



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

SEP 28 1992

Bill Humes  
Paul  
Kaj w/and  
File  
"AE39-2"  
"PDR"

MEMORANDUM FOR: Clemens J. Heltemes, Jr., Deputy Director  
for Generic Issues and Rulemaking  
Office of Nuclear Regulatory Research

FROM: Patricia G. Norry, Director  
Office of Administration

SUBJECT: OFFICE CONCURRENCE ON PROPOSED RULE ENTITLED,  
"OPERATORS' LICENSES," 10 CFR PART 55

The Office of Administration concurs on the proposed rule package that will amend 10 CFR Part 55 by deleting the requirement that each licensed operator pass a comprehensive requalification written examination and an operating test administered by the NRC during the term of an operator's 6-year license as a prerequisite for license renewal. NRC will provide oversight for these programs and examinations through inspections. The proposed amendment will also require facility licensees to submit copies of the annual operating test and comprehensive written examination 30 days prior to administration for review by the Commission. We have attached a marked copy of the proposed rule package that presents our comments.

We have suggested a number of adjustments in the presentation of regulatory text necessary to comply with the publication requirements of the Office of the Federal Register. Additionally, in the Summary and Introductory text of the Regulatory Analysis, we have recommended adding a general statement regarding regulatory requirements for operator license requalification prior to the 1987 amendment.

We have forwarded a copy of the proposed rule to the Information and Records Management Branch, IRM, for their comment or concurrence concerning the paperwork management aspects of this rulemaking action. We have requested that they respond directly to you.

In order to assist in the preparation of the list of documents centrally relevant to this rulemaking action that is required by NRC's regulatory history procedures, the designator "AE39" should be placed in the upper right-hand corner of each document concerning the rule that is forwarded to the Nuclear Document System.

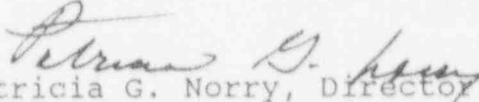
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C. J. Heltemes, Jr.

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SEP 28 1992

If you have any questions concerning this matter, please have a member of your staff contact Patricia M. Larkins (28523) or Michael T. Lesar (27758).

  
Patricia G. Norry, Director  
Office of Administration

Attachment:  
As stated

*Markings*

[7590-01]

NUCLEAR REGULATORY COMMISSION

10 CFR Part 55

RIN *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 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. The <sup>proposed</sup> ~~amended~~ regulations will also require facility licensees to submit copies of the annual operating test and comprehensive written examination <sup>used for operator requalification</sup> 30 days prior to administration for review by the Commission. <sup>the proposed rule will amend</sup> In addition, the "Scope" section of 10 CFR Part 55 will

*provisions of the regulation pertaining to operating licenses +0*

include facility licensees. *The proposed rule is intended to reduce the regulatory burden on the facility licensees and improve operational safety by providing more timely identification of program weaknesses.*

DATES: The comment period expires \_\_\_\_\_. Comments received after this date will be considered if it is practical to do so, but <sup>(the Commission is able to</sup> assurance of consideration <sup>only</sup> cannot be given except for comments received on or before this date.

ADDRESSES: Mail written comments to: ~~The~~ 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 a.m. and 4:15 p.m. 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, N.W. (Lower Level), Washington, DC.

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

#### 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." <sup>The</sup> Such 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,

On March 25, 1987 (D.F. 9453)

and instructional requirements for civilian nuclear power plant licensee personnel training programs." The NRC accomplished the objectives of the NWPA that were related to licensed operators by revising 10 CFR Part 55, effective May 26, 1987. With respect to licensed operator requalification, the revision established simulator training requirements, requirements for operating tests at simulators, instructional requirements for the program (formerly Appendix A to 10 CFR Part 55), and stipulated that in lieu of the Commission accepting a certification by the facility licensee that the licensee has passed written examinations and operating tests administered by the facility licensee within its Commission approved program developed by using a systems approach to training (SAT), the Commission may administer 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 administered by the NRC during the term of the operator's 6-year license as a prerequisite for license renewal.

