



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

SEP 29 1992

MEMORANDUM FOR: Edward L. Jordan, Director  
Office for Analysis and Evaluation  
of Operational Data

FROM: C. J. Heltemes, Jr., Deputy Director  
for Generic Issues and Rulemaking  
Office of Nuclear Regulatory Research

SUBJECT: PROPOSED REVISION OF 10 CFR 55 TO AMEND OPERATOR  
REQUALIFICATION EXAMINATION REQUIREMENTS

Enclosed for the Committee to Review Generic Requirements (CRGR) is a Commission paper related to the rule change to 10 CFR Part 55, "Operator's Licenses" (Attachment 1). The proposed rule change and its associated regulatory analysis are Enclosures A and B of this Commission paper. Attachment 2 contains specific information on the 12 items requested in Section IV.B of the CRGR Charter. The proposed action to amend 10 CFR Part 55 will: 1) delete the requirement that each licensed individual pass an NRC-administered requalification examination during the term of license; 2) require that facility licensees submit to the NRC their annual requalification operating tests and comprehensive requalification written examinations 30 days prior to the conduct of these tests and examinations; and 3) include facility licensees in the "Scope" of Part 55. The rules, as proposed, will improve operational safety at each facility by redirecting NRC examiners to inspect and oversee facility requalification programs rather than conducting requalification examinations for all licensed operators, while reducing both licensee and NRC costs to administer the program.

In SECY-92-100 (Status and Direction of the Licensed Operator Requalification Program), dated March 19, 1992, the staff informed the Commission of its intent to initiate a 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 June 2, 1992, the Commission was briefed on SECY-92-100, including the staff's intent to initiate rulemaking for 10 CFR Part 55. On June 23, 1992, the Commission issued the staff requirements memorandum (SRM) for SECY-92-100, indicating agreement to proceed with a proposed rule change.

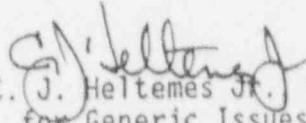
The enclosed proposed rule change and regulatory analysis have been concurred upon in draft form by management in the Offices of NRR, OE, and RES. OGC has no legal objection. Until released for public comments, the rule change and regulatory analysis are predecisional and for internal use only.

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55 59FR5934 PDR

Mr. Edward L. Jordan

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In order to meet the accelerated schedule for this rulemaking, we request your review by October 13, 1992. Questions regarding this rulemaking should be addressed to Raj Auluck at 492-3794.

  
C. J. Heltemes Jr. Deputy Director  
for Generic Issues and Rulemaking  
Office of Nuclear Regulatory Research

Enclosures:  
As stated



SEP 25 1992

Mr. Edward L. Jordan

2

In order to meet the accelerated schedule for this rulemaking, we request your review by October 13, 1992. Questions regarding this rulemaking should be addressed to Raj Auluck at 492-3794.

Original Signed By:

C. J. Heltemes Jr., Deputy Director  
for Generic Issues and Rulemaking  
Office of Nuclear Regulatory Research

Enclosures:  
As stated

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 DLange  
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OFFC:	<i>RAuluck</i>	LOLB:NRR	LOLB:NRR	RD:DRA:RES	DD:DRA:RES	D:DRA:RES	DD:G.M:RES
NAME:	RAuluck:cj	DLange	RGallo	PLohaus	NCostanzi	BMorris	CJHeltemes
DATE:	9/28/92	9/28/92	9/28/92	9/28/92	9/28/92	9/28/92	9/28/92

OFFICIAL RECORD COPY

For: The Commissioners

From: James M. Taylor  
Executive Director for Operations

Subject: PROPOSED AMENDMENTS TO 10 CFR PART 55 ON RENEWAL OF LICENSES  
AND REQUALIFICATION

Purpose: To obtain Commission approval for publication of the  
proposed amendments.

Background: 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. 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

Contact:  
Rajender Auluck, RES  
301-492-3794

David Lange, NRR  
301-504-3171

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. 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 staff 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 systems-approach-to-training based training program. This revision to the NRC requalification examination process enabled the staff 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.

In SECY-90-235, "NRC Recognition of Good Performance by Power Reactor Licensees," dated July 2, 1990, the staff proposed a pilot program that would recognize good performance at facilities that received two successive satisfactory ratings of the operator license renewal program. The staff informed the Commission in SECY-90-235 that it would make recommendations to the Commission concerning rulemaking to permanently effect a change to allow operators to renew their licenses under requalification examinations that the NRC would audit.

Since the NRC began 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 staff 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 staff issued an information notice IN-90-54, dated August 28, 1990, that described the process and technical deficiencies that contributed to the program failures. Since that time only five additional programs have been evaluated as unsatisfactory.

## The Commissioners

In SECY-92-100, (Status and Direction of the Licensed Operator Requalification Program) dated March 19, 1992, the staff informed the Commission of its intent to initiate a 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 operators 6-year license. On June 2, 1992, the Commission was briefed on SECY-92-100, including the staff's intent to initiate rulemaking for 10 CFR Part 55. On June 23, 1992, the Commission issued the staff requirements memorandum (SRM) for SECY-92-100, indicating agreement to proceed with a proposed rule change.

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 requirements which impose a dual responsibility on both the facility licensee which assists in developing and conducting its own as well as NRC requalification examinations, and the NRC which supervises both the facility licensee requalification program as well as conducting a comprehensive requalification examination during the term of an operator's 6-year license.

The 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. The staff'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 significant deficiencies in the performance of operators. The staff 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, the staff expects to find and correct programmatic weaknesses earlier 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 the training

## The Commissioners

material used for development of the written and operating examinations and 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. The staff would review these examinations for conformance with 10 CFR 55.59(c). The 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(c).

The proposed regulations deleting the requirement for each licensed individual to pass an NRC requalification examination during the 6-year term of the individual's license will continue to meet the requirements of Section 306 of the 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 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 cases this option is warranted after conducting an on-site inspection of the facility's requalification program.

Coordination: The Office of the General Counsel has no legal objection.

Recommendation: That the Commission:

- (1) Approve publication for comment of the proposed rule as set forth in Enclosure A.
- (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) The notice of rulemaking (Enclosure A) will be published in the Federal Register, allowing 60 days for public comment.
- (b) A regulatory analysis will be available in the Public Document Room (Enclosure B).
- (c) A public announcement will be issued (Enclosure C).
- (d) The Subcommittee on Nuclear Regulation of the Senate Committee on Environment and Public Works, the Subcommittee on Energy and Power of the House Committee on Energy and Commerce, and the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs will be informed by letter (Enclosure D).
- (e) This rule will be submitted to the Office of Management and Budget for review and approval of the paperwork requirements.
- (f) 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.

James M. Taylor  
Executive Director  
for Operations

Enclosures:

- A. Federal Register Notice
- B. Regulatory Analysis
- C. Public Announcement
- D. Congressional Letters

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(3) Note that:

- (a) The notice of rulemaking (Enclosure A) will be published in the Federal Register, allowing 60 days for public comment.
- (b) A regulatory analysis will be available in the Public Document Room (Enclosure B).
- (c) A public announcement will be issued (Enclosure C).
- (d) The Subcommittee on Nuclear Regulation of the Senate Committee on Environment and Public Works, the Subcommittee on Energy and Power of the House Committee on Energy and Commerce, and the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs will be informed by letter (Enclosure D).
- (e) This rule will be submitted to the Office of Management and Budget for review and approval of the paperwork requirements.
- (f) 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.

James M. Taylor  
Executive Director  
for Operations

Enclosures:

- A. Federal Register Notice
  - B. Regulatory Analysis
  - C. Public Announcement
  - D. Congressional Letters
- } Not included

\*See Heltemes memo to Office Directors, dtd 9/11/92

Offc:	*RDB:DRA:RES	LOLB:NRR	LOLB:/NRR	*RDB:DRA:RES	*DD:DRA:RES	*D:DRA:RES
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Date:	09/10/92	/ /92	/ /92	09/10/92	09/10/92	09/10/92

Offc:	*DD:GIR:RES	D:NRR	OGC	D:OE	D:ADM	D:IRM
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Date:	/ /92	/ /92

DOC. FILE NAME: RENEWAL.REV

LONG DISPLAY: Commission Paper re 10 CFR Part 55 Proposed Amendments

CREATED:

AUTHOR: R. Auluck

REVISED:	09/23/92	09/24/92	09/25/92	09/28/92
TYPIST:	CJones	CJ	CJ	CJ
TIME:	2:40 pm	8:33 am	2:10 pm	10:18 am

EXCERPT:

For: The Commissioners

From: James M. Taylor  
Executive Director for Operations

Subject: PROPOSED AMENDMENTS TO 10 CFR PART 55 ON RENEWAL OF LICENSES  
AND REQUALIFICATION

Purpose: To obtain Commission approval for publication of the  
proposed amendments.

Background: Section 306 of the Nuclear Waste Policy Act (NWPA) of 1982  
directed the NRC to promulgate regulations or other



ENCLOSURE A  
PROPOSED RULE CHANGE

NUCLEAR REGULATORY COMMISSION

10 CFR Part 55

RIN

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 conducted by the NRC during the term of the operator's 6-year license as a prerequisite for license renewal. The amended regulations will also require facility licensees to submit copies of the annual operating test or comprehensive written examination 30 days prior to conducting the examination or the test for review by the Commission. In addition, the "Scope" section of 10 CFR Part 55 will include facility licensees.

DATES: The comment period expires \_\_\_\_\_. Comments received after this date will be considered if it is practical to do so, but assurance of consideration 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: Dr. Rajender Auluck, P.E., 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." 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,

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 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.

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 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 conducted by the NRC during the term of a 6-year license. These regulations establish requirements which impose a dual responsibility on both the facility licensee which assists in developing and conducting its own as well as NRC requalification examinations, and the NRC which supervises both the facility

licensee requalification program as well as conducting a comprehensive requalification examination during the term of an operator's 6-year license.

The NRC 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 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 the training material used for development of the written and operating examinations and 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 or comprehensive

written examinations used for operator requalification 30 days prior to giving these tests or examinations. The staff would review these examinations on an audit basis for conformance with 10 CFR 55.59(c). The 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.

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

The "Scope" of Part 55, Section 55.2, will be revised to include facility licensees. This is an addition to the regulation. It eliminates currently existing ambiguities between the regulations of Parts 50 and 55. Part 50, in sections 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 will meet the requirements of Section 306 of the NWPA without the requirement that each licensed individual pass a requalification examination conducted by the NRC during the 6-year term of the individual's license. The requirements of the NWPA will be met as follows:

- 1) the regulations will continue to require facilities to have requalification

programs and conduct requalification examinations; 2) the NRC will provide oversight (i.e., administration) for these programs and examinations through inspections; and 3) Section 55.59(a)(2)(iii) provides that the NRC may conduct requalification examinations in lieu of accepting the facility licensee's certification that a licensed individual has passed the facility requalification examination. The NRC may find that in some limited cases this option is warranted after an on-site inspection of the facility's requalification program. The proposed amendments will 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 the NRC to conduct requalification examinations in lieu of an examination given by the facility.

