"AE39-2"

cc: File (3320) "PDR"
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

OCT 25 1993

MEMORANDUM FOR: Eric S. Beckjord, Director
Office of Nuclear Regulatory Research

FROM: Patricia G. Norry, Director
Office of Administration

SUBJECT: OFFICE CONCURRENCE ON PROPOSED RULE PACKAGE ENTITLED "FINAL AMENDMENTS TO 10 CFR PART 55 ON RENEWAL OF LICENSES AND REQUALIFICATION REQUIREMENTS FOR LICENSED OPERATORS"

The Office of Administration concurs, subject to the comments provided, on the final rule that amends the Commission's regulations governing renewal of licenses and requalification requirements for licensed operators at power, test, and research reactors. We have attached a marked copy of the final rule package that presents our comments.

When this document is forwarded for signature and publication, please have a member of your staff include a 3.5-inch diskette that contains a copy of the document in WordPerfect 5.0 or 5.1 as part of the transmittal package. The diskette will be forwarded to the Office of the Federal Register and the Government Printing Office for their use in typesetting the document.

To assist you in preparing the list of documents centrally relevant to this final rule that is required by the NRC's regulatory history procedures, you should place the designator "AE39-2" in the upper right-hand corner of each document concerning the rule that you forward to the Nuclear Documents System.

If you have any questions regarding our comments, please have a member of your staff contact Michael Harrison on 492-8208 or Michael T. Lesar on 492-7758 of the Division of Freedom of Information and Publications Services.

Patricia G. Norry, Director
Office of Administration

Attachment: As stated

FOR: The Commissioners

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: FINAL AMENDMENTS TO 10 CFR Part 55 ON RENEWAL OF LICENSES AND REQUALIFICATION REQUIREMENTS FOR LICENSED OPERATORS

PURPOSE:

To obtain Commission approval for publication of the subject final amendments in the Federal Register.

BACKGROUND:

On May 20, 1993, the proposed amendments to 10 CFR Part 55 on Operators' Licenses were published in the Federal Register for a 60-day comment period (58 FR 29366). The amendments included (i) deletion of Section 55.57(b)(2)(iv) that required licensed operators to pass a comprehensive requalification written examination and operating test conducted by the NRC during the 6-year term of the license; (ii) a requirement that facility licensees submit copies of their operating tests or comprehensive written examinations to the NRC 30 days prior to conducting these tests and examinations for operator requalification; and (iii) a revision to the "Scope" of Part 55 to reflect that requirements pertaining to operators' licenses will

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also be applicable to facilities licensees. The proposed amendments will not affect the regulatory or other appropriate guidance as required by Section 306 of the Nuclear Waste Policy Act of 1982. In accordance with direction in the Staff Requirement Memorandum dated April 27, 1993, the Federal Register Notice included comments of the Chairman and Commissioners Remick and de Planque with separate views of Commissioners Rogers and Curtiss. The comment period ended on July 20, 1993, with 42 comments having been received from power and non-power reactor licensees, industry advocates, public citizen groups, and the States.

DISCUSSION:

Every power and non-power reactor licensee and every industry advocate that chose to comment on the proposed rulemaking was in favor of deleting the requirement that licensed operators pass an NRC-administered comprehensive written requalification examination during the term of a 6-year license. The results of NRC requalification examinations and inspections (using Temporary Instruction (TI) 2515/117, "Licensed Operator Requalification Program Evaluation") continue to support the staff's proposal to eliminate this requirement. However, there were some respondents who disagreed with the staff's proposal. The principal opposition came from the States of Vermont and Illinois. The State of Vermont pointed out that the Vermont Yankee requalification program would not have been evaluated as unsatisfactory if the facility licensee's grading had been used and stated that it does not have confidence that the program's deficiencies would have been detected and corrected if the proposed rule change were in effect. The State of Illinois contended that the current regulations provided incentive for licensees to maintain quality operator training programs and that the likelihood of further improving or even maintaining that quality without the periodic independent involvement by the NRC is unlikely. The State of Illinois recommended a combination of routine NRC inspections of crew examinations on a plant simulator and a periodic independent test administered simultaneously to all licensed operators every 6 years. The inspectors and observers who participated in the pilot inspections (conducted during August through December 1991) generally agree that the guidance in the TI was appropriate and enabled the inspectors to conduct adequate assessments of the facility licensees' operator requalification programs. The staff confirmed that the proposed inspection program could actually improve facility requalification programs because the trial inspections performed in accordance with the TI identified several issues that went undetected during previous NRC-administered examinations.

The staff recommends no change in the final amendment to delete Section 55.57(b)(2)(iv).

The second proposed amendment would require that facility licensees submit to the NRC copies of each annual operating test or comprehensive written examination used for operator requalification at least 30 days before conducting such examination or test. Comments from power reactor licensees,

non-power reactor licensees, the Nuclear Management and Resources Council, and the Professional Reactor Operator Society were opposed to this proposal. Most respondents believed that submitting copies of all examinations and tests to the NRC 30 days prior to their administration would place additional burden both on the facility licensees and the NRC without any increase in safety. Several respondents offered alternatives such as shortening the lead time, requiring that the examinations and tests be submitted after they are administered, submitting to the NRC the question banks from which the examinations are developed, or simply having the examinations available for on-site inspection.

This requirement was proposed so that the staff could evaluate examination material to determine the scope of the on-site inspection. However, the pilot inspection program has demonstrated no such need. Therefore, the staff recommends that ~~Section~~ 55.59(c) be revised to require facility licensees to submit written examinations and operating tests to the Commission only upon request.

The third amendment would broaden the scope of Part 55 to reflect that the provisions of operators licenses as specified in 10 CFR Part 55 are also applicable to facility licensees. Only one of the 42 respondents to the FRN commented and endorsed this provision. The staff recommends that this amendment remain unchanged.

Finally, the Federal Register Notice invited specific comments on the applicability of the proposed amendments to research and test reactor facilities. A total of 13 non-power reactor licensees, the National Organization of Test, Research, and Training Reactors (TRTR), and a former research reactor director agreed with the deletion of ~~Section~~ 55.57(b)(2)(iv) as a condition for license renewal. Several respondents suggested that the NRC return to the policy that was in effect prior to the 1987 rule change (i.e., facility-conducted examinations with periodic NRC inspections), and some respondents endorsed the NRC's intent to conduct requalification examinations "for cause" only. This same group opposed the provision to have facilities submit copies of all their examinations and tests to the NRC 30-days prior to their administration.

The staff recommends that the final amendments to Part 55 apply to both power and non-power reactor licensees. This is based on the fact that at the time the proposed amendments were submitted for Commission approval (SECY-92-430), the NRC had conducted very few requalification examinations at non-power facilities. At that time the justification for applying the amended rule to those facilities was not as convincing as for power reactors. Now, the results of completed requalification examinations at non-power reactors indicate a 97 percent pass rate, that is consistent with the rate at power reactors.