Remember that amended

(The amendment revised in) (1) (2) (3)

and (The final rule also)

The Commission determined that during the term of a 6-year license issued after the 1987 amendment to Part 55, the NRC would conduct 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. Following the first ten (10) programs to be evaluated as unsatisfactory, the NRC issued Information Notice No. 90-54, "Summary of Requalification Program Deficiencies," dated August 28, 1990, that described the technical deficiencies that contributed to the program failures. Since that time *(out of a total of 10 programs)* only five programs have been evaluated as unsatisfactory.

#### Discussion

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 administered by the NRC during the term of a 6-year license. These regulations establish a dual responsibility for the facility licensee and the NRC to conduct individual operator requalification examinations for the purpose of license renewal.

The NRC staff believes operational safety at each facility will continue to be ensured, and, in fact, will be improved, if NRC examiner resources are directed towards inspecting and overseeing the facility requalification programs rather than continuing to conduct <sup>(individual operator)</sup> 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 examiner 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. By redirecting the examiner resources to inspect programs, the NRC expects to find and correct programmatic weaknesses more rapidly and thus improve operational safety.

Currently, facility licensees assist in the development and conduct of the NRC requalification examinations. The assistance includes providing to the NRC <sup>(1)</sup> the training material used for development of the written and operating examinations and <sup>(2)</sup> providing 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 removing the effort expended by the facility to assist the NRC in developing and conducting NRC requalification examinations for all licensed operators.

As part of the proposed rule change, the facility licensees would be required to submit to the NRC their annual operating tests and comprehensive written examinations used for operator requalification 30 days prior to administration. The staff would review these examinations for conformance

(NRC)

with 10 CFR 55.59(c). The <sup>NRC</sup> staff 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.

The licensed operators would need take no 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-administered 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, Section <sup>§</sup> 55.2, will be revised to include facility licensees. This is an addition to the regulation. However, it merely eliminates currently existing ambiguities between the regulations of Parts 50 and 55. Part 50, in sections <sup>§</sup> 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 <sup>would</sup> will continue to meet the requirements of Section 306 of the NWPA without the requirement for each licensed individual to pass a requalification examination conducted by the NRC during the 6-year term of the individual's license. The requirements of the NWPA <sup>would</sup> will continue to be met as follows. The regulations <sup>would</sup> will continue to require facilities to have requalification programs and conduct requalification examinations. The NRC <sup>would</sup> will provide oversight for these programs and examinations 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 may find that in some limited cases this option is warranted after conducting an on-site inspection of the facility's requalification program. The proposed amendments <sup>would</sup> not affect the regulatory or other appropriate guidance required by Section 306 of the NWPA and established in Section 55.59(a)(2)(iii) for administering NRC requalification examinations in lieu of facility-administered examinations.

#### Invitation To Comment

Comments concerning the scope and content and the implementation of the proposed amendments are encouraged. Comments on the applicability of the proposed amendments to research and test reactor facilities are expressly invited. Suggestions are especially solicited for alternatives to those rulemaking methods described in this notice.

#### Finding of No Significant Environmental Impact: Availability

The NRC has determined that the proposed rule is 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 <sup>to</sup> of 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.

Public reporting burden for this collection of information is estimated to average \_\_\_\_\_ 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, (3150-0011), 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, N.W. (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 the development and administration of 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. <sup>notice</sup> ~~The amendments will~~ reduce the regulatory burden on the facility licensees by removing the effort expended by the facility licensees to assist the NRC in developing and conducting NRC requalification examinations for all licensed operators.

As part of the rule <sup>proposed amendments would</sup> change, the facility licensees ~~will~~ be required to submit to the NRC their annual requalification operating tests and

The Commission has concluded on the basis of the documented evaluation required by 10 CFR Part 50.109(a)(4), that backfitting to comply with the requirements of this proposed rule

comprehensive written requalification examinations 30 days prior to the conduct of these tests and examinations. The NRC <sup>would</sup> will review these examinations for conformance with 10 CFR 55.59(c). The NRC <sup>would</sup> will 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 <sup>would</sup> will continue to expect each facility to meet all of the conditions required of a requalification program in accordance with 10 CFR 55.59.