#### Invitation To Comment

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

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

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



## Paperwork Reduction Act Statement

This proposed rule amends information collection requirements that are subject 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. 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 change, the facility licensees will be required to submit to the NRC their annual requalification operating tests and

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

Licensed operators will not have to take any additional actions. Each operator 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 will be expected to continue to meet the requirements of the facility requalification training program. However, the licensed operator 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, 10 CFR 55.2, will be revised to include facility licensees. This is an addition to the regulation. It eliminates currently existing ambiguities between the regulations of Parts 50 and 55. Part 50, in 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 oversee facility licensee requalification programs rather than conducting individual operator requalification examinations for all licensed operators. The NRC is expected to realize an annual operational cost savings of approximately \$1.5 million.

Each facility licensee will continue in its present manner of conducting its licensed operator requalification program. However, this proposed rule will reduce the burden on the facility licensees because each facility licensee 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 \$150K.

In summary, the proposed rule is expected to result in improved operational safety by providing more timely identification of weaknesses in licensees' programs to qualify operators. In addition, the resources expended by both the NRC and the licensees will be less than current expenditures. The Commission has, therefore, concluded that the proposed rule meets the requirements of 10 CFR 50.109, that there 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

Manpower training programs, nuclear power plants and reactors, penalty, reporting and recordkeeping requirements.

## Text of Final Regulation

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

### PART 55 - OPERATORS' LICENSES

1. The authority citation for 10 CFR Part 55 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)).

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

(c) any facility licensee.

3. Section 55.57(b)(2)(iv) is deleted.

4. Section 55.59(c) is revised to read as follows:

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

Dated at Rockville, Maryland, this \_\_\_\_ day of \_\_\_\_\_.

For the Nuclear Regulatory Commission.

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Samuel J. Chilk,  
Secretary of the Commission.

DOC. FILE NAME: PRPSDRQL.ONE  
LONG DISPLAY: Operators' Licenses

CREATED:

AUTHOR: R. Auluck

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EXCERPT:

[7590-01]

NUCLEAR REGULATORY COMMISSION  
10 CFR Part 55  
RIN  
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 conducted by the NRC during the term of the operator's 6-year license as a

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

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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 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). 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 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 \$1.5 million. Facility licensees are expected to realize a combined annual operational cost savings of approximately \$150,000.

## ABBREVIATIONS

CFR - Code of Federal Regulations

FR - Federal Register

FY - Fiscal Year

NRC - U.S. Nuclear Regulatory Commission

## 1.0 INTRODUCTION

The NRC is considering 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 conduct 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 conducted by the NRC during the term of a 6-year license. These regulations establish requirements which impose a dual responsibility on both the facility licensee which assists in developing and conducting its own as well as NRC requalification examinations, and the NRC which supervises both the facility licensee requalification program as well as conducting a comprehensive requalification examination during the term of an operator's 6-year license.

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). 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 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). 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. 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.

## 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 have to 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 a copy of each requalification written examination or annual operating test to the NRC for review 30 days prior to conducting such examination or test. 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 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).



### 3.0 CONSEQUENCES

This section discusses the benefits and costs that may result from the proposed rulemaking. The benefits and costs of the proposed 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 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 indicates that the root cause of significant deficiencies in the performance of individual licensed operators is generally caused by 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 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 proposed 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 proposed 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.

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

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

<u>Cost Element</u>	<u>Best Estimate (\$)</u>
SALARIES AND BENEFITS	
Facility administrative staff (to prepare reference materials for NRC)	1,000*
Facility technical staff (to assist NRC with developing and conducting the NRC examinations)	6,000*
Facility administrative staff (to assist NRC with conducting the NRC examinations)	<u>1,000*</u>
Total Direct Salaries	8,000
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	<u>1,000</u>
Total Materials and Services	1,200
TOTAL FACILITY COSTS	9,200

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\*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.

\*120 staff-hours @ \$50/hour.

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/hour.

<sup>c</sup>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  $(\$9,200/\text{program-yr})(65 \text{ programs}) = \$6.0\text{E}+5/\text{yr}$ . 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  $\$1.5\text{E}+5$  associated with the proposed 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.

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  $\$50,000$ .\*

### 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  $\$100,000/\text{person-year}$ .

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\*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.

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

- training of NRC & 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

The proposed rulemaking should reduce the NRC cost to operate the licensed operator requalification program 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 more rapidly, 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 compliance with the proposed rule.

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 NRC cost of (\$51,600/program-yr)(65 programs) = \$3.4E+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 cost of (\$25,700/program-yr)(75 programs) = \$1.9E+6/yr. This indicates an annual NRC cost savings of \$1.5E+6 associated with the proposed rulemaking.

### 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 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 3.4 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 total of 320 staff-hours @ \$95/hour. This labor rate includes overhead charges.



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

<u>Cost Element</u>	<u>Best Estimate (\$)</u>
<b>SALARIES AND BENEFITS</b>	
NRC staff (to prepare for, inspect, and document the facility requalification program inspection)	16,000*
Contractor staff (to assist NRC in inspection of the facility requalification programs)	<u>4,500</u> <sup>b</sup>
Total Salaries and Overhead	20,500
<b>MATERIALS AND SERVICES</b>	
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
<b>TOTAL NRC COSTS</b>	<b>25,700</b>

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\*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/hour - \$50/hour = \$45/hour was used to calculate the incremental increase in costs associated with the use of contractor staff.

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	\$6.0E+5	4.5E+5
NRC Operation	\$3.4E+6	1.9E+6

Based on recurring costs, annual operational savings are:

Annual NRC cost savings = \$1.5E+6  
 Annual Industry cost savings = \$1.5E+5.

Annually, the licensee recurring cost savings are approximately \$1.5E+5/yr. When discounted at 5% annually over the average remaining lifetime of 25 years, the total licensee recurring cost savings becomes  $(\$1.5E+5/yr)(14.1)^* = \$2.1E+6$ . Annually, the NRC recurring cost savings are \$1.5E+6/yr. When discounted at 5% annually over the average remaining lifetime of 25 years, the total NRC recurring cost savings becomes  $(\$1.5E+6/yr)(14.1) = \$2.1E+7$ .

### 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 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 proposed rulemaking. The administration of the revised regulations would be absorbed by current NRC personnel and staff.

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

#### 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 proposal 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 copies of the comprehensive written examinations or annual operating tests 30 days prior to conducting such examinations or tests.

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

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*DRAFT*

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

Response to the 12 items from the CRGR Charter

1. The proposed generic requirement or staff position as it is proposed to be sent out to licensees:

See the Federal Register Notice.

2. Draft staff papers or other underlying staff documents supporting the requirements or staff positions.

Enclosed with cover letter are the:

- a. Commission Paper, "Proposed Amendments to 10 CFR Part 55 on Renewal of Licenses and Requalification,"
- b. proposed rule, and
- c. proposed regulatory analysis.

Additional references:

- a. the SRM of June 23, 1992,
- b. the July, 23, 1992 memorandum from C. J. Heltemes, Jr. to Frank J. Miraglia and Martin G. Malsch,
- c. SECY-90-235, "NRC Recognition of Good Performance by Power Reactor Licensees," and
- d. SECY-92-100, "Status and Direction of the Licensed Operator Requalification Program."

3. The sponsoring office's position as to whether the proposal would increase requirements or staff positions, implement existing requirements or staff positions, or would relax or reduce existing requirements or positions:

The "Scope" of Part 55, Section 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 50.54(i) through (m), already imposes Part 55 requirements on facility licensees, and Part 55 already specifies requirements for facility licensees (e.g., 55.23, 55.25, 55.27, 55.45(b), and 55.59(c)). This change is administrative in nature and serves to codify already existing regulatory requirements.

The existing requirements will be reduced in that 10 CFR 55.57(b)(2)(iv) will be deleted. Each licensed individual will no longer be required to pass an NRC-conducted requalification examination during the term of his or her license for the purpose of license renewal.

The existing requirements will be increased in that facility licensees will be required to submit to the NRC their annual requalification operating tests and comprehensive requalification written examinations 30 days prior to the conduct of these tests and examinations. This requirement codifies the staff's current practice of requesting examination material for the purpose of conducting NRC examinations and the material being required (generally only exams) is a reduction in the scope of material previously requested.

4. The proposed method of implementation along with the concurrence (and any comments) of OGC on the method proposed. The concurrence of affected program offices or an explanation of any non-concurrences:

OGC has indicated that no legal objection exists relative to the proposal. The proposed method of implementation is to review licensees' written requalification examinations and operating tests, and conduct performance-based inspections of facility licensee requalification programs.

5. Regulatory analyses generally conforming to the directives and guidance of NUREG/BR-0058 and NUREG/CR-3568.

See the Regulatory Analysis referenced in the Federal Register Notice.

6. Identification of the category of reactor plants to which the generic requirement or staff position is to apply.

The revisions to Part 55 apply to all categories of reactor plants. They also apply to all licensed operators.

7. For backfits other than compliance or adequate protection backfits, a backfit analysis as defined in 10 CFR 50.109. The backfit analysis includes, for each category of reactor plant, an evaluation which demonstrates how action should be prioritized and scheduled in light of other ongoing regulatory activities. The backfit analysis documents for consideration information available concerning the following factors as may be appropriate and any other information relevant and material to the proposed action:

The addition of the requirement that facility licensees submit to the NRC their annual requalification operating tests and comprehensive requalification written examinations 30 days prior to the conduct of these tests and examinations may require modification or addition to the procedures required to operate a facility. See the Backfit Analysis in the Federal Register Notice.

- (a) Statement of the specific objectives that the proposed action is designated to achieve:

The staff seeks to improve 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. The staff'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 staff could more effectively allocate its examiners 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 examiners to inspect programs, the staff expects to find and correct programmatic weaknesses more rapidly than by having them continue to conduct requalification examinations for each individual licensed operator.