INSPECTION PROGRAM IMPLEMENTATION:

As it was reported in SECY-92-432, requalification program inspections will be conducted at each facility once per SALP cycle, and will be scheduled to coincide with the annual operator licensing tests that the facility licensee conducts in accordance with Section 55.59(a)(2). Significant requalification program deficiencies identified during an inspection may prompt inspection of additional activities to perform a detailed evaluation of the program. In addition, the staff will retain the authority to conduct requalification examinations "for cause" at any facility where the staff believes that ineffective training caused operators to commit errors.

RESOURCES:

If this rule is promulgated, the NRC will no longer conduct requalification written examinations or annual operating tests. The resources thus saved can be directed to inspect and oversee facility requalification programs to improve operational safety at each facility. The resources applied to each program inspection may also be adjusted on the basis of the staff's observation of the quality with which the facility is implementing its program. No additional NRC resources are required for implementation of this rulemaking.

COORDINATION:

The Office of the General Counsel has no legal objection.

RECOMMENDATION:

That the Commission:

1. Approve publication of the final rule as set forth in Enclosure 1.

2. In order to satisfy the requirements of the Regulatory Flexibility Act, 5 U.S.C. 605(b), certify that this rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. This certification is included in the enclosed Federal Register Notice.

3. Note that:

   a. A regulatory analysis will be available in the Public Document Room (Enclosure 2);

   b. A public announcement will be issued (Enclosure 3);

The Commissioners

c. The appropriate congressional committees will be informed (Enclosure 4);

d. The chief Counsel for Advocacy of the Small Business Administration will be informed of the certification and the reasons for it as required by the Regulatory Flexibility Act;

e. The final rule contains information collection requirements that are subject to the Paperwork Reduction Act of 1980 (U.S.C. 3501 et seq.) The staff is in the process of obtaining OMB approval for these requirements. The rule will not be published in the Federal Register until that approval has been obtained; and

f. Copies of the Federal Register Notice of final rulemaking will be distributed to all Commission licensees. The notice will be sent to other interested parties upon request.

James M. Taylor
Executive Director
for Operations

Enclosures:
1. Federal Register Notice of Final Rulemaking
2. Regulatory Analysis
3. Public Announcement
4. Congressional Letters

Enclosure 1

Federal Register Notice

[7590-01]

NUCLEAR REGULATORY COMMISSION

10 CFR Part 55

RIN-AE 39

FINAL AMENDMENTS TO 10 CFR Part 55 ON RENEWAL OF LICENSES AND REQUALIFICATION REQUIREMENTS FOR LICENSED OPERATORS

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is amending 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 administered by the NRC during the term of the operator's 6-year license as a prerequisite for license renewal. Also, facility licensees shall have a requalification program reviewed and approved by the Commission and shall, upon request, submit a copy of its annual operating test or comprehensive written examination used for operator requalification for review by the Commission. In addition, the final rule will amend the "Scope" provisions of the regulations pertaining to operators' licenses to include

facility licensees. The amendments will improve operational safety at each facility by redirecting NRC resources to inspect and oversee facility requalification programs rather than administering requalification examinations, while reducing both licensee and NRC costs to administer the program.

EFFECTIVE DATE: (30 days after publication in the Federal Register.)

FOR FURTHER INFORMATION CONTACT: Anthony DiPalo, Office of Nuclear Regulatory Research, telephone: (301) 492-3784, 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 and which became 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 its requalification examination program, 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 6 programs, of 120 subsequent program evaluations, have been evaluated as unsatisfactory.

Pilot requalification examinations were conducted during the period August through December 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 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 remedial training for operators who exhibited weaknesses. The performance of the facilities' evaluators during the pilot examinations further confirmed that the facility licensees can find deficiencies, provide remedial training, and retest their licensed operators appropriately.

In June 1992, the Commission agreed with the staff to proceed with initiation of rulemaking to eliminate the requirement for each licensed operator to pass a comprehensive requalification written examination and operating test administered by the Commission during the term of the operator's 6-year license. On December 28, 1992, proposed amendments to 10 CFR Part 55 on renewal of licensees and requalification requirements for licensed operators were submitted to the Commission for approval.

On May 20, 1993, the Commission published a proposed rule in the Federal Register (58 FR 29366) to amend 10 CFR Part 55. The proposed amendments were to:

1. Delete the requirement that each licensed operator pass an NRC-administered requalification examination during the term of his or her license.

2. Require that facility licensees submit to the NRC their annual requalification operating tests and comprehensive requalification written examinations at least 30 days prior to the conduct of these tests and examinations.

3. Include "Facility Licensees" in the "Scope" of Part 55.

The period for public comment on the proposed amendments ended on July 20, 1993.

Summary of Public Comments

The NRC received 42 comments on the proposed rule. Based on analysis of these comments, several changes have been made in the final rule. A summary of the public comments and, where appropriate, a description of the changes that resulted from them is discussed for each of the proposed amendments to 10 CFR Part 55.

1. Proposed Amendment: Delete the requirement that each licensed operator pass an NRC-administered requalification examination during the term of a licensed operator's 6-year license.

General Statement: Of the 42 comments received, 36 favored this proposed amendment and 6 were in opposition. Most of the respondents who favored the proposed change based their support on the expectation that this change would reduce the regulatory burden on licensees and would improve operational safety at nuclear facilities. One respondent indicated that while the NRC's involvement has had a positive impact on the content and conduct of license requalification, utilities have proven their ability to develop and administrator requalification examinations that meet the requirements of 10 CFR 55.59(a)(2)(iii). Another respondent representing the utility industry stated that, "we believe the performance-based inspection process will be an effective means for ensuring high quality operator requalification programs." This respondent further stated, "The proposed rule change will also afford better operating crew continuity. Because personnel changes occur over time, operating crews may be configured with individuals who have or have not had an NRC administered exam. In the past, it has been a common practice to reconfigure crews to accommodate the NRC administered requalification exam by

putting together individuals whose 6 years is about to end. Use of this practice to facilitate the conduct of requalification exams may not be in the best interest of crew coordination and teamwork."

The six comments in opposition to the proposed change to delete the NRC-administered requalification examination varied in content. For example, two public citizen respondents were against a rule change of any kind on the basis it would give the public the perception that the NRC's authority over the operation of power and non-power reactor plants would be weakened. Two respondents, one representing a State public service department with oversight of a nuclear power plant and a second representing a State nuclear safety department, urged that from a defense-in-depth standpoint to reactor safety the proposed rule change should be reconsidered. One of these respondents, a State nuclear engineer who submitted two separate comments indicated that it was because of the current regulation that the NRC was able to detect the unsatisfactory requalification program at Vermont Yankee and identify corrective actions to ensure safety of the plant. Finally, one respondent was opposed to this amendment, especially its application to test and research reactors and suggested the existing rule be deleted since the regulatory analysis for the 1987 rule change stated that the rule would not apply to non-power reactors (NPR). This same respondent believed it important to maintain NRC staff competence in relation to NPR operator licensing and felt this could be accomplished by maintaining a nucleus of specialized qualified personnel either as part of or in conjunction with the NPR directorate and through specialized training and administration of initial examinations, which occur rather frequently.