The licensed operators <sup>would</sup> will need take no additional actions. Each operator <sup>would</sup> will 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 <sup>would</sup> will be expected to continue to meet the requirements of the facility requalification training program. However, the licensed operator <sup>would</sup> will 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, Section <sup>§</sup> 55.2, <sup>would</sup> will be revised to include facility licensees. This is an addition to the regulation. However, it merely eliminates currently existing ambiguities between the regulations of Parts 50 and 55. Part 50, in <sup>§</sup> sections 50.54(i) through (m), already imposes Part 55 requirements on facility licensees, and Part 55 already specifies requirements for facility licensees.

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 inspect facility licensee requalification programs rather than conducting individual operator requalification examinations. The NRC is expected to realize an annual operational cost savings of approximately \$2 million.

Each facility licensee <sup>would</sup> will continue in its present manner of conducting its licensed operator requalification program. However, this proposed rule <sup>would</sup> will reduce the burden on the facility licensees because each facility licensee <sup>would</sup> will 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 \$240K.

In summary, the proposed rule is expected to result in improved operational safety by providing more timely identification of weaknesses in <sup>facility</sup> licensees' <sup>requalification</sup> programs to ~~qualify operators~~ and the resources expended by both the NRC and the licensees <sup>would</sup> will be less than the current ~~expenditure~~. <sup>In addition, the proposed rule would also reduce</sup> The Commission has, therefore, concluded that the proposed rule meets the requirements of 10 CFR 50.109, that there <sup>would</sup> will be a substantial increase in the overall protection of public health and safety and the costs of implementations are justified.

#### List of Subjects 10 CFR Part 55

<sup>Chemical penalties,</sup> Manpower training programs, nuclear power plants and reactors, ~~penalty,~~ reporting and recordkeeping 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 proposing to adopt the following amendments to 10 CFR Part 55 as follows:

PART 55 - OPERATORS' LICENSES

*continues*

1. The authority citation for 10 CFR Part 55 ~~is revised~~ 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).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 55.3, 55.21, 55.49, and 55.53, are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and 55.9, 55.23, 55.25, and 55.53(f) are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

*(Close space)*

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 deleted.~~

*Section 55.57 is amended by removing paragraph (b)(2)(iv).  
the introductory text of paragraph (c)*

4. ~~In Section 55.59(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 submit a copy of each comprehensive requalification written examination and annual operating test to the Commission 30 days prior to administration. 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 \_\_\_\_.

For the Nuclear Regulatory Commission.

\_\_\_\_\_  
Samuel J. Chilk,  
Secretary of the Commission.

ENCLOSURE B  
REGULATORY ANALYSIS



*DRAFT*

Regulatory Analysis of Proposed Revisions to  
10 CFR Part 55 -- Operators' Licenses

Pacific Northwest Laboratory  
Richland, WA 99352

September 9, 1992

DRAFT

SUMMARY

*Add Req. history that prior to 1987 Regs. did not require continuous and rigorous examinations for requalification.*

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 administered by the NRC during the term of a 6-year license.

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 for the evaluation process outlined in 10 CFR 55.59(c)(4). After conducting these examinations over a 3-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 revising 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 proposed 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.

Since licensee requalification programs are already well established, most costs associated with the proposed rulemaking are incremental in nature. The NRC is expected to incur one-time costs associated with development and implementation of the proposed rulemaking. These one-time NRC costs are estimated to total approximately \$200,000. Offsetting these costs, the NRC is expected to realize an annual operational cost savings of approximately \$2.0 million. Facility licensees are expected to realize a combined annual operational cost savings of approximately \$240,000.