- (b) General description of the activity that would be required by the licensee or applicant in order to complete the action:

The licensed operators need take no additional actions. Each operator will 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 this rule change, the facility licensees will be required to submit to the NRC their annual operating tests and comprehensive written examinations used for operator requalification. The staff will audit these examinations for conformance with 10 CFR 55.59. The staff will conduct this audit and review other information already available to the staff to determine the focus of the onsite inspections of facility licensee requalification programs. The NRC will 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) Potential change in the risk to the public from the accidental offsite release of radioactive material:

The staff believes that it could continue to ensure, and improve, 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. The staff'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 examiners to perform on-site inspections of facility requalification examination and training programs in accordance with indicated programmatic weaknesses rather than scheduling examiners in accordance with the number of individuals requiring license renewal. By redirecting the examiners to inspect programs, the NRC expects to find and correct

programmatic weaknesses more rapidly and thereby improve operational safety. This may result in a reduction of the risk to the public from the accidental offsite release of radioactive material.

- (d) Potential impact on radiological exposure of facility employees and other onsite workers:

This rule change is not expected to have any impact on occupational radiological exposure of facility employees or other onsite workers.

- (e) Installation and continuing costs associated with the action, including the cost of facility downtime or the cost of construction delay:

The staff expects that each facility licensee would continue in its present manner of conducting requalification programs.

The amount of material that each facility licensee will be required to submit under the proposed amendments is expected to be much smaller than the amount each facility licensee currently submits to the NRC for the routine NRC-conducted requalification examinations. Currently, in order to assist the NRC in the development of NRC-conducted requalification examinations, facility licensees typically submit their examination banks (written, simulator and job performance measures), requalification training material including all lesson plans, Technical Specifications, and procedures (operating, surveillance, administrative, abnormal, emergency operating and emergency plan).

The proposed amendment would reduce the burden on the facility licensee because each facility licensee would have its administrative and technical staff expend fewer hours than are now spent to assist in developing and administering the NRC requalification examination. Currently, facility evaluators assist NRC examiners to develop, validate, and administer the NRC examinations, to ensure that the NRC examinations are valid and appropriate for the facility at which the examinations are being given.

- (f) The potential safety impact of changes in plant or operational complexity, including the relationship to proposed and existing regulatory requirements and staff positions:

See answer to 7(c).

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 powerplant operators, supervisors, technicians and other appropriate operating

personnel." Such regulations or guidance were to "establish simulator training requirements for applicants for civilian nuclear powerplant operator licenses and for operator requalification programs; requirements governing NRC administration of requalification examinations; requirements for operating tests at civilian nuclear powerplant simulators, and instructional requirements for civilian nuclear powerplant licensee personnel training programs."

The staff believes the proposed amendments will continue to meet the requirements of Section 306 of the NWPA without the requirement for each licensed individual to pass an NRC-conducted requalification examination during the 6-year term of the individual's license. The regulations will continue to require facilities to have requalification programs and conduct requalification examinations. The NRC will maintain active oversight of these programs and examinations through inspections. In addition, Section 55.59(a)(2)(iii) provides that the NRC may conduct requalification examinations in lieu of accepting the facility licensee's certification that a licensed individual has passed the facility-conducted requalification examination. The NRC may find that in some cases this option is warranted because of the results of an on-site inspection of the facility's requalification program and may periodically conduct all or portions of the requalification examinations. The proposed amendments will 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 conducting NRC requalification examinations in lieu of facility-conducted examinations.

Verifying licensee requalification programs through the NRC inspection process is consistent with the proposed rule changes for 10 CFR Parts 50 and 52, "Training and Qualification of Nuclear Power Plant Personnel," that also addressed the directives of Section 306 of the NWPA.

- (g) The estimated resource burden on the NRC associated with the proposed action and the availability of such resources:

The staff believes that the proposed amendments to 10 CFR Part 55 would reduce the cost to regulate the administration of the NRC's requalification program requirements. The staff also believes that the current NRC resources used in the operator licensing program could more effectively be used by allocating examiners 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 administering individual requalification examinations for the purpose of license renewal.

- (h) The potential impact of differences in facility type, design or age on the relevancy and practicality of the proposed action:

The staff believes there is no potential impact of differences in facility type, design or age on the relevancy and practicality of the proposed action because these factors are not germane to the proposed amendments. However, comments on the applicability of the proposed amendments to research and test reactor facilities are especially solicited, as are suggestions for alternatives to the proposed rulemaking methods.

- (i) Whether the proposed action is interim or final, and if interim, the justification for imposing the proposed action on an interim basis:

The proposed action will be final upon issuance of a final rule. No interim action is proposed.

8. For each backfit analyzed pursuant to 10 CFR 50.109(a)(2) (i.e., not adequate protection backfits and not compliance backfits) the proposing office director's determination, together with the rationale for the determination, that (a) there is a substantial increase in the overall protection of public health and safety or the common defense and security to be derived from the proposal; and (b) the direct and indirect costs of implementation, for the facilities affected, are justified in view of this increased protection:

See the answers to 7(c) and (e).

9. For adequate protection or compliance backfits evaluated pursuant to 10 CFR 50.109(a)(4), (1) a documents evaluation and (2) an evaluation of immediate actions that were taken without prior CRGR review:

The revisions to Part 55 are not backfits evaluated pursuant to 10 CFR 50.109(a)(4). No immediate actions have been taken.

10. For each evaluation conducted for proposed relaxations or decreases in current requirements or staff positions, the proposing office director's determination, together with the rationale for the determination that (1) the public health and safety would be adequately protected if the proposed reduction in requirements or positions were implemented, and (2) the cost savings attributed to the action would be substantial enough to justify taking the action:

The public health and safety will be adequately protected if the proposed reduction in requirements is implemented, and the cost savings attributed to the action will be substantial enough to justify taking the action. For the rationale, see the answers to 7(c), (e) and (g).

11. For each request for information under 10 CFR 50.54(f) an evaluation that includes (a) a problem statement that describes the need for the information in terms of potential safety benefit, (b) the licensee

actions required and the cost to develop a response to the information request, (c) an anticipated schedule for NRC use of the information, and (d) a statement affirming that the request does not impose new requirements on the licensee, other than for the requested information:

The revisions to Part 55 do not include requests for information under 10 CFR 50.54(f).

12. An assessment of how the proposed action relates to the Commission's Safety Goal Policy Statement.

The revisions to Part 55 do not relate directly to the Safety Goal Policy Statement as this Statement only implicitly addresses plant operations. However, the staff recognizes that how well a plant is operated is a vital component of plant safety and believes that it could continue to ensure and improve operational safety at each facility by directing its examiners to inspect and oversee facility requalification programs rather than conducting requalification examinations. In this regard, the staff believes that the proposed revision to Part 55 meets the intent of the Commission's Safety Goal Policy Statement.

DOC. FILE NAME: CRGRREQ.LBRF  
LONG DISPLAY: 12 ITEMS FROM CRGR CHARTER  
CREATED:  
AUTHOR: R. Auluck  
REVISED: 09/21/92 09/24/92 09/25/92 09/28/92  
TYPIST: CJones CJ CJ CJ  
TIME: 11:20 am 2:40 pm 12:10 pm 10:32 am

EXCERPT:

Response to the 12 items from the CRGR Charter

1. The proposed generic requirement or staff position as it is proposed to be sent out to licensees:  
  
See the Federal Register Notice.
2. Draft staff papers or other underlying staff documents supporting the

# **CRGR BRIEFING ON LICENSED OPERATOR REQUALIFICATION**

**October 6, 1992**

**Paul H. Lohaus  
Robert M. Gallo**

AE 37-2  
PDR

# **RECOMMENDED CHANGES TO 10 CFR PART 55**

- **Delete requirement for NRC to examine each operator for license renewal**
- **Add requirement that utility submit annual operating tests and biennial written examinations to NRC**
- **Include facility licensees in "Scope"**



# LEGAL ISSUES

- **Statutory requirements will continue to be met**
  - **NRC will continue to actively oversee facility licensee requalification programs**
  - **Part 55 will continue to contain legally binding requirements for requalification examinations**

# REVISED INSPECTION PROGRAM

- Review exams
- On-site observations
- Monitor programmatic performance
- Advantages

## **PROPOSED SCHEDULE**

- **Proposed Rule to Commission**      **11/30/92**
- **Proposed Rule Published**              **01/15/93**
- **Public Comment Period Ends**          **03/16/93**
- **Final Rule Published**                      **07/30/93**

**ACRS BRIEFING ON LICENSED  
OPERATOR REQUALIFICATION**

**October 9, 1992**

**William T. Russell**

"AE39-2"  
"PDR"

# **BACKGROUND**

- **Pilot program results**
  - **SECY-92-100**
- **Proposed rulemaking**
  - **SECY-92-100**

# **PILOT PROGRAM**

- **Pilot evaluation method**
  - **Crew evaluation on simulator**
  - **Individual weaknesses**
- **Results**
  - **All crews passed**
  - **Individual weaknesses identified and remediated by licensees**

# **PILOT PROGRAM**

**(continued)**

- **Benefits**
  - **Teamwork**
  - **Reduce unnecessary stress**
  
- **Proposal**
  - **Use on volunteer basis**
  - **Incorporate into Examiner Standards with next formal revision**

# **ENHANCEMENT OF NRC REQUALIFICATION PROGRAM**

- **Lessons learned from 15  
unsatisfactory programs**
- **Identify program weaknesses  
earlier to enhance safety**



## **ENHANCEMENTS**

**(continued)**

- **Allocate NRC resources based on identified weaknesses**
- **Eliminate requirement for NRC to examine each operator during 6-year license**

## **RECOMMENDED CHANGES TO 10 CFR PART 55**

- **Delete requirement for NRC to examine each operator for license renewal**
- **Add requirement that utility submit annual operating tests and biennial written examinations to NRC**

## **LEGAL ISSUES**

- **Statutory requirements will continue to be met**
  - **NRC will actively oversee facility licensee requalification programs**
  - **Part 55 will contain legally binding requirements for requalification examinations**

# **REVISED INSPECTION PROGRAM**

- **Review exams**
- **On-site observations**
- **Monitor programmatic  
performance**
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- **Proposed Rule to Commission**      **11/30/92**
- **Proposed Rule Published**              **01/15/93**
- **Public Comment Period Ends**          **03/16/93**
- **Final Rule Published**                      **07/30/93**

OCC  
Comments

10/27/92  
"AE39-2"  
"PDR"

For: The Commissioners

From: James M. Taylor  
Executive Director for Operations

Subject: PROPOSED AMENDMENTS TO 10 CFR PART 55 ON RENEWAL OF LICENSES  
AND REQUALIFICATION

Purpose: To obtain Commission approval for publication of the  
proposed amendments.

Background: 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. 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

Contact:  
Rajender Auluck, RES  
301-492-3794

David Lange, NRR  
301-504-3171

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. 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 staff 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 systems-approach-to-training based training program. This revision to the NRC requalification examination process enabled the staff 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.