Response: After reviewing the six comments opposing the proposed regulation, the Commission has concluded that the basis for this requirement remains sound and that it should be adopted. This determination is based on the following considerations:

(i) The NRC believes that since the beginning of the requalification program, experience indicates that weaknesses in implementation of facility licensee's programs are generally the root cause of deficiencies in the performance of operators.

(ii) The NRC believes if its resources were directed towards inspection and oversight of facility licensee's requalification programs rather than continuing to conduct individual operator requalification examinations, the operational safety at each facility will continue to be ensured and in fact, will be improved. A routine inspection frequency of once per SALP cycle will ensure consistency between inspection scheduling and licensee performance. A minimum inspection frequency of at least once every 2 years will ensure active NRC oversight of facility licensee's requalification programs.

(iii) The NRC believes that the facility requalification programs have been demonstrated to be basically sound during the pilot examinations. Given the broad range of possible approaches built into the inspection process, the NRC would only conduct examinations when it is the most effective tool to evaluate and understand the programmatic issues, or if the NRC loses confidence in the facility licensee's ability to conduct its own examinations. Examples which could result in a regional management decision for a "for cause" requalification examination include:

a. Requalification inspection results which indicate an ineffective licensee requalification program;

b. Operational problems for which operator error is a major contributor;

c. A SALP Category 3 rating in plant operations attributed to operator performance; and

d. Allegations regarding significant training program deficiencies.

When conditions such as these exist, the NRC will initiate planning to conduct requalification examinations during the next annual examination cycle scheduled by the facility.

With respect to the applicability of the proposed regulation to non-power reactors, the Commission believes there is a continuing need for the regulation to apply to both power and non-power reactor licensees in order to provide assurance that all operators of reactors are properly qualified. The proposed amendment was not intended to maintain NRC competence in relation to non-power reactor operator licensing, but to continue to ensure, and improve, the operational safety at each facility by directing its examiners to inspect and oversee facility requalification programs rather than conducting requalification examinations for all licensed operators.

2. Proposed Amendment: Require that facility licensees submit to the NRC their annual requalification operating tests and comprehensive requalification written examinations at least 30 days prior to the administering of these tests and examinations.

General Statement: Of the 42 comments received, only 1 respondent favored the amendment as proposed. This response came from a university operated research reactor, stating that submitting requalification examinations by the facility to the NRC for review prior to administering the examination was less burdensome, by comparison, than retaining the existing

régulation. On the other hand, most respondents stated that submitting all examinations and tests to the NRC 30 days prior to their administration would place an undue burden on facility licensees and the NRC, with little return on the investment. Several respondents offered alternatives including shortening the lead time, requiring that the examinations and tests be submitted after they are administered, submitting the question banks from which the examinations are developed, and simply having the examinations available for on-site inspection.

Response: This requirement was included in the proposed regulation so that the NRC could evaluate the proposed examination materials, in conjunction with other information already available to the NRC, to determine the scope of the on-site inspection. However, the pilot inspection program has demonstrated that a facility's proposed examinations are not an absolute necessity in preparing for the on-site activities. In addition, those facility licensees' examination and simulator scenario banks that were evaluated were found to be adequate for an effective requalification program to be managed by the licensees' staffs. Although being able to review the proposed examinations at the NRC did save some on-site inspection effort, the inspectors were still able to complete the Temporary Inspection procedures within the time allowed (i.e., two inspectors on-site for 1 week).

Although it may not be necessary to have all the examinations submitted to the NRC 30 days in advance all the time, the NRC believes that it will be advantageous to have selected examinations available at NRC offices for review prior to the conduct of the on-site portion of the inspection. Therefore, the NRC will delete the amendment to § 55.59(c) as proposed from the final rulemaking and will require instead only that comprehensive written

examinations or operating tests be submitted upon request, consistent with the inspection program needs and sustained effectiveness of the facility licensee's examination and simulator scenario banks. Inspection findings that indicate a deterioration in the quality, diversity, or effectiveness of a licensee's examination or simulator scenario banks could prompt a request for submittal of additional examinations for NRC review.

3. Proposed Amendment: Include facility licensees in the scope of 10 CFR Part 55. Section 55.2 will be revised to include facility licensees.

General Statement: Only 1 of the 42 respondents to the FRN addressed and endorsed this provision of the proposed rulemaking. The NRC believes that the absence of comments regarding this proposal substantiates the NRC's position that this is simply an administrative correction that does not materially change the intent of the regulations.

Response: The NRC considers this amendment as an administrative addition to these regulations. The NRC proposed this change to eliminate the ambiguities between the regulations of Parts 50 and 55. Section 50.54(i) through (m) already imposes Part 55 requirements on facility licensees, and Part 55 already specifies requirements for facility licensees. On this basis, the NRC has determined that the requirement be adopted.

Finding of No Significant Environmental Impact: Availability

The Commission has determined that under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, that this rule is not a major Federal Action significantly

affecting the quality of the human environment and therefore, an environmental impact statement is not required.

Paperwork Reduction Act Statement

This final rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). These requirements were approved by the Office of Management and Budget approval number ____. 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 regulatory analysis on this regulation. The analysis examines the values (benefits) and impacts (costs) of implementing the regulation for licensed operator requalification. The 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 Anthony DiPalo, Division of Regulatory Applications, Office of Nuclear Regulatory Research, U. S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 492-3784.

Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1980, 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 (final

rule would 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. A smaller increase in regulatory burden is anticipated due to a need for the facility licensee to provide data and support for periodic requalification program inspections.

As part of the final rule amendments, facility licensees shall have a requalification program reviewed and approved by the Commission and shall, upon request, submit a copy of the comprehensive written examinations or annual operating tests to the Commission. The NRC has determined that the pilot inspection program demonstrated that the facility's proposed examinations are not an absolute necessity in preparing for the on-site activities. Therefore, the NRC would request test submittal on a case-by-case basis consistent with its test inspection program needs and review these examinations for conformance with 10 CFR 55.59(a)(2)(iii). 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 periodic inspection of facility requalification training and examination programs. Facility licensees could have then corrected these problems and improved overall operator job performance sooner.

This final rule will improve operational safety by providing the staff direction 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 NRC staff has planned to conduct about 20 percent fewer requalification examinations during FY 1993 through FY 1997 because the NRC 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 continued conducting requalification examinations for all licensed operators, these efforts would require approximately 20 FTE each year. Implementing the proposed requalification inspection program would save the equivalent of about 8 FTE (or $1.45 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 final 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 $1.24 million.