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ABBREVIATIONS

CFR - Code of Federal Regulations

FR - Federal Register

FY - Fiscal Year

NRC - U.S. Nuclear Regulatory Commission

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CONTENTS

SUMMARY . . . . .	i
ABBREVIATIONS . . . . .	ii
1.0 INTRODUCTION . . . . .	1
1.1 Background . . . . .	1
1.2 Statement of the Issue . . . . .	1
1.3 Objectives . . . . .	2
2.0 REGULATORY ALTERNATIVES . . . . .	4
2.1 Take No Action . . . . .	4
2.2 Proposed Action . . . . .	4
3.0 CONSEQUENCES . . . . .	6
3.1 Estimation of Values (Safety-Related Consequences) . . . . .	6
3.2 Estimation of Impacts (Economic Consequences) . . . . .	7
3.2.1 Onsite Property and Industry Implementation Costs . . . . .	7
3.2.2 Industry Operation Costs . . . . .	7
3.2.3 NRC Development Costs . . . . .	11
3.2.4 NRC Implementation Costs . . . . .	11
3.2.5 NRC Operation Costs . . . . .	12
3.3 Value-Impact Assessment Summary . . . . .	15
3.4 Impact on other Requirements . . . . .	15
4.0 DECISION RATIONALE . . . . .	17
5.0 IMPLEMENTATION SCHEDULE . . . . .	17
6.0 REFERENCES . . . . .	17

## 1.0 INTRODUCTION

The NRC is considering <sup>(amendments)</sup> revising 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 proposed 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 proposed 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 administer a comprehensive requalification written examination and operating test in lieu of accepting certification that the licensee had passed written examinations and operating tests administered 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 administered by the NRC during the term of a 6-year license. These regulations establish a dual responsibility for the facility licensee and the NRC to conduct individual operator requalification examinations for the purpose of license renewal.

Prior to 1987, NRC regulations did not require facility licensees to perform continuous and rigorous examinations and training/reevaluation programs for operators' licenses. Licensees could establish programs voluntarily.

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As a result, Commission

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 staff's expectations for the evaluation process outlined in 10 CFR 55.59(c)(4). Section 55.59(c) provides that, in lieu of Paragraph 10 CFR 55.59(c)(4), the Commission may approve a program developed by using a systems approach to training. However, in 1987, the industry had not yet developed the criteria for accrediting the licensed operator requalification program even though some facilities had implemented a systems approach to training.

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 proposed rulemaking is therefore being considered to ensure and improve the continued effectiveness of the Part 55 requalification requirements.

If the NRC adopts the proposed 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 provide oversight for these programs and examinations 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 may find that in some limited cases this option is warranted after conducting an onsite inspection of the facility's requalification program. The proposed 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 proposed 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 for the evaluation process outlined in 10 CFR 55.59(c)(4).

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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. Furthermore, 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.

## DRAFT

### 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 proposed 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 3-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. In light of these developments, taking no action at this time would have a relative negative impact on the continued effectiveness of the rule.

#### 2.2 Proposed Action

The regulations need to be amended in two places to resolve the issue. First, 10 CFR 55.57(b)(2)(iv) needs to be deleted. Each licensed individual would then no longer be required to pass an NRC-administered requalification examination during the term of his or her license. Second, the NRC would amend 10 CFR 55.59(c) to require each facility licensee to submit a copy of each requalification written examination and annual operating test to the NRC for review 30 days prior to administration. 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.

An additional amendment, not directly related to resolving this issue, will be to change 10 CFR 55.2, "Scope," 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.

The licensed operators would need take no 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. As part of the rule change, the facility licensees would be required to submit to the NRC their annual operating tests and comprehensive written examinations used for operator requalification 30 days prior to administration. The NRC would review these examinations for conformance with 10 CFR 55.59(c). 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).



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3.0 CONSEQUENCES

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

Table 3.1. Checklist for Identification of Potential Effects

<u>Potential Effect</u>	<u>Quantified Change</u>	<u>Qualitative Change</u>	<u>No Significant Change</u>
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 proposed 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 proposed rulemaking accrue from increased effectiveness of the NRC examiner resources.