In SECY-90-235, "NRC Recognition of Good Performance by Power Reactor Licensees," dated July 2, 1990, the staff proposed a pilot program that would recognize good performance at facilities that received two successive satisfactory ratings of the operator license renewal program. The staff informed the Commission in SECY-90-235 that it would make recommendations to the Commission concerning rulemaking to permanently effect a change to allow operators to renew their licenses under requalification examinations that the NRC would audit.

Since the NRC began 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 staff 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 staff issued information notice IN-90-54, dated August 28, 1990, to describe the technical deficiencies that contributed to the first 10 program failures. Since that time only six additional programs, of 120 subsequent program evaluations, have been evaluated as unsatisfactory.

In SECY-92-100, "Status and Direction of the Licensed Operator Requalification Program," dated March 19, 1992, the staff informed the Commission of the results of pilot requalification examinations that were conducted in August through December of 1991. The pilot test procedure directed the NRC examiners to focus on the evaluation of crews, rather than individuals, in the simulator portion of the operating test. In conducting the pilot examinations, the NRC examiners and the facility evaluators independently evaluated the crews and compared their results. The results were found to be in total agreement. Furthermore, the NRC examiners noted that the facility evaluators were competent at evaluating crews and individuals and were aggressive in finding deficiencies and recommending remediation for operators who exhibited weaknesses. The performance of the facilities' evaluators during the pilot examinations further confirmed that the facility licensees can find deficiencies, and remediate and retest their licensed operators' appropriately.

In SECY-92-100, the staff also informed the Commission of its intent to initiate a 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 operators 6-year license. On June 2, 1992, the Commission was briefed on SECY-92-100, including the staff's intent to initiate rulemaking for 10 CFR Part 55. On June 23, 1992, the Commission issued the staff requirements memorandum (SRM) for SECY-92-100, indicating agreement to proceed with a proposed rule change.

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 requirements which impose a dual responsibility on both the facility licensee which assists in developing and conducting its own as well as NRC requalification examinations, and the NRC which supervises both the facility licensee requalification program as well as conducting a comprehensive requalification examination during the term of an operator's 6-year license.

The 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. The staff'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 significant deficiencies in the performance of operators. The staff 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, the staff expects to find and correct programmatic weaknesses earlier 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 the training material used for development of the written and operating examinations and 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. The staff would review these examinations for conformance with 10 CFR 55.59(a)(2)(i&ii). The 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 staff also intends to conduct selected portions of requalification examinations at each facility at least every 6 years. 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).

The proposed regulations deleting the requirement for each licensed individual to pass an NRC requalification examination during the 6-year term of the individual's license will continue to meet the requirements of Section 306 of the NWSA. The regulations will continue to require facilities to have requalification programs and conduct

## The Commissioners

requalification examinations. The NRC will administer these programs by providing oversight for the programs and examinations through inspections. In addition, Section 55.59(a)(2)(iii) provides that the NRC may administer *conduct* requalification examinations in lieu of accepting the facility licensee's certification that a licensed individual has passed the facility requalification examination. The NRC will use this option if warranted after conducting an on-site inspection of the facility's requalification program and also to periodically conduct selected portions of requalification examinations.

The NRC was budgeted and expended approximately 15 FTE and 1.8 million in contractor assistance funds; which is equivalent to almost 10 FTE, to administer requalification examinations during each of fiscal years (FYs) 1991 and 1992. If the staff were to *continue* conducting examinations at the same rate, the NRC would save approximately 12 FTE (or \$2 million) by implementing the proposed requalification inspection program.

However, the staff expects to conduct about 20 percent fewer requalification examinations during FY 1993 through FY 1997 because its examination efforts to date have greatly reduced the number of operators who still require an examination for license renewal. Consequently, if the NRC continues *conducting* requalification examinations for all licensed operators, the staff estimates that it would require approximately 20 FTE each year. Therefore, implementing the proposed requalification inspection program would save about 7 FTE (or \$1 million) each year over conducting requalification examinations at the reduced rate for the long term.

Coordination: The Office of the General Counsel has no legal objection.

Recommendation: That the Commission:

- (1) Approve publication for comment of the proposed rule as set forth in Enclosure A.
- (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) The notice of rulemaking (Enclosure A) will be published in the Federal Register, allowing 60 days for public comment.
- (b) A regulatory analysis will be available in the Public Document Room (Enclosure B).
- (c) A public announcement will be issued (Enclosure C).
- (d) The Subcommittee on Nuclear Regulation of the Senate Committee on Environment and Public Works, the Subcommittee on Energy and Power of the House Committee on Energy and Commerce, and the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs will be informed by letter (Enclosure D).
- (e) This rule will be submitted to the Office of Management and Budget for review and approval of the paperwork requirements.
- (f) 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.

James M. Taylor  
Executive Director  
for Operations

Enclosures:

- A. Federal Register Notice
- B. Regulatory Analysis
- C. Public Announcement
- D. Congressional Letters

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.

James M. Taylor  
Executive Director  
for Operations

- Enclosures [RENEWAL.REV]:  
A. Federal Register Notice  
B. Regulatory Analysis  
C. Public Announcement  
D. Congressional Letters

\*See Heltemes memo to Office Directors, dtd 9/11/92

Offc:	*RDB:DRA:RES	LOLB:NRR	LOLB:/NRR	*RDB:DRA:RES	*DD:DRA:RES	*D:DRA:RES
Name:	RAuluck/cj:dm	DLange	RGallo	PLoñaus	FCostanzi	BMorris
Date:	09/10/92	/ /92	/ /92	09/10/92	09/10/92	09/10/92
Offc:	*DD:GIR:RES	D:NRR	OGC	D:OE	D:ADM	D:IRM
Name:	CHeltemes	TMurley	WParler	JLieberman	PNorry	GCranford
Date:	09/10/92	/ /92	/ /92	/ /92	/ /92	/ /92
Offc:	D:RES	EDO				
Name:	EBeckjord	JMTaylor				
Date:	/ /92	/ /92				

OFFICIAL RECORD COPY

DOC. FILE NAME: RENEWAL.REV  
LONG DISPLAY: Commission Paper re 10 CFR Part 55 Proposed Amendments  
CREATED:  
AUTHOR: R. Auluck  
REVISED: 09/23/92 09/24/92 09/25/92 09/28/92 10/09/92  
TYPIST: CJones CJ CJ CJ CJ  
TIME: 2:40 pm 8:33 am 2:10 pm 10:18 am 3:30 pm  
10/19/92 10/22/92  
JWilliams JWilliams  
4:45 pm 5:30 pm

EXCERPT:  
For: The Commissioners  
From: James M. Taylor  
Executive Director for Operations  
Subject: PROPOSED AMENDMENTS TO 10 CFR PART 55 ON RENEWAL OF LICENSES  
AND REQUALIFICATION  
Purpose: To obtain Commission approval for publication of the  
proposed amendments.  
Background: Section 306 of the Nuclear Waste Policy Act (NWP) of 1982  
directed the NRC to promulgate regulations or other

NUCLEAR REGULATORY COMMISSION

10 CFR Part 55

RIN-AE 39

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 conducted by the NRC during the term of the operator's 6-year license as a prerequisite for license renewal. The proposed amendment will require facility licensees to submit copies of the annual operating test or comprehensive written examination used for operator requalification for review by the Commission 30 days prior to conducting the examination or the test. In addition, the proposed rule will amend the "Scope" provisions of the regulations pertaining to operators' licenses to include facility licensees.

DATES: The comment period expires \_\_\_\_\_. Comments received after this date will be considered if it is practical to do so, but the Commission is able to assure consideration only for comments received on or before this date.

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

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

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

SUPPLEMENTARY INFORMATION:

Background

Section 305 of the Nuclear Waste Policy Act (NWPA) of 1982 authorized and directed the NRC "to promulgate regulations, or other appropriate Commission regulatory guidance, for the training and qualifications of civilian nuclear power plant operators, supervisors, technicians and other appropriate operating personnel." The regulations or guidance were to "establish simulator training requirements for applicants for civilian nuclear power plant operator licenses and for operator requalification programs; requirements governing NRC administration of requalification examinations; requirements for operating tests at civilian nuclear power plant simulators,

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

Following the 1987 amendment to Part 55, the NRC began conducting operator requalification examinations for the purpose of license renewal. As a result of conducting these examinations, the NRC determined that nearly all facility requalification programs met the Commission's expectations and that the NRC examiners were largely duplicating tasks that were already required of, and routinely performed by, the facility licensees.

The NRC revised its requalification examination procedures in 1988 to focus on performance-based evaluation criteria that closely paralleled the



training and evaluation process used for a SAT based training program. This revision to the NRC requalification examination process enabled the NRC to conduct comprehensive examinations for the purpose of renewing an individual's license and, at the same time, use the results of the examinations to determine the adequacy of the facility licensee's requalification training program.

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

Pilot requalification examinations were conducted in August through December of 1991. The pilot test procedure directed the NRC examiners to focus on the evaluation of crews, rather than individuals, in the simulator portion of the operating test. In conducting the pilot examinations, the NRC examiners and the facility evaluators independently evaluated the crews and compared their results. The results were found to be in total agreement. Furthermore, the NRC examiners noted that the facility evaluators were competent at evaluating crews and individuals and were aggressive in finding deficiencies and recommending remediation for operators who exhibited

weaknesses. The performance of the facilities' evaluators during the pilot examinations further confirmed that the facility licensees can find deficiencies, and remediate and retest their licensed operators' appropriately.

### Discussion

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

The NRC believes operational safety at each facility will continue to be ensured, and, in fact, will be improved, if NRC examiner resources are directed towards inspecting and overseeing the facility requalification programs rather than continuing to conduct individual operator requalification examinations. The NRC's experience since the beginning of the requalification program indicates that weaknesses in the implementation of the facility program are generally the root cause of deficiencies in the performance of operators. The NRC could more effectively allocate its 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. The NRC expects to find and correct programmatic weaknesses more rapidly and improve operational safety by redirecting the examiner resources to inspect programs.

As of October 9, 1992, the NRC had conducted requalification examinations at 11 research and test reactor facilities for a total of 34 operators being examined. No failures were identified. For research and test reactors, this sample provides the NRC with little data to support the same rationale that is discussed above with respect to power reactors. However, the NRC believes that the flexibility to allocate resources based on indicated programmatic performance rather than on the number of individuals requiring license renewal would also improve operational safety at research and test reactors. In addition, the proposed rule does not prevent the NRC from conducting requalification examinations at research and test reactor facilities. Furthermore, 10 CFR 55.59(c)(7) provides for accommodating specialized modes of operation and differences in control, equipment, and operator skills and knowledge for licensed operator requalification programs at test and research reactor facilities. This allows the NRC to implement the Part 55 requalification requirements appropriately for each of these facilities.