In summary, the final rule will result in improved operational safety by providing more timely identification of weaknesses in facility licensees' requalification programs. In addition, the final rule would also reduce the resources expended by both the NRC and the licensees. The Commission has, therefore, concluded that the final rule meets the requirements of 10 CFR 50.109 (a)(3), 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 record-keeping requirements.

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 adopting 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

* * * * *

(c) *Requalification program requirements.* A facility licensee shall have a requalification program reviewed and approved by the Commission and shall, upon request, submit a copy of its comprehensive requalification written examinations or annual operating tests to the Commission. 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 ____ day of _____, 1993.

For the Nuclear Regulatory Commission.

_____

Samuel J. Chilk,
Secretary of the Commission.

Enclosure 2

Draft Regulatory Analysis

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SUMMARY

In 1987, the NRC amended 10 CFR Part 55 to add requirements for the requalification and renewal of operators' licenses. The regulations required licensed operators to pass facility requalification examinations and annual operating tests. In addition, the amended regulations required licensed operators to pass a comprehensive requalification written examination and operating test conducted by the NRC during the term of a 6-year license. Prior to 1987, NRC regulation did not require facility licensees to conduct continuous and rigorous examinations and training regulations programs for operators' licenses.

This additional requirement was added because at the time the regulation was amended, the NRC did not have sufficient confidence that each facility would conduct its annual operating tests and written examinations in accordance with the NRC's expectations. The lack of confidence was due to the implementation of new aspects of the operator requalification program with which neither the NRC nor the industry had very much experience. The new aspects included: 1) changing from a 2-year to a 6-year license term resulting in license renewal applications being submitted for NRC review much less frequently; 2) requiring operating tests on simulators when most of the industry's simulators were either new or still under construction; and 3) permitting requalification programs to be based on a systems approach to training when the industry had not implemented the process for accrediting these programs. After conducting these examinations over a 4-year period, however, NRC now has the confidence that facility licensees can successfully implement their own requalification programs. As a result, the NRC is considering amending the current requalification regulations in 10 CFR Part 55.

It is now believed that rather than requiring NRC-conducted requalification examinations, NRC can ensure safety and more effectively use its resources by periodically inspecting the licensee's requalification program. The final rulemaking, which would eliminate the need for each licensee to pass an NRC requalification examination, is intended to ensure and improve the continued effectiveness of the Part 55 requalification requirements.

The NRC is expected to incur one-time costs associated with development and implementation of the final rulemaking. These one-time NRC costs are estimated to total approximately $200,000. If the NRC continues conducting requalification examinations for all licensed operators, the staff estimates that it would require approximately 22 FTE each year. Implementing the final requalification inspection program would save the equivalent of about 8 FTE (or $1.45 million) each year over conducting requalification examinations for all licensed operators. Facility licensees are expected to realize a combined annual operational cost savings of approximately $1.25 million. On a 1992 present worth basis, assuming an average 25-year remaining lifetime and a 5% real discount rate, the NRC and industry savings are equivalent to $20.25 million and $17.48 million, respectively.

ABBREVIATIONS

CFR - Code of Federal Regulations
FR - Federal Register
FY - Fiscal Year
NRC - U.S. Nuclear Regulatory Commission

REGULATORY ANALYSIS of FINAL RULE CHANGE
to
10 CFR Part 55

RENEWAL OF LICENSES AND REQUALIFICATION REQUIREMENTS FOR LICENSED OPERATORS

December , 1993

1.0 INTRODUCTION

The NRC is considering amending the current requalification regulations for nuclear power reactor operating personnel contained in 10 CFR Part 55. Section 1 of this Regulatory Analysis includes background information, a discussion of the existing operator requalification examination requirements in 10 CFR Part 55, a statement of the issue, and the objectives of the final rulemaking. Section 2 identifies and discusses the proposed action and the alternative actions. Section 3 discusses the projected benefits and estimates the costs associated with adopting the final rulemaking. Section 4 provides the decision rationale and Section 5 discusses the implementation schedule.

1.1 BACKGROUND

Section 306 of the Nuclear Waste Policy Act of 1982 (42 USC 10226, Public Law 97-425, January 7, 1983) authorized and directed the U.S. NRC to promulgate regulations or other appropriate regulatory guidance for the training and qualifications of civilian nuclear power plant operators. Such regulations or regulatory guidance were required to establish, among other things, requirements governing the NRC's administration of requalification examinations. The NRC accomplished this objective by revising 10 CFR Part 55, to add Section 55.59(a)(2)(iii) to provide that the NRC could conduct a comprehensive requalification written examination and operating test in lieu of accepting certification that the licensee had passed written examinations and operating tests conducted by the facility. The NRC also developed guidance for examiners to conduct NRC requalification examinations.

In SECY-86-348, dated November 21, 1986, the NRC described the revisions that it made to 10 CFR Part 55 in response to Section 306 of the Nuclear Waste Policy Act. On February 12, 1987, the Commission approved the proposed amendments in SECY-86-348, adding the requirement in 10 CFR 55.57(b)(2)(iv) for each licensee to pass an NRC-administered requalification examination during the 6-year term of the individual's license.

1.2 STATEMENT OF THE ISSUE

In 1987, the NRC amended 10 CFR Part 55 to add requirements for the requalification and renewal of operators' licenses. In accordance with Section 55.57(b)(2)(iii), licensed operators are required to pass facility requalification examinations and annual operating tests. In Section 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 that 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.

Prior to 1987, NRC regulations did not require facility licenses to conduct continuous and rigorous examinations and training and requalification programs. As a result, the Commission did not have sufficient confidence that

each facility would conduct its annual operating tests and written examinations in accordance with the staff's expectations. The lack of confidence was due to the implementation of new aspects of the operator requalification program with which neither the NRC nor the industry had very much experience. The new aspects included: 1) changing from a 2-year to a 6-year license term resulting in license renewal applications being submitted for NRC review much less frequently; 2) requiring operating tests on simulators when most of the industry's simulators were either new or still under construction; and 3) permitting requalification programs to be based on a systems approach to training when the industry had not implemented the process for accrediting these programs.

As a result, the NRC determined that during the first term of a 6-year license issued after the 1987 amendment to Part 55, the NRC would conduct requalification examinations to operators for the purpose of license renewal. As a result of conducting these examinations over a 3-year period, it has been determined that the NRC examiners are largely duplicating the tasks already required of, and routinely performed by, the facility licensees. The final rulemaking is therefore being considered to ensure and improve the continued effectiveness of the Part 55 requalification requirements.