The experience gained since the NRC requalification program began in 1988 has indicated that the root cause of significant deficiencies in the performance of individual licensed operators is generally a weaknesses in the implementation of the facility requalification program. 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. As of March, 1992, the FY92 failure rate of individual licensed operators was only 5%.

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

DRAFT

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 are expected to be identified and corrected more rapidly.

The proposed regulatory action would, therefore, more effectively ensure that licensed individuals and operating crews are qualified to safely operate the facility. As a result, operational safety can be ensured and improved at each facility by directing the NRC examiners to inspect and oversee facility requalification programs rather than conducting requalification examinations.

### 3.2 Estimation of Impacts (Economic Consequences)

The proposed rulemaking would reduce the burden on the facility licensee because each facility licensee would have its administrative and technical staff expend fewer hours than now required to assist in developing and conducting the NRC requalification examination.

In estimating the impact of the proposed regulatory action on utility and NRC costs, three types of costs are considered. The utility costs are onsite property costs, implementation costs, and operation costs. The NRC costs are development costs, implementation costs, and operation costs.

#### 3.2.1 Onsite Property and Industry Implementation Costs

Since the proposed rulemaking is expected to have no significant impact on the accident frequency, there is no expected impact or potential onsite property damage. Similarly, since implementation of the proposed 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 examiners and facility evaluators, co-conduct, validate, and co-administer the NRC examinations to ensure that the NRC examinations are valid and appropriate for the facility at which the examinations are being given. The amount of material that each facility licensee currently submits to the NRC for the routine NRC requalification examinations is also much larger than the amount expected under the proposed regulatory action.

Under the proposed rulemaking, each facility licensee is expected to continue in its present manner of conducting requalification training programs. However, adopting the proposed rulemaking would reduce the regulatory burden

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on the facility licensees by removing the dual effort expended by the facility 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 proposed rulemaking.

DRAFT

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

<u>Cost Element</u>	<u>Best Estimate (\$)</u>
<b>SALARIES AND BENEFITS</b>	
Facility administrative staff (to prepare reference materials for NRC)	1,000 <sup>a</sup>
Facility technical staff (to assist NRC in the development and conduct of the NRC examinations)	6,000 <sup>b</sup>
Facility administrative staff (to assist NRC in conduct of the NRC examinations)	<u>1,000</u> <sup>a</sup>
Total Direct Salaries	8,000
<b>MATERIALS AND SERVICES</b>	
Expendable Supplies (to provide the NRC all the material used for development of the written and operating examinations)	100
Reproduction Expenses	100
Shipping Expenses	<u>1,000</u>
Total Materials and Services	1,200
<b>TOTAL FACILITY COSTS</b>	<b>9,200</b>

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<sup>a</sup> 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.

<sup>b</sup> 120 staff-hours @ \$50/hour.

DRAFT

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

<u>Cost Element</u>	<u>Best Estimate (\$)</u>
<b>SALARIES AND BENEFITS</b>	
Facility administrative staff (to prepare examination materials for NRC)	750 <sup>a</sup>
Facility technical staff (to assist NRC in the inspection of the facility requalification program)	3,000 <sup>b</sup>
Facility administrative staff (to assist NRC in the inspection of the facility requalification program)	<u>1,000<sup>c</sup></u>
Total Direct Salaries	4,750
<b>MATERIALS AND SERVICES</b>	
Expendable Supplies (to provide the NRC all the material used for inspection of the facility requalification program)	100
Reproduction Expenses	100
Shipping Expenses	<u>1,000</u>
Total Materials and Services	1,200
<b>TOTAL FACILITY COSTS</b>	<b>5,950</b>

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<sup>a</sup> 15 person-hours @ \$50/hour.

<sup>b</sup> 60 staff-hrs @ \$50/hr.

<sup>c</sup> 20 person-hrs @ \$50/hr.