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

would reduce the regulatory burden on the facility licensees by 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 or comprehensive written examinations used for operator requalification 30 days prior to giving these tests or examinations. The NRC would review these examinations on an audit basis for conformance with 10 CFR 55.59(a)(2)(i&ii). The NRC would also review other information already available to the staff to determine the scope of an on-site inspection of the facility requalification program. The NRC also intends to conduct selected portions of requalification examinations at each facility at least every 6 years. The NRC would continue to expect each facility to meet all of the conditions required for conducting a requalification program in accordance with 10 CFR 55.59(c).

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

The "Scope" of Part 55, § 55.2, will be revised to include facility licensees. This is an addition to the regulation. It eliminates currently existing ambiguities between the regulations of Parts 50 and 55. Part 50, in

§ 50.54(i) through (m), already imposes Part 55 requirements on facility licensees, and Part 55 already specifies requirements for facility licensees.

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

#### Invitation To Comment

Comments concerning the scope, content, and implementation of the proposed amendments are encouraged. Comments on the applicability of the proposed amendments to research and test reactor facilities are especially

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

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

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

#### Paperwork Reduction Act Statement

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

The public reporting burden for this collection of information is estimated to average 8 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch (MNBB-7714), U.S. Nuclear Regulatory Commission, Washington, DC 20555; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-3019, (3150-0018 and 3150-0101), Office of Management and Budget, Washington, DC 20503.

## Regulatory Analysis

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

### Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1989, 5 U.S.C. 605(b), the Commission certifies that this rule will not have a significant economic impact upon a substantial number of small entities. This rule primarily affects the companies that own and operate light-water nuclear power reactors. The companies that own and operate these reactors do not fall within the scope of the definition of "small entity" set forth in the Regulatory Flexibility Act or the Small Business Size Standards set out in regulations issued by the Small Business Administration in 13 CFR Part 121. Since these companies are dominant in their service areas, this rule does not fall within the purview of its Act.

### Backfit Analysis

Currently, facility licensees assist in the development <sup>ing and conducting</sup> 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. 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 requirement of this proposed rule would 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. *and (2) it reduces the regulatory burden on the licensees by reducing them to 30 days prior to the annual requalification examination.*

As part of the proposed amendments, the facility licensees would be required to submit to the NRC their annual requalification operating tests and comprehensive written requalification examinations 30 days prior to the conduct of these tests and examinations. The NRC would review these examinations on an audit basis for conformance with 10 CFR 55.59(a)(2)(i&ii). The NRC would conduct this review and review other information already available to the NRC to determine the scope of an on-site inspection of the facility requalification program. The NRC would continue to expect each facility to meet all of the conditions required of a requalification program in accordance with 10 CFR 55.59(c).

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



during the term of his or her license, in addition to passing the facility licensee's requalification examinations, as a condition of license renewal.

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

The Commission believes that licensed operators are one of the main components and possibly the most critical component of continued safe reactor operation, especially with respect to mitigating the consequences of emergency conditions. Two-thirds of the requalification programs that have been evaluated as "unsatisfactory" had significant problems in the quality or implementation of the plant's emergency operating procedures (EOPs). In some of these cases, the facility licensees did not train their operators on challenging simulator scenarios or did not retrain their operators after the EOPs were revised. The Commission believes that it could have identified these problems sooner by reviewing facility requalification examinations and operating tests and inspecting facility requalification training and examination programs. Facility licensees could have then corrected these problems and improved overall operator job performance sooner.

This proposed rule is intended to improve operational safety by providing the means to find and correct weaknesses in facility licensee requalification programs more rapidly than provided for under the current regulations. The experience gained from conducting NRC requalification examinations indicates that the NRC is largely duplicating the efforts of the facility licensees. The NRC could more effectively use its resources to

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

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

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

#### List of Subjects 10 CFR Part 55

Criminal penalty, Manpower training programs, Nuclear power plants and reactors, 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

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).

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)).

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 submit a copy of each comprehensive requalification written examination or annual operating test to the Commission 30 days prior to conducting such examination or test. The requalification program must meet the requirements of paragraphs (c)(1) through (7) of this section. In lieu of paragraphs (c)(2), (3), and (4) of this section, the Commission may approve a program developed by using a systems approach to training.

\* \* \* \* \*

Dated at Rockville, Maryland, this \_\_\_\_ day of \_\_\_\_\_ 1992.

For the Nuclear Regulatory Commission.

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

DOC. FILE NAME: PRPSDRQL.ONE  
LONG DISPLAY: Operators' Licenses

CREATED:

AUTHOR: R. Auluck

REVISED:	08/27/92	08/28/92	09/03/92	09/15/92
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TIME:	10:45 am	2:30 pm	9:55 am	2:20 pm
	09/24/92	09/25/92	09/25/92	09/28/92
	CJ	CJ	CJ	CJ
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	10/13/92	10/14/92	10/19/92	
	STaylor	STaylor	JWilliams	
	4:15 pm	3:45 pm	5:05 pm	

EXCERPT:

[7590-01]

NUCLEAR REGULATORY COMMISSION  
10 CFR Part 55  
RIN-AE 39  
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 conducted by the NRC during the term of the operator's 6-year license as a

*DRAFT*

Regulatory Analysis of Proposed Revisions to

10 CFR Part 55 -- Operators' Licenses

Pacific Northwest Laboratory  
Richland, WA 99352

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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 administered by the NRC during the term of a 6-year license. Prior to 1987, NRC regulations did not require facility licenses 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 for the evaluation process outlined in 10 CFR 55.59(c)(4). 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 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 amending the current requalification regulations in 10 CFR Part 55.

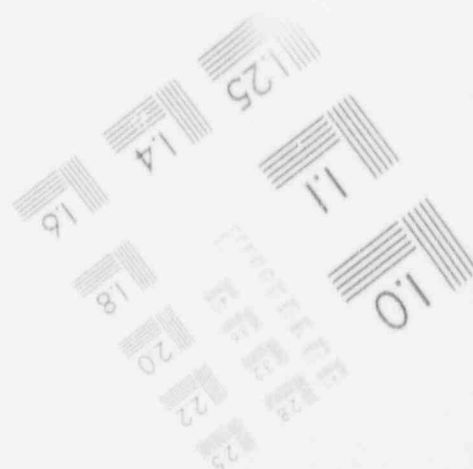
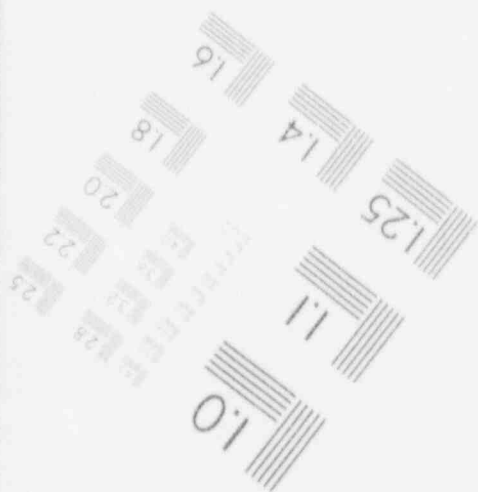
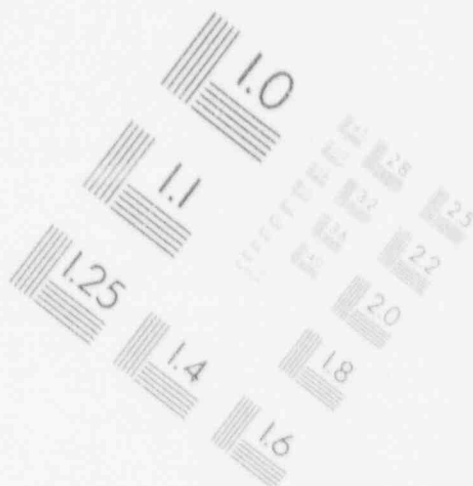
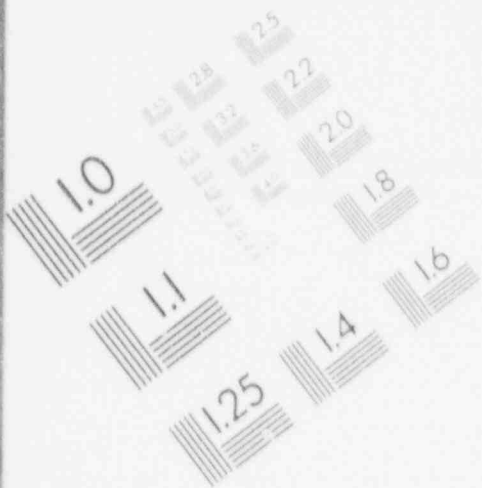
It is now believed that rather than requiring NRC-conducted requalification examinations, NRC can ensure safety and more effectively use its resources by periodically inspecting the licensee's requalification program. The proposed rulemaking, which would eliminate the need for each licensee to pass an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

- 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 million. Facility licensees are expected to realize a combined annual operational cost savings of approximately \$820,000. 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 \$28.2 million and \$11.6 million, respectively.