If the NRC adopts the final rulemaking and deletes the requirement for each licensed individual to pass an NRC requalification examination during the 6-year term of the individual's license, the regulations in 10 CFR 55.57, "Renewal of Licenses," and 10 CFR 55.59, "Requalification," will continue to meet the requirements of Section 306 of the Nuclear Waste Policy Act (NWPA). The regulations will continue to require facilities to have requalification programs and conduct requalification examinations. The NRC will administer these programs by providing oversight for the programs through inspections. In addition, Section 55.59(a)(2)(iii) provides that the NRC may administer 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 conducting an onsite inspection of the facility's requalification program. The final rule would not affect the regulatory and other appropriate guidance required by Section 306 of the NWPA and described in Section 55.59(a)(2)(iii) for administering NRC requalification examinations in lieu of facility examinations.

1.3 OBJECTIVES

The objective of the final rulemaking is to improve the effectiveness of the current regulations for operator requalification and renewal of operators' licenses. The current regulations, which were amended in 1987, require licensed operators to pass a comprehensive requalification written examination and operating test administered by the NRC during the term of a 6-year license. At the time the regulation was amended in 1987, the NRC did not have sufficient confidence that each facility would conduct its annual operating tests and written examinations in accordance with the NRC's expectations. The lack of confidence was due to the implementation of new aspects of the

operator requalification program with which neither the NRC nor the industry had very much experience. The new aspects included: 1) changing from a 2-year to a 6-year license term resulting in license renewal applications being submitted for NRC review much less frequently; 2) requiring operating tests on simulators when most of the industry's simulators were either new or still under construction; and 3) permitting requalification programs to be based on a systems approach to training when the industry had not implemented the process for accrediting these programs.

The experience gained from conducting these examinations over a 3-year period indicates that the NRC examiners are largely duplicating the efforts of the facility licensees. Further, the industry has since developed criteria for accrediting licensed operator requalification programs at facilities. Based on this experience, NRC now has the confidence that facility licensees can implement their own requalification program in accordance with 10 CFR 55.59(c)(4). As a result, it is now believed that rather than conducting these requalification examinations, NRC can ensure safety and more effectively use its resources by periodically inspecting the licensee's requalification program.

2.0 REGULATORY ALTERNATIVES

This section discusses the reasonable alternatives considered for meeting the regulatory objective identified in Section 1.3.

2.1 TAKE NO ACTION

One alternative to the final rule changes would be to take no action. Taking no action would allow current licensed operator requalification practices to continue. However, this alternative would disregard the insights gained from conducting the NRC requalification examinations over a 4-year period. This alternative also neglects consideration of the industry-related progress that has been made over the past several years in the area of operator requalification programs.

2.2 PROPOSED ACTION

The regulations must be amended in two places to implement the proposed rule change. First, delete 10 CFR 55.57(b)(2)(iv) requiring each licensed individual to pass an NRC-conducted requalification examination during the term of his or her license. Second, amend 10 CFR 55.59(c) to require each facility licensee to submit upon request a copy of each requalification written examination and annual operating test to the NRC for review and approval. These actions will ensure that the margin of safety for plant operations is not reduced and remove the dual responsibility of the facility licensee and the NRC for the conduct of licensed operator requalification examinations.

In addition, 10 CFR 55.2, "Scope," will be revised to include facility licensees. This will eliminate the currently existing ambiguities between the regulations of Part 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.

Licensed operators would not be required 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 requalification examinations for license renewal. However, the facility licensees would be required to submit upon request a copy of each annual operating tests and comprehensive written examinations used for operator requalification to the Commission for review and approval. The NRC would review these examinations 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 onsite 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).

3.0 CONSEQUENCES

This section discusses the benefits and costs that may result from the final rulemaking. The benefits and costs of the final rulemaking are compared with those associated with the status quo using the current regulations as a baseline. Table 3.1 identifies the potential effects associated with the final rulemaking.

As described in Section 2.2, the proposed action involves two distinct regulatory amendments. However, the dominant consequences (both in terms of values and impacts) of the proposed action are associated with the amendment which eliminates the requirement for licensed individuals to pass NRC-conducted requalification examinations. The consequences of the second amendment, which requires exams and annual operating tests, are considered relatively insignificant. Therefore, although the proposed action involves two distinct regulatory amendments, the consequences of these two amendments are evaluated together. As a result, the values and impacts identified in this Section and summarized in Tables 3.2 and 3.3 represent the consequences of the complete regulatory action.

Table 3.1. Checklist for Identification of Potential Effects

Potential Effect	Quantified Change	Qualitative Change	No Significant Change
Public Health & Safety		X	
Public Property			X
Occupational Health & Safety			X
Industry Property			X
Industry Implementation Costs			X
Industry Operation Costs	X		
NRC Development Costs	X		
NRC Implementation Costs	X		
NRC Operation/Review Costs	X		
Regulatory Effectiveness		X	
Reduced Regulatory Burden		X	

3.1 ESTIMATION OF VALUES (SAFETY-RELATED CONSEQUENCES)

The benefits of the final rulemaking are evaluated in terms of the general objectives stated in Section 1.3, namely, to ensure safety and improve the effectiveness of the NRC examiner resources. These benefits are not readily quantifiable and, as a result, are discussed here qualitatively. The primary qualitative benefits associated with the final rulemaking accrue from increased effectiveness of the NRC examiner resources.

The staff's experience since the beginning of the requalification program indicates that the weaknesses in the implementation of the facility program are generally the root cause of significant deficiencies in the performance of

licensed operators. The performance on NRC-conducted examinations of licensed operators who have participated in comprehensive facility requalification programs has been very good. The failure rate of individual licensed operators was 9% in FY91. The FY92 failure rate of individual licensed operators was 7%.

Based on this experience, it is believed that NRC examiner resources could be more effectively used to perform onsite 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. By redirecting the NRC examiner resources toward facility programs rather than individuals, programmatic weaknesses should be identified and corrected more rapidly.

The final regulatory action directing the NRC examiners to inspect and oversee facility requalification programs rather than conducting requalification examinations would ensure that licensed individuals and operating crews are qualified to safely operate the facility and that operational safety would be improved at each facility.

3.2 ESTIMATION OF IMPACTS (ECONOMIC CONSEQUENCES)

The final rulemaking would reduce the burden on the facility licensee because the administrative and technical staff would expend fewer hours than are now required to assist in developing and conducting the NRC requalification examination. Similarly, a net savings would accrue to the NRC due to the elimination of most NRC requalification examinations.

In estimating the impact of the final regulatory action, the following types of costs were considered. For the industry, costs include onsite property costs, implementation costs, and operation costs. For the NRC, costs include development costs, implementation costs, and operation costs.

3.2.1 Onsite Property and Industry Implementation Costs

Since the final rulemaking is expected to have no significant impact on the accident frequency, there is no expected impact on potential onsite property damage. Similarly, since implementation of the final rulemaking does not require licensees to purchase special equipment or materials, nor does it involve additional facility labor requirements, there are no expected industry implementation costs.