DRAFT

The number of facility licensee requalification programs is 75. Assuming that current practices involve one NRC requalification examination per program-year, and a total of 75 programs, this results in an annual industry cost of  $(\$9,200/\text{program-yr})(75 \text{ programs}) = \$6.9\text{E}+5/\text{yr}$ . Assuming that, after the proposed changes, NRC would administer one requalification program inspection per program-year, at a total of 75 programs, this results in an annual industry cost of  $(\$5,950/\text{program-yr})(75 \text{ programs}) = \$4.5\text{E}+5/\text{yr}$ . This indicates an annual industry cost savings of  $\$2.4\text{E}+5$  associated with the proposed rulemaking.

### 3.2.3 NRC Development Costs

NRC development costs are those 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.

Since much of the development work has been completed on this proposed action, some "development costs" will be incurred regardless of whether the proposed action is adopted or rejected. 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 proposed 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-years will be required to complete all phases of the development process. Based on an NRC labor cost estimate of  $\$50/\text{person-hr}$ , the above labor requirement results in an NRC development cost of approximately  $\$50,000^a$ .

### 3.2.4 NRC Implementation Costs

NRC implementation costs are those costs that 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  $\$100,000/\text{person-year}$ .

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<sup>a</sup> The value of  $\$50/\text{person-hour}$  is rounded from the standard NRC labor rate of  $\$48/\text{person-hour}$  from the most recent draft of the Regulatory Analysis Technical Evaluation Handbook.

DRAFT

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

- training of NRC & contractor examiners on the new inspection module in 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

It is believed that the proposed rulemaking would reduce the NRC cost to operate the licensed operator requalification program. It is also believed that the current NRC resources used in the operator licensing program could more effectively be used by allocating examiner resources according to the indicated performance of each facility's requalification training program rather than according to the number of licensed individuals at a facility. The NRC would direct these resources to find programmatic weaknesses earlier, correct safety issues, and implement an onsite inspection program instead of routinely conducting individual requalification examinations.

The NRC would retain the option of conducting requalification examinations to assure that the operators are performing satisfactorily. The proposed rulemaking would delete the redundant requirement that each licensee pass both the NRC and the facility requalification examinations as a condition for license renewal.

The NRC currently incurs operating costs associated with the NRC requalification examinations. These costs, as indicated in Table 3.4, are the recurring costs that are necessary to ensure continued compliance with the current requalification regulations. After the proposed action is implemented, the NRC will continue to incur associated operating costs. These costs, as indicated in Table 3.5, are the recurring costs that are necessary to ensure continued compliance with the proposed rule.



DRAFT

Table 3.4 Affected Current NRC Costs (per NRC examination)

<u>Cost Element</u>	<u>Best Estimate (\$)</u>
SALARIES AND BENEFITS	
NRC staff (to develop and conduct exams)	10,000 <sup>a</sup>
Contractor staff (to develop and conduct exams)	<u>30,400<sup>b</sup></u>
Total Salaries and Overhead	40,400
MATERIALS AND SERVICES	
Expendable Supplies (used for development of the written and operating examinations)	100
Reproduction Expenses	100
NRC staff travel costs	3,000
Contractor staff travel costs	<u>8,000</u>
Total Materials and Services	11,200
TOTAL NRC COSTS	51,600

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<sup>a</sup> 200 person-hours @ \$50/hour.

<sup>b</sup> Two contractor staff for a total of 320 staff-hours @ \$95/hour.  
This labor rate includes overhead charges.