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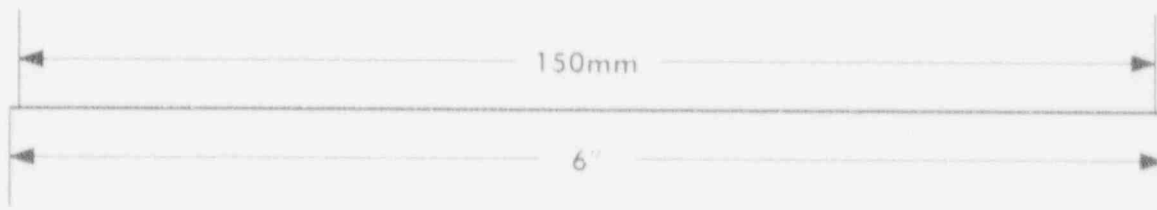
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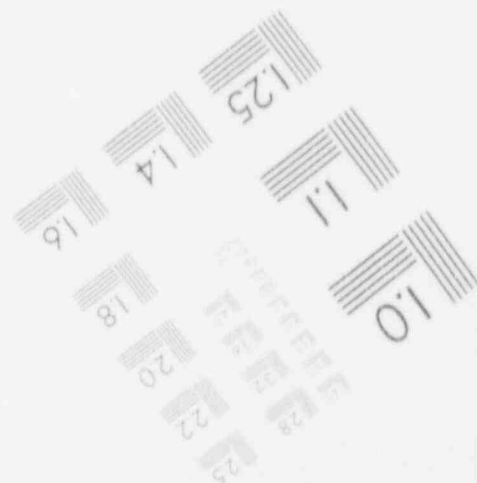
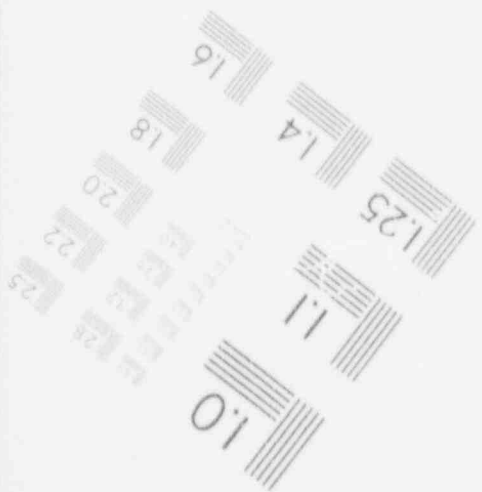
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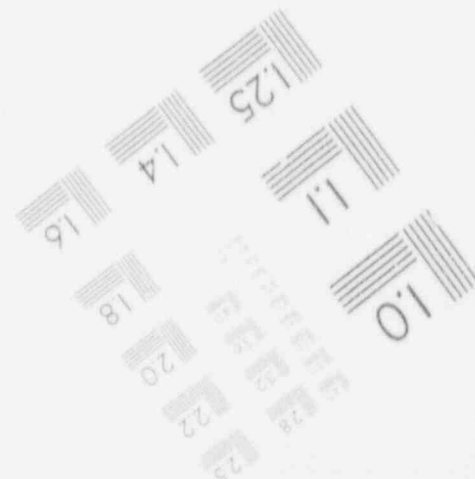
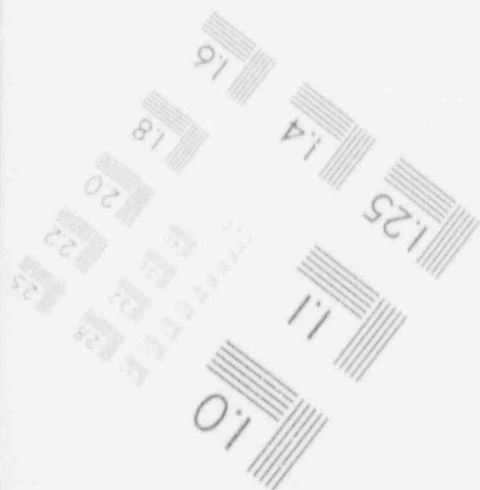
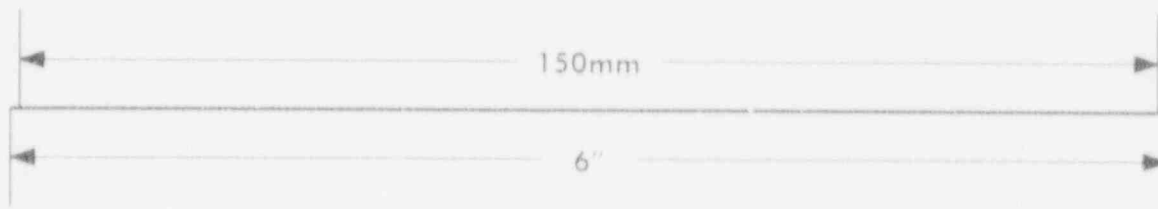
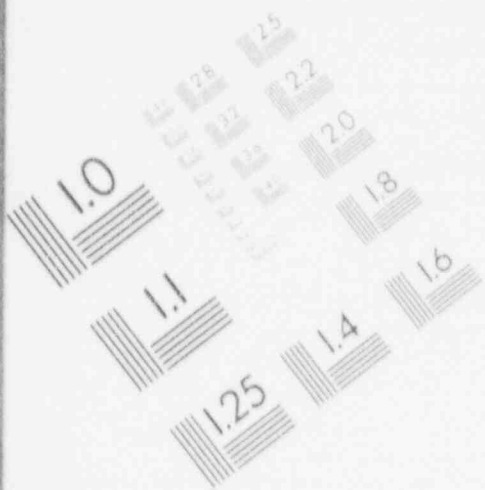


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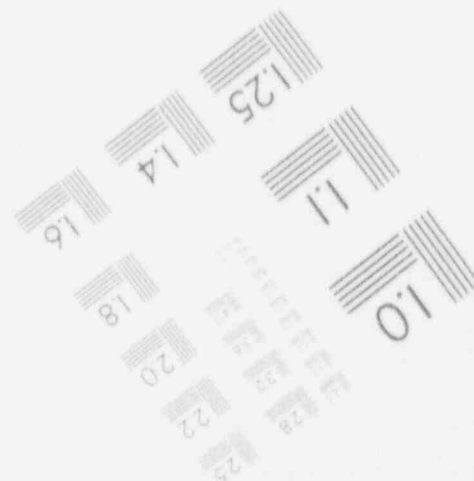
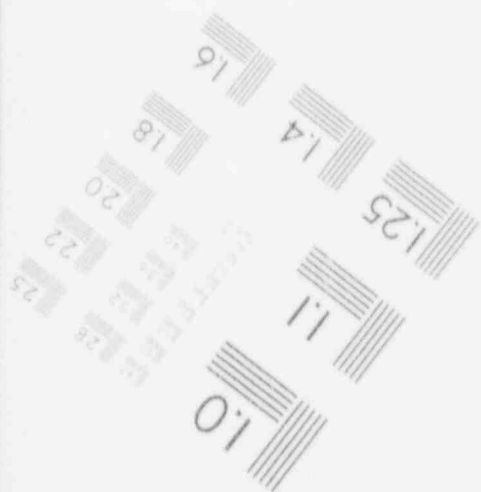
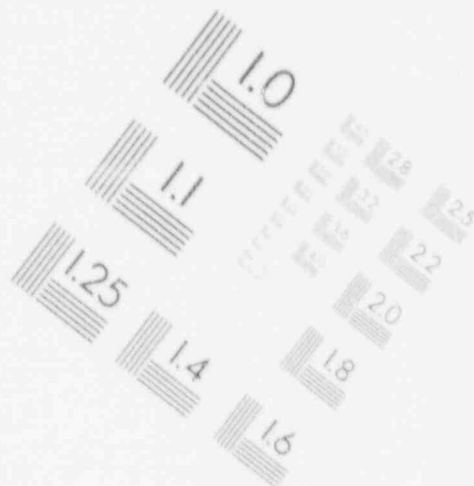
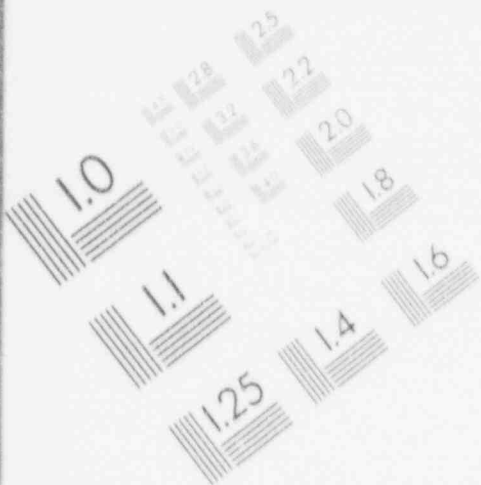
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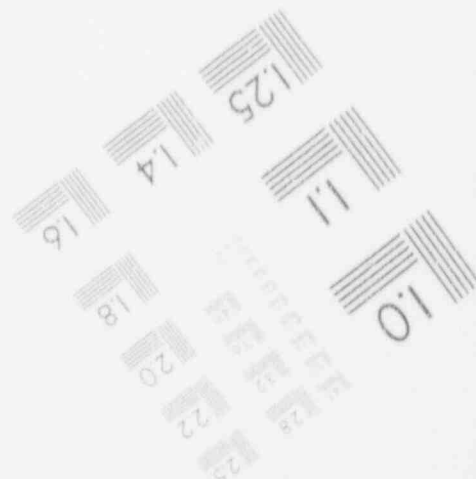
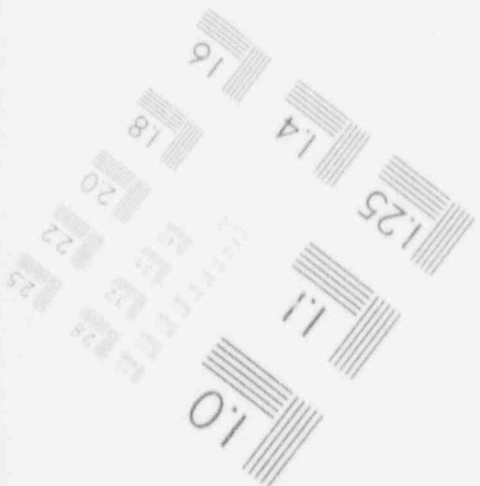
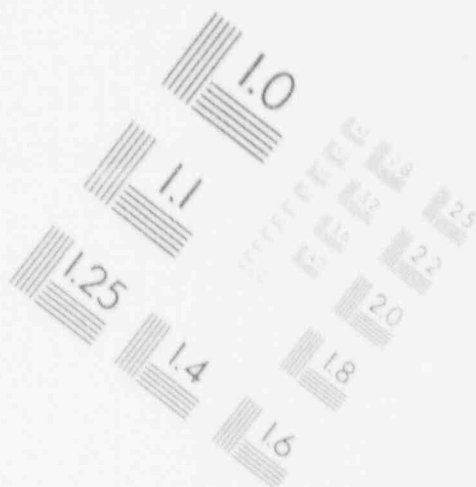
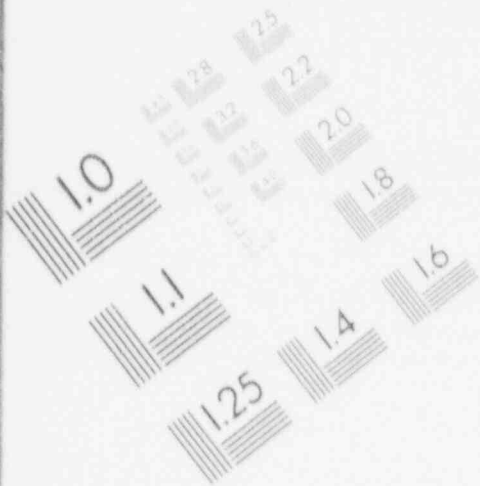
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## ABBREVIATIONS

CFR - Code of Federal Regulations

FR - Federal Register

FY - Fiscal Year

NRC - U.S. Nuclear Regulatory Commission



## 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 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 conduct 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 conducted by the NRC during the term of a 6-year license. These regulations establish requirements which impose a dual responsibility on both the facility licensee which assists in developing and conducting its own as well as NRC requalification examinations, and the NRC which supervises both the facility licensee requalification program as well as conducting a comprehensive requalification examination during the term of an operator's 6-year license.