3.2.2 Industry Operation Costs

Under the current regulations, facility licensees provide assistance to the NRC in the development and conduct of the NRC requalification examinations. This assistance includes providing to the NRC the training materials used for development of the written and operating examinations. In addition, the current regulations require that an examination team made up of NRC examiner and facility evaluators co-conduct, validate, and co-supervise the NRC examinations to ensure that the NRC examinations are valid and appropriate for the facility at which the examinations are being given.

The labor burden and amount of material that each facility licensee currently provides to the NRC for the routine NRC requalification examinations is expected to be larger than the amount projected under the proposed regulatory action. Under the final rulemaking, each facility licensee is expected to continue in its present manner of conducting requalification training programs. However, adopting the final rulemaking would reduce the regulatory burden on the facility licensees by removing the dual effort expended by the facilit to assist the NRC in developing and conducting NRC requalification examinations for all licensed operators. As a result, fewer hours would be expended by its technical and administrative staff which are now required to assist in developing and conducting the NRC requalification examination. Table 3.2 provides a summary of the estimated current industry costs associated with the NRC requalification examinations. Table 3.3 provides a summary of the estimated industry costs associated with the NRC requalification program inspections after implementation of the final rulemaking.

Table 3.2. Affected Current Industry Costs (per NRC examination)

Cost Element	Best Estimate ($)
SALARIES AND BENEFITS	
Facility administrative staff (to prepare reference materials for NRC)	1,000[a]
Facility technical staff (to assist NRC with developing and conducting the NRC examinations)	28,800[b]
Facility administrative staff (to assist NRC with conducting the NRC examinations)	1,000[a]
Total Direct Salaries	30,800
MATERIALS AND SERVICES	
Expendable Supplies (to provide the NRC all the material used for development of the written and operating examinations)	100
Reproduction Expenses	100
Shipping Expenses	1,000
Total Materials and Services	1,200
TOTAL FACILITY COSTS TO SUPPORT NRC EXAMINATIONS	32,000

[a]20 person-hours @ $50/person-hour. The value of $50/person-hour is rounded from the standard labor rate of $48/person-hour from the most recent draft of the Regulatory Analysis Technical Evaluation Handbook.

[b]576 staff-hours @ $50/hour.

Table 3.3. Affected Industry Costs (per NRC inspection) After final Changes

Cost Element	Best Estimate ($)
- SALARIES AND BENEFITS	
Facility administrative staff (to prepare inspection materials for NRC)	750[a]
Facility technical staff (to assist NRC in the inspection of the facility requalification program)	14,400[b]
Facility administrative staff (to assist NRC in the inspection of the facility requalification program)	1,000[c]
Total Direct Salaries	16,150
MATERIALS AND SERVICES	
Expendable Supplies (to provide the NRC all the material used for inspection of the facility requalification program)	50
Reproduction Expenses	50
Shipping Expenses	500
Total Materials and Services	600
TOTAL FACILITY COSTS TO SUPPORT NRC INSPECTIONS	16,750

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[a] 15 person-hours @ $50/hour.

[b] 288 staff-hrs @ $50/hour.

[c] 20 person-hrs @ $ 50/hour.

There are 75 facility licensee requalification programs. Current practices involve one NRC requalification examination per program-year for 65 of these 75 programs. This results in an annual industry cost of ($32,000/program--year)(65 programs) = $2.08 million/yr. Assuming that, after the proposed changes, NRC would administer the SALP program with an average cycle of 18 months, this would result in 50 requalification program inspections per program-year. The annual industry cost of ($16,750/program-yr)(50 programs) = $838,000/yr. This indicates an annual industry cost savings of $1.24 million associated with the final rulemaking.

3.2.3 NRC Development Costs

NRC development costs are the costs of preparations prior to implementation of the proposed regulatory action. These costs usually consist of labor costs and overhead within the NRC and the cost of procuring contractors to perform tasks not undertaken within the NRC. Only incremental costs resulting from adoption of the proposed action should be included.

Much of the development work has been completed on this proposed action and, as such, is a sunk cost. These costs are not included in this analysis since they will be incurred both for the proposed action and for the alternative. It is expected, however, that additional NRC staff time will be required before implementation of the final rulemaking can occur. This staff time is primarily associated with the development of the new inspection program and inspection module.

Some of these costs will be incurred regardless of whether the proposed action is adopted or rejected. For example, an NRC Tiger Team is presently developing a new inspection program. As a result, these costs are not included in this analysis. It is estimated that the equivalent of 0.5 staff--year will be required to complete all phases of the development process. Based on an NRC labor cost estimate of $50/person-hr, the above labor requirement results in an NRC development cost of approximately $50,000.*

3.2.4 NRC Implementation Costs

NRC implementation costs are those costs that the NRC will incur to implement the action once a proposed action is defined and the Commission endorses its application. It is estimated that implementation of the proposed action will require one professional NRC staff person-year at a cost of $100,000/person--year.

In addition, the NRC will also incur one-time implementation costs associated with:

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*The value of $50/person-hour is rounded from the standard NRC labor rate of $48/person-hour from the most recent draft of the Regulatory Analysis Technical Evaluation Handbook.

- training of NRC and contractor examiners on the new inspection module requirements
- conduct of pilot inspections
- modification of the inspection module

The incremental, one-time costs associated with these three implementation activities are estimated to be $50,000. As a result, the total NRC implementation costs are estimated to be $150,000.

3.2.5 NRC Operation Costs

NRR, the office responsible for administering and budgetary planning for the requalification examination program, has estimated the NRC cost implications of the final rule change. Their analysis focussed solely on NRC staff resources and contractor support because these were the only cost factors judged to be affected by the final rule change.

In FY92 the NRC resources committed to this program for NRC staff and contractor support were approximately 12 FTE and $1.3 million, respectively. The staff projects that a slightly larger average number of examinations, requiring approximately 1.5 additional FTE and an additional $200,000, would be conducted in future years if the NRC continues conducting requalification examinations for all licensed operators. Thus, if it is assumed that without the rule change, this program would continue into the future, the relevant baseline NRC burden would approximate $2.85 (1.35 + 1.5) million per year in 1992 dollars for FY93 through FY97. For regulatory analysis purposes, the 13.5 (12 + 1.5) NRC staff years (FTE) were converted to $1.35 million ($100,000 per staff year) based on allowances for composite wage rates and direct benefits.*

Under the final rule change, NRR's analysis indicates that NRC staff could perform all necessary inspections of requalification exam programs with 11 FTEs and $300,000 per year. At $100,000 per FTE, this converts to an annual cost in 1992 dollars of $1.4 million. Thus, the annual savings in NRC operating costs is estimated to be on the order of $1.45 million ($2.85 million less $1.4 million). Over an assumed 25-year remaining life, based on a 5% real discount rate, the 1992 present worth savings in NRC resources is estimated at about $20.25 million in 1992 dollars.