DRAFT

Table 3.5 Affected NRC Costs (per NRC inspection) After Proposed Changes

<u>Cost Element</u>	<u>Best Estimate (\$)</u>
SALARIES AND BENEFITS	
NRC staff (to prepare for, inspect, and document the facility requalification program inspection)	16,000 <sup>a</sup>
Contractor staff (to assist NRC in inspection of the facility requalification programs)	<u>4,500<sup>b</sup></u>
Total Salaries and Overhead	20,500
MATERIALS AND SERVICES	
Expendable Supplies (used for inspection of the facility requalification program)	100
Reproduction Expenses	100
NRC staff travel costs	3,000
Contractor staff travel costs	<u>2,000</u>
Total Materials and Services	5,200
TOTAL NRC COSTS	25,700

The number of facility licensee requalification programs is 75. Assuming that current practices involve one NRC requalification examination per program-year, and a total of 75 programs, this results in an annual NRC cost of (\$51,600/program-yr)(75 programs) = \$3.9E+6/yr. Assuming that, after the proposed changes, NRC would administer one requalification program inspection per program-year, at a total of 75 programs, this results in an annual NRC

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<sup>a</sup> 320 person-hours @ \$50/hour.

<sup>b</sup> One contractor staff for a total of 100 staff-hours @ \$95/hour may substitute for one NRC examiner in special circumstances. This labor rate includes applicable overhead charges. The difference of \$95/hr - \$50/hr = \$45/hr was used to calculate the incremental increase in costs associated with the use of contractor staff.

DRAFT

cost of  $(\$25,700/\text{program-yr})(75 \text{ programs}) = \$1.9\text{E}+6/\text{yr}$ . This indicates an annual NRC cost savings of  $\$2.0\text{E}+6$  associated with the proposed rulemaking.

3.3. 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 proposed 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 3.6.

Table 3.6. Summary of Impacts (\$/year)

	<u>Current Regulations</u>	<u>After Proposed Changes</u>
One-time costs:		
NRC Development	--	5.0E+4
NRC Implementation	--	1.5E+5
Recurring Costs:		
Industry Operation	\$6.9E+5	4.5E+5
NRC Operation	\$3.9E+6	1.9E+6

Based on recurring costs, annual operational savings are:

Annual NRC cost savings =  $\$2.0\text{E}+6$   
Annual Industry cost savings =  $\$2.4\text{E}+5$ .

Annually, the licensee recurring cost savings are approximately  $\$2.4\text{E}+5/\text{yr}$ . When discounted at 5% annually over the average remaining lifetime of 25 years, the total licensee recurring cost savings becomes  $(\$2.4\text{E}+5/\text{yr})(14.1)^a = \$3.4\text{E}+6$ . Annually, the NRC recurring cost savings are  $\$2.0\text{E}+6/\text{yr}$ . When discounted at 5% annually over the average remaining lifetime of 25 years, the total NRC recurring cost savings becomes  $(\$2.0\text{E}+6/\text{yr})(14.1) = \$2.8\text{E}+7$ .

3.4 Impact on other Requirements

The principal impact of the proposed 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

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<sup>a</sup> The value 14.1 represents the annuity discount factor assuming a 25 year average remaining lifetime and an annual real discount rate of 5%.

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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 1977. It is not anticipated that the NRC would need to add any additional staff or administrative personnel as a result of this proposed rulemaking. The administration of the revised regulations would be absorbed by current NRC personnel and staff.

#### 4.0 DECISION RATIONALE

The purpose of the proposed rulemaking is to address issues related to the effectiveness of the Part 55 requirements. The proposed action is recommended in order to address these issues and continue assuring that the general performance objectives of the regulations are achieved, as discussed in Section 1.3 of this regulatory analysis. NRC staff has found that, in light of experience gained over the past several years, the proposed revisions are needed to ensure the overall effectiveness of the regulations. This is accomplished by eliminating the dual responsibility for the licensee and the NRC to conduct individual operator requalification examinations for the purpose of license renewal.

The NRC staff believes that operational safety will be improved by the proposed action. The NRC will be able to use the resources of the operator licensing program in a more effective manner 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 that the staff has found are usually the root cause of individual operator performance deficiencies. The proposed action will continue 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.

DRAFT

## 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 copies of the comprehensive written examinations and annual operating tests 30 days prior to administration.

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6.0 REFERENCES

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

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Requalification and Renewal of Operators' Licenses. 7/13/92. U.S. Nuclear  
Regulatory Commission. Washington, DC.