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 for the evaluation process outlined in 10 CFR 55.59(c)(4). 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 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 will use this option if warranted after conducting an onsite inspection of the facility's requalification program and also to periodically conduct selected portions of requalification examinations. 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). 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. 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.

## 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.

### 2.2 PROPOSED ACTION

The regulations have to 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 a copy of each requalification written examination and annual operating test to the NRC for review 30 days prior to conducting such examination or test. 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 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(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 proposed rulemaking. The benefits and costs of the proposed 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 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 objective 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 indicates that the root cause of deficiencies in the performance of individual licensed operators is generally caused by a weakness 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 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 proposed 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 proposed 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 proposed 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 proposed 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 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-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 judged to be 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 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.

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*
Facility technical staff (to assist NRC with developing and conducting the NRC examinations)	28,800 <sup>b</sup>
Facility administrative staff (to assist NRC with conducting the NRC examinations)	<u>1,000*</u>
Total Direct Salaries	30,800
<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 TO SUPPORT NRC EXAMINATIONS</b>	<b>32,000</b>

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\*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>576 staff-hours @ \$50/hour.

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)	14,400 <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	16,150
<b>MATERIALS AND SERVICES</b>	
Expendable Supplies (to provide the NRC all the material used for inspection of the facility requalification program)	50
Reproduction Expenses	50
Shipping Expenses	<u>500</u>
Total Materials and Services	600
<b>TOTAL FACILITY COSTS TO SUPPORT NRC INSPECTIONS</b>	<b>16,750</b>

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

<sup>b</sup>288 staff-hrs @ \$50/hour.

<sup>c</sup>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  $(\$32,000/\text{program-yr})(65 \text{ programs}) = \$2.08 \times 10^6/\text{yr}$ . 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  $(\$16,750/\text{program-yr})(75 \text{ programs}) = \$1.26 \times 10^6/\text{yr}$ . This indicates an annual industry cost savings of  $\$8.2 \times 10^5$  associated with the proposed 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 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-year 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  $\$50,000$ .\*

### 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  $\$100,000/\text{person-year}$ .

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

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\*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.

- training of NRC & 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 proposed 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 proposed rule change.

In FY91 and FY92 the average annual NRC resources committed to this program for NRC staff and contractor support approximated 15 FTE and \$1.8 million, respectively. Thus, if it is assumed that without the rule change, this program would continue into the future at these recent historical levels, the relevant baseline NRC burden would approximate \$3.3 million per year in 1992 dollars. For regulatory analysis purposes, the 15 NRC staff years (FTE) were converted to \$1.5 million (\$100,000 per staff year) based on allowances for composite wage rates and direct benefits.\*

Under the proposed rule change, NRR's analysis indicates that NRC staff could perform all necessary inspections of requalification exam programs without contractor support and that this would require 13 FTEs per year. At \$100,000 per FTE, this converts to an annual cost in 1992 dollars of \$1.3 million. Thus, the annual savings in NRC operating costs is estimated to be on the order of \$2.0 million (\$3.3 million less \$1.3 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 \$28.2 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 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 3.4.

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

	<u>Annual</u>	<u>Lifetime (1992 Present Worth)*</u>
INDUSTRY SAVINGS		
Operation	\$ 820,000	\$11,560,000
NRC SAVINGS		
Development (one-time cost)		-\$50,000
Implementation (one-time cost)		-\$150,000
Operation	\$2,000,000	\$28,200,000
TOTAL NRC SAVINGS		\$28,000,000

### 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 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 proposed 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 proposal 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 copies of the comprehensive written examinations or annual operating tests 30 days prior to conducting such examinations or tests.

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

DOC. FILE NAME: 10-55RPT.PNL

LONG DISPLAY: PACIFIC-N'WEST REGULATORY ANALYSIS

CREATED:

AUTHOR: R. Auluck

REVISED: 09/23/92 09/24/92 09/25/92 09/25/92 09/25/92

TYPIST: CJones CJ CJ CJ CJ

TIME: 4:40 pm 10:55 am 12:05 pm 2:15 pm 3:15 PM

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CJones CJ JWilliams JWilliams  
3L35 pm 4:55 pm 8:45 am 9:00 am

EXCERPT:

*DRAFT*

Regulatory Analysis of Proposed Revisions to

10 CFR Part 55 -- Operators' Licenses



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

AE39-2  
PDR

SEP 23 1992

MEMORANDUM FOR: Edward L. Jordan, Director  
Office for Analysis and Evaluation  
of Operational Data

FROM: C. J. Heltemes, Jr., Deputy Director  
for Generic Issues and Rulemaking  
Office of Nuclear Regulatory Research

SUBJECT: PROPOSED REVISION OF 10 CFR 55 TO AMEND OPERATOR  
REQUALIFICATION EXAMINATION REQUIREMENTS

Enclosed for the Committee to Review Generic Requirements (CRGR) is a Commission paper related to the rule change to 10 CFR Part 55, "Operator's Licenses" (Attachment 1). The proposed rule change and its associated regulatory analysis are Enclosures A and B of this Commission paper. Attachment 2 contains specific information on the 12 items requested in Section IV.B of the CRGR Charter. The proposed action to amend 10 CFR Part 55 will: 1) delete the requirement that each licensed individual pass an NRC-administered requalification examination during the term of license; 2) require that facility licensees submit to the NRC their annual requalification operating tests and comprehensive requalification written examinations 30 days prior to the conduct of these tests and examinations; and 3) include facility licensees in the "Scope" of Part 55. The rules, as proposed, will improve operational safety at each facility by redirecting NRC examiners to inspect and oversee facility requalification programs rather than conducting requalification examinations for all licensed operators, while reducing both licensee and NRC costs to administer the program.

In SECY-92-100 (Status and Direction of the Licensed Operator Requalification Program), dated March 19, 1992, the staff informed the Commission of its intent to initiate a 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 June 2, 1992, the Commission was briefed on SECY-92-100, including the staff's intent to initiate rulemaking for 10 CFR Part 55. On June 23, 1992, the Commission issued the staff requirements memorandum (SRM) for SECY-92-100, indicating agreement to proceed with a proposed rule change.

The enclosed proposed rule change and regulatory analysis have been concurred upon in draft form by management in the Offices of NRR, OE, and RES. OGC has no legal objection. Until released for public comments, the rule change and regulatory analysis are predecisional and for internal use only.

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51 pp

In order to meet the accelerated schedule for this rulemaking, we request your review by October 13, 1992. Questions regarding this rulemaking should be addressed to Raj Auluck at 492-3794.

Original Signed By:

C. J. Heltemes Jr., Deputy Director  
for Generic Issues and Rulemaking  
Office of Nuclear Regulatory Research

Enclosures:  
As stated

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*9/25  
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For: The Commissioners

From: James M. Taylor  
Executive Director for Operations

Subject: PROPOSED AMENDMENTS TO 10 CFR PART 55 ON RENEWAL OF LICENSES  
AND REQUALIFICATION

Purpose: To obtain Commission approval for publication of the  
proposed amendments.

Background: 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. 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

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## The Commissioners

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. 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 staff 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 systems-approach-to-training based training program. This revision to the NRC requalification examination process enabled the staff 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.

In SECY-90-235, "NRC Recognition of Good Performance by Power Reactor Licensees," dated July 2, 1990, the staff proposed a pilot program that would recognize good performance at facilities that received two successive satisfactory ratings of the operator license renewal program. The staff informed the Commission in SECY-90-235 that it would make recommendations to the Commission concerning rulemaking to permanently effect a change to allow operators to renew their licenses under requalification examinations that the NRC would audit.

Since the NRC began 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 staff 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 staff issued an information notice IN-90-54, dated August 28, 1990, that described the process and technical deficiencies that contributed to the program failures. Since that time only five additional programs have been evaluated as unsatisfactory.

The Commissioners

In SECY-92-100, (Status and Direction of the Licensed Operator Requalification Program) dated March 19, 1992, the staff informed the Commission of its intent to initiate a 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 operators 6-year license. On June 2, 1992, the Commission was briefed on SECY-92-100, including the staff's intent to initiate rulemaking for 10 CFR Part 55. On June 23, 1992, the Commission issued the staff requirements memorandum (SRM) for SECY-92-100, indicating agreement to proceed with a proposed rule change.

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 requirements which impose a dual responsibility on both the facility licensee which assists in developing and conducting its own as well as NRC requalification examinations, and the NRC which supervises both the facility licensee requalification program as well as conducting a comprehensive requalification examination during the term of an operator's 6-year license.

The 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. The staff'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 significant deficiencies in the performance of operators. The staff 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, the staff expects to find and correct programmatic weaknesses earlier 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 the training

The Commissioners

material used for development of the written and operating examinations and 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. The staff would review these examinations for conformance with 10 CFR 55.59(c). The 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(c).

The proposed regulations deleting the requirement for each licensed individual to pass an NRC requalification examination during the 6-year term of the individual's license will continue to meet the requirements of Section 306 of the 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 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 cases this option is warranted after conducting an on-site inspection of the facility's requalification program.

Coordination: The Office of the General Counsel has no legal objection.

Recommendation: That the Commission:

- (1) Approve publication for comment of the proposed rule as set forth in Enclosure A.
- (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) The notice of rulemaking (Enclosure A) will be published in the Federal Register, allowing 60 days for public comment.
- (b) A regulatory analysis will be available in the Public Document Room (Enclosure B).
- (c) A public announcement will be issued (Enclosure C).
- (d) The Subcommittee on Nuclear Regulation of the Senate Committee on Environment and Public Works, the Subcommittee on Energy and Power of the House Committee on Energy and Commerce, and the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs will be informed by letter (Enclosure D).
- (e) This rule will be submitted to the Office of Management and Budget for review and approval of the paperwork requirements.
- (f) 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.

James M. Taylor  
Executive Director  
for Operations

Enclosures:

- A. Federal Register Notice
- B. Regulatory Analysis
- C. Public Announcement
- D. Congressional Letters

entities. This certification is included in the enclosed Federal Register Notice.

(3) Note that:

- (a) The notice of rulemaking (Enclosure A) will be published in the Federal Register, allowing 60 days for public comment.
- (b) A regulatory analysis will be available in the Public Document Room (Enclosure B).
- (c) A public announcement will be issued (Enclosure C).
- (d) The Subcommittee on Nuclear Regulation of the Senate Committee on Environment and Public Works, the Subcommittee on Energy and Power of the House Committee on Energy and Commerce, and the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs will be informed by letter (Enclosure D).
- (e) This rule will be submitted to the Office of Management and Budget for review and approval of the paperwork requirements.
- (f) 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.