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*NRC labor costs presented here differ from those developed under the NRC's license fee recovery program. For regulatory analysis purposes, labor costs are developed under strict incremental cost principles wherein only variable costs that are directly related to the development, implementation, and operation and maintenance of the proposed requirement are included. This approach is consistent with guidance set forth in NUREG/CR-3568, "A Handbook for Value Impact Assessment," and general cost benefit methodology. Alternatively, NRC labor costs for fee recovery purposes are appropriately designed for full cost recovery of the services rendered and, as such, include non-incremental costs (e.g. overhead and administrative and logistical support costs).

3.3 VALUE-IMPACT ASSESSMENT SUMMARY

The overall objective of this analysis was to assess the values and impacts (costs and savings) expected to result from implementation of the final rulemaking. Values were qualitatively discussed in Section 3.1. Impacts were assessed for the proposed rulemaking in Section 3.2 relative to the status quo. These impacts are summarized in Table 3.4.

Table 3.4 Summary of Cost Savings to Industry and the NRC (1992 Dollars)

	Annual	Lifetime (1992 Present Worth)*
INDUSTRY SAVINGS		
Operation	$ 1,240,000	$17,480,000
NRC SAVINGS		
Development (one-time cost)		-$50,000
Implementation (one-time cost)		-$150,000
Operation	$1,450,000	$20,445,000
TOTAL NRC SAVINGS		$20,250,000

3.4 IMPACT ON OTHER REQUIREMENTS

The principal impact of the final rulemaking would be on affected licensees and licensee employees. The cost impact on licensees is discussed in Section 3.2. Impacts on other government agencies are expected to be minimal. The impacts on NRC programs and requirements are also expected to be relatively small. The NRC has had existing personnel and procedures for conducting licensed operator requalification examinations since the program began in 1988. It is not anticipated that the NRC would need to add any additional staff or administrative personnel as a result of this final rulemaking. The administration of the revised regulations would be absorbed by current NRC personnel and staff.

4.0 DECISION RATIONALE

NRC staff has found that, in light of experience gained over the past several years, the proposed revisions would ensure the overall effectiveness of the

regulations in Part 55. This would be accomplished by eliminating the dual responsibility for the licensee and the NRC to conduct individual operator requalification examinations for the purpose of license renewal. Resources of the operator licensing program would be used more effectively.

The proposed action will continue to assure that licensed operators can operate controls in a safe manner and provide for direct inspection of the quality of the facility licensees' requalification programs. In fact, the NRC staff believes that the final rule will improve operational safety by allocating resources based on the performance of each facility, rather than on the number of individuals that need their license renewed. The NRC staff believes that the proposed action will result in earlier identification and correction of programmatic weaknesses. The staff has found that these are generally the root cause of individual operator performance deficiencies.

5.0 IMPLEMENTATION SCHEDULE

It is assumed that all licensees will be able to implement the requirements of the rule within 60 days after the effective date of the rule. This assumption is based on the fact that no changes to the industry's existing operator requalification programs will be required other than to begin submitting upon request copies of the requalification comprehensive written examinations or annual operating tests to the NRC for review.

6.0 REFERENCES

Gallucci, et al., Regulatory Analysis Technical Evaluation Handbook. Draft. November 1991. Pacific Northwest Laboratories. Richland, WA.

Auluck, R., ISSUE PAPER for Proposed Revisions to 10 CFR Part 55 -- Requalification and Renewal of Operators' Licenses. 7/13/92. U.S. Nuclear Regulatory Commission. Washington, DC.

Enclosure 3

Public Announcement

NRC AMENDED REQUIREMENTS GOVERNING RENEWAL OF
LICENSES OF NUCLEAR POWER PLANT AND NON-POWER REACTOR OPERATORS

The Nuclear Regulatory Commission is amending its requirements governing the renewal of licenses of nuclear power plant and non-power reactor operators.

The amendment would eliminate the present requirement for a licensed operator at power, test, and research reactors to pass a comprehensive requalification written examination and operating test administered by the NRC during the term of a six-year license as a prerequisite for license renewal.

Instead, requalification examinations would continue to be conducted by individual facility licensees who employ the operators. The existing NRC resources would then be devoted to inspecting and overseeing facility requalification programs.

The amendment reflects experience gained since the requirement was put in place in May 1987 when:

-- The term for operator licenses was changed from two years to six.

-- Operating tests had to be conducted on plant reference simulators when they either were new or still under construction.

-- Requalification programs were permitted to be based on a systems approach to training when the industry had not yet implemented the process for accrediting these programs.

Experience with this program has shown that NRC examiners largely are duplicating tasks already required of and routinely performed by the facility licensees as part of their requalification program.

In addition, in 1988, the NRC staff revised its requalification examination procedures to focus on performance-based evaluation criteria which enabled it to conduct comprehensive examinations for the purpose of renewing an individual operator's license and, at the same time, to use the results of the individual operator requalification examinations to determine the adequacy of a facility licensee's requalification training program.

Since 1987, the pass rates for individual operator requalification examinations have increased from 83 to 93 percent and the pass rate for facility licensees' requalification training programs have increased from 81 to 98 percent.

Further, the staff has seen a general improvement in the quality of the facility licensees' testing materials and in the performance of the facility test evaluators. Of the first 79 programs evaluated, 10 were found to be unsatisfactory; since that time, an additional 120 programs have been evaluated and only six additional programs were found to be unsatisfactory.

The amendment also would require facility licensees to submit upon request, a copy of their annual operating tests and comprehensive written examinations used for operator requalification to the NRC so that the staff could assure that they conform to NRC requirements. The tests and examinations would be used, together with other information already available to the staff, to determine the scope of an annual on-site requalification inspection.

Enclosure 4

Congressional Letters

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

The Honorable Richard H. Lehman, Chairman
Subcommittee on Energy and Mineral Resources
Committee on Natural Resources
United States House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

Enclosed for the information of the subcommittee is a copy of a final rule to be published in the Federal Register that contains additions to 10 CFR Part 55. Section 306 of the Nuclear Waste Policy Act (NWPA) of 1982 directed the NRC to promulgate regulations or other appropriate guidance to establish "simulator training requirements . . . and . . . requirements governing NRC administration of requalification examinations." On May 26, 1987, the NRC amended 10 CFR Part 55 to require each licensed operator to pass a comprehensive requalification written examination and an operating test administered by the NRC during the term of the operator's 6-year license as a prerequisite for license renewal.

At the time the regulation was amended, the Commission did not have sufficient confidence that each facility would conduct its annual operating tests and written examinations in accordance with the Commission's expectations. The lack of confidence was due to the implementation of new aspects of the operator requalification program with which neither the NRC nor the industry had very much experience. Therefore, the Commission determined that during the term of a 6-year license, the staff would conduct individual operator requalification examinations for the purpose of license renewal. As a result of conducting these examinations, the staff has determined that the NRC examiners are largely duplicating tasks already required of, and routinely performed by, the facility licensees.

The final rule will 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 amendment will require facility licensees to submit upon request, a copy of its requalification written examinations or annual operating tests to the Commission for review and approval to be used for operator requalification. In addition, the final rule will amend the "Scope" provisions of the regulations pertaining to operators' licenses to include facility licensees.

The staff believes that it could ensure and improve operational safety at each facility by directing its examiners to inspect and oversee facility requalification programs rather than conducting requalification examinations. By redirecting the examiner resources, the staff expects to find and correct programmatic weaknesses earlier and thus improve operational safety.

Sincerely,

Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosure:
Notice of Final Rulemaking

cc: Representative Barbara Vucanovich

The staff believes that it could ensure and improve operational safety at each facility by directing its examiners to inspect and oversee facility requalification programs rather than conducting requalification examinations. By redirecting the examiner resources, the staff expects to find and correct programmatic weaknesses earlier and thus improve operational safety.

Sincerely,

Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosure:
Notice of Final Rulemaking

cc: Representative Barbara Vucanovich

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

The Honorable Philip R. Sharp, Chairman
Subcommittee on Energy and Power
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

Enclosed for the information of the subcommittee is a copy of a final rule to be published in the Federal Register that contains additions to 10 CFR Part 55. Section 306 of the Nuclear Waste Policy Act (NWPA) of 1982 directed the NRC to promulgate regulations or other appropriate guidance to establish "simulator training requirements . . . and . . . requirements governing NRC administration of requalification examinations." On May 26, 1987, the NRC amended 10 CFR Part 55 to require each licensed operator to pass a comprehensive requalification written examination and an operating test administered by the NRC during the term of the operator's 6-year license as a prerequisite for license renewal.

At the time the regulation was amended, the Commission did not have sufficient confidence that each facility would conduct its annual operating tests and written examinations in accordance with the Commission's expectations. The lack of confidence was due to the implementation of new aspects of the operator requalification program with which neither the NRC nor the industry had very much experience. Therefore, the Commission determined that during the term of a 6-year license, the staff would conduct individual operator requalification examinations for the purpose of license renewal. As a result of conducting these examinations, the staff has determined that the NRC examiners are largely duplicating tasks already required of, and routinely performed by, the facility licensees.

The final rule will 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 amendment will require facility licensees to submit upon request, a copy of its requalification written examinations or annual operating tests to the Commission for review and approval to be used for operator requalification. In addition, the final rule will amend the "Scope" provisions of the regulations pertaining to operators' licenses to include facility licensees.

The staff believes that it could ensure and improve operational safety at each facility by directing its examiners to inspect and oversee facility requalification programs rather than conducting requalification examinations. By redirecting the examiner resources, the staff expects to find and correct programmatic weaknesses earlier and thus improve operational safety.

Sincerely,

Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosure:
Notice of Final Rulemaking

cc: Representative Michael Bilirakis

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

The Honorable Joseph Lieberman, Chairman
Subcommittee on Clean Air and Nuclear Regulation
Committee on Environment and Public Works
United States Senate
Washington, DC 20510

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cc: Senator Alan K. Simpson

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PRESENTATION TO THE CRGR

BRIEFING ON LICENSED OPERATOR REQUALIFICATION

OCTOBER 26, 1993

SHER BAHADUR, CHIEF
REGULATION DEVELOPMENT BRANCH, DRA/RES
301 492-3775
AND
ROBERT M. GALLO, CHIEF
OPERATOR LICENSING BRANCH, DRCH/NRR
301 504-1031

BACKGROUND

- Briefed CRGR on Proposed Rule, October 1992
- Submitted Proposed Rule to the Commission, December 1992 (SECY-92-430)
- Published Proposed Rule in Federal Register, May 1993 for a 60-day public comment period
- 42 comments received
- Briefed ACRS on the Final Rule Amendments, October 1993

SUMMARY OF COMMENTS

1. Proposed Amendment: Delete § 55.57(b)(2)(iv) requiring licensed operators at Part 50 facilities to pass a comprehensive requalification written examination and operating test administered by the NRC during the term of a 6-year license.

    - 36 of 42 favored the proposed amendment
      (of the 36 respondents, 22 were power reactor licensees, 13 were non-power reactor licensees; and 1 representing the National Organization of Test, Research, and Training Reactors).

    - 6 opposed (most notable from States of Vermont and Illinois).

        - Lack of confidence in licensee's grading procedures to detect unsatisfactory licensee requalification programs.

        - Current requirement provides a strong incentive for licensees to maintain the quality of their operator training program.

SUMMARY OF COMMENTS (CONT'D.)

- Staff Resolution: Deficiency in an operator's performance mostly due to weakness in implementation of licensee's requalification programs. Redirection of NRC resources towards inspection and oversight expected to improve facility programs.

  Recommendation: Delete Section 55.57(b)(2)(iv).

SUMMARY OF COMMENTS (CONT'D.)

2. Proposed Amendment: Require facility licensee to submit to the NRC for review copies of each written examination or annual operating test used for operator requalification 30 days prior to administration.

    - 41 of the 42 respondents opposed this amendment.

        - Additional burden on licensee and NRC without increase in safety benefit.

    - 1 respondent (non-power reactor licensee) favored this amendment.

        - Less burdensome than the current licensee requalification requirements.

SUMMARY OF COMMENTS (CONT'D.)

- Staff Resolution: 30-day period was proposed so that NRC could evaluate examinations and tests to determine scope of on-site inspection. Pilot Inspection Program has demonstrated no such need.

  Recommendation: Submission of examinations or tests should be required only upon request.

SUMMARY OF COMMENTS (CONT'D.)

3. Proposed Amendment: Revise scope of Part 55 to include "facility licensees."

   - Only 1 of 42 respondents to the FRN commented and endorsed this amendment.

   - Staff Resolution: This amendment is an administrative addition to the regulation, which is intended to eliminate ambiguities between Parts 50 and 55.

SUMMARY OF COMMENTS (CONT'D.)

- Specific Comments Requested: Applicability of the proposed amendments to research and test reactor facilities.

  Based on 97% pass rate in recently completed requalification examinations, staff recommends that the final amendments be applicable to both power and non-power reactor facilities.

FINAL CHANGES
TO 10 CFR PART 55

- Delete requirement for NRC to examine each operator for license renewal (i.e., § 55.57(b)(2)(iv)).

- Add requirement to § 55.59 that a facility licensee shall, upon request, submit a copy of its annual operating tests or comprehensive requalification written examinations to the Commission.

- Revise Scope of Part 55 to include "facility licensees."

PROPOSED SCHEDULE

- Complete Offices, CRGR, and ACRS review, October 26, 1993
- Final Rule to the EDO, October 29, 1993
- Publish Final Rule, December 15, 1993