James M. Taylor  
Executive Director  
for Operations

Enclosures:

- A. Federal Register Notice
- B. Regulatory Analysis
- C. Public Announcement } *Not included*
- D. Congressional Letters }

\*See Heltemes memo to Office Directors, dtd 9/11/92

Offc:	*RDB:DRA:RES	LOLB:NRR	LOLB:/NRR	*RDB:DRA:RES	*DD:DRA:RES	*D:DRA:RES
Name:	RAuluck/cj:dm	DLange	RGallo	PLohaus	FCostanzi	BMorris
Date:	09/10/92	/ /92	/ /92	09/10/92	09/10/92	09/10/92

Offc:	*DD:GIR:RES	D:NRR	OGC	D:OE	D:ADM	D:IRM
Name:	CHeltemes	TMurley	WParler	JLieberman	PNorry	GCranford
Date:	09/10/92	/ /92	/ /92	/ /92	/ /92	/ /92

Offc:	D:RES	EDO
Name:	EBeckjord	JMTaylor
Date:	/ /92	/ /92

ENCLOSURE A  
PROPOSED RULE CHANGE

NUCLEAR REGULATORY COMMISSION

10 CFR Part 55

RIN

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 conducted by the NRC during the term of the operator's 6-year license as a prerequisite for license renewal. The amended regulations will also require facility licensees to submit copies of the annual operating test or comprehensive written examination 30 days prior to conducting the examination or the test for review by the Commission. In addition, the "Scope" section of 10 CFR Part 55 will include facility licensees.

DATES: The comment period expires \_\_\_\_\_. Comments received after this date will be considered if it is practical to do so, but assurance of consideration 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: Dr. Rajender Auluck, P.E., 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." 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,



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 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.

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 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 conducted by the NRC during the term of a 6-year license. These regulations establish requirements which impose a dual responsibility on both the facility licensee which assists in developing and conducting its own as well as NRC requalification examinations, and the NRC which supervises both the facility

licensee requalification program as well as conducting a comprehensive requalification examination during the term of an operator's 6-year license.

The NRC 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 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 the training material used for development of the written and operating examinations and 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 or comprehensive

written examinations used for operator requalification 30 days prior to giving these tests or examinations. The staff would review these examinations on an audit basis for conformance with 10 CFR 55.59(c). The 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.

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

The "Scope" of Part 55, Section 55.2, will be revised to include facility licensees. This is an addition to the regulation. It eliminates currently existing ambiguities between the regulations of Parts 50 and 55. Part 50, in sections 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 will meet the requirements of Section 306 of the NWPA without the requirement that each licensed individual pass a requalification examination conducted by the NRC during the 6-year term of the individual's license. The requirements of the NWPA will be met as follows:

- 1) the regulations will continue to require facilities to have requalification

programs and conduct requalification examinations; 2) the NRC will provide oversight (i.e., administration) for these programs and examinations through inspections; and 3) Section 55.59(a)(2)(iii) provides that the NRC may conduct requalification examinations in lieu of accepting the facility licensee's certification that a licensed individual has passed the facility requalification examination. The NRC may find that in some limited cases this option is warranted after an on-site inspection of the facility's requalification program. The proposed amendments will not affect the regulatory or other appropriate guidance required by Section 306 of the NWSA and established in Section 55.59(a)(2)(iii) for the NRC to conduct requalification examinations in lieu of an examination given by the facility.

*Invitation*

#### Invitation To Comment

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

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

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

## Paperwork Reduction Act Statement

This proposed rule amends information collection requirements that are subject 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. 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 change, the facility licensees will be required to submit to the NRC their annual requalification operating tests and



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

Licensed operators will not have to take any additional actions. Each operator 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 will be expected to continue to meet the requirements of the facility requalification training program. However, the licensed operator 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, 10 CFR 55.2, will be revised to include facility licensees. This is an addition to the regulation. It eliminates currently existing ambiguities between the regulations of Parts 50 and 55. Part 50, in 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 oversee facility licensee requalification programs rather than conducting individual operator requalification examinations for all licensed operators. The NRC is expected to realize an annual operational cost savings of approximately \$1.5 million.

Each facility licensee will continue in its present manner of conducting its licensed operator requalification program. However, this proposed rule will reduce the burden on the facility licensees because each facility licensee 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 \$150K.

In summary, the proposed rule is expected to result in improved operational safety by providing more timely identification of weaknesses in licensees' programs to qualify operators. In addition, the resources expended by both the NRC and the licensees will be less than current expenditures. The Commission has, therefore, concluded that the proposed rule meets the requirements of 10 CFR 50.109, that there 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

Manpower training programs, nuclear power plants and reactors, penalty, reporting and recordkeeping requirements.

## Text of Final Regulation

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

### PART 55 - OPERATORS' LICENSES

1. The authority citation for 10 CFR Part 55 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)).

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

(c) any facility licensee.

3. Section 55.57(b)(2)(iv) is deleted.

4. Section 55.59(c) is revised to read as follows:

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

Dated at Rockville, Maryland, this \_\_\_\_ 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

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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 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). 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 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 \$1.5 million. Facility licensees are expected to realize a combined annual operational cost savings of approximately \$150,000.

## ABBREVIATIONS

CFR - Code of Federal Regulations

FR - Federal Register

FY - Fiscal Year

NRC - U.S. Nuclear Regulatory Commission



## 1.0 INTRODUCTION

The NRC is considering 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 conduct 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 conducted by the NRC during the term of a 6-year license. These regulations establish requirements which impose a dual responsibility on both the facility licensee which assists in developing and conducting its own as well as NRC requalification examinations, and the NRC which supervises both the facility licensee requalification program as well as conducting a comprehensive requalification examination during the term of an operator's 6-year license.

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). 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 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). 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. 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.

## 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 have to 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 a copy of each requalification written examination or annual operating test to the NRC for review 30 days prior to conducting such examination or test. 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 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).

### 3.0 CONSEQUENCES

This section discusses the benefits and costs that may result from the proposed rulemaking. The benefits and costs of the proposed 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 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 indicates that the root cause of significant deficiencies in the performance of individual licensed operators is generally caused by 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 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 proposed 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 proposed 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.

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

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

<u>Cost Element</u>	<u>Best Estimate (\$)</u>
SALARIES AND BENEFITS	
Facility administrative staff (to prepare reference materials for NRC)	1,000 <sup>a</sup>
Facility technical staff (to assist NRC with developing and conducting the NRC examinations)	6,000 <sup>b</sup>
Facility administrative staff (to assist NRC with conducting the NRC examinations)	<u>1,000<sup>a</sup></u>
Total Direct Salaries	8,000
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	<u>1,000</u>
Total Materials and Services	1,200
 TOTAL FACILITY COSTS	 9,200

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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.

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/hour.

<sup>c</sup>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  $(\$9,200/\text{program-yr})(65 \text{ programs}) = \$6.0\text{E}+5/\text{yr}$ . 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  $\$1.5\text{E}+5$  associated with the proposed 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.

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  $\$50,000$ .\*

### 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  $\$100,000/\text{person-year}$ .

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\*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.

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

- training of NRC & 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

The proposed rulemaking should reduce the NRC cost to operate the licensed operator requalification program 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 more rapidly, 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 compliance with the proposed rule.

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 NRC cost of  $(\$51,600/\text{program-yr})(65 \text{ programs}) = \$3.4\text{E}+6/\text{yr}$ . 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 NRC 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  $\$1.5\text{E}+6$  associated with the proposed rulemaking.

### 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 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 3.4 Affected Current NRC Costs (per NRC examination)

<u>Cost Element</u>	<u>Best Estimate (\$)</u>
<b>SALARIES AND BENEFITS</b>	
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
<b>MATERIALS AND SERVICES</b>	
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
<b>TOTAL NRC COSTS</b>	<b>51,600</b>

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

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

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

<u>Cost Element</u>	<u>Best Estimate (\$)</u>
<b>SALARIES AND BENEFITS</b>	
NRC staff (to prepare for, inspect, and document the facility requalification program inspection)	16,000*
Contractor staff (to assist NRC in inspection of the facility requalification programs)	<u>4,500</u> <sup>b</sup>
Total Salaries and Overhead	20,500
<b>MATERIALS AND SERVICES</b>	
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
<b>TOTAL NRC COSTS</b>	<b>25,700</b>

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\*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/hour - \$50/hour = \$45/hour was used to calculate the incremental increase in costs associated with the use of contractor staff.

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	\$6.0E+5	4.5E+5
NRC Operation	\$3.4E+6	1.9E+6

Based on recurring costs, annual operational savings are:

Annual NRC cost savings = \$1.5E+6  
 Annual Industry cost savings = \$1.5E+5.

Annually, the licensee recurring cost savings are approximately \$1.5E+5/yr. When discounted at 5% annually over the average remaining lifetime of 25 years, the total licensee recurring cost savings becomes  $(\$1.5E+5/yr)(14.1)^*$  = \$2.1E+6. Annually, the NRC recurring cost savings are \$1.5E+6/yr. When discounted at 5% annually over the average remaining lifetime of 25 years, the total NRC recurring cost savings becomes  $(\$1.5E+6/yr)(14.1)$  = \$2.1E+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 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 proposed rulemaking. The administration of the revised regulations would be absorbed by current NRC personnel and staff.

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

#### 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 proposal 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 copies of the comprehensive written examinations or annual operating tests 30 days prior to conducting such examinations or tests.



## 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.

Response to the 12 items from the CRGR Charter

1. The proposed generic requirement or staff position as it is proposed to be sent out to licensees:

See the Federal Register Notice.

2. Draft staff papers or other underlying staff documents supporting the requirements or staff positions.

Enclosed with cover letter are the:

- a. Commission Paper, "Proposed Amendments to 10 CFR Part 55 on Renewal of Licenses and Requalification,"
- b. proposed rule, and
- c. proposed regulatory analysis.

Additional references:

- a. the SRM of June 23, 1992,
- b. the July, 23, 1992 memorandum from C. J. Heltemes, Jr. to Frank J. Miraglia and Martin G. Malsch,
- c. SECY-90-235, "NRC Recognition of Good Performance by Power Reactor Licensees," and
- d. SECY-92-100, "Status and Direction of the Licensed Operator Requalification Program."

3. The sponsoring office's position as to whether the proposal would increase requirements or staff positions, implement existing requirements or staff positions, or would relax or reduce existing requirements or positions:

The "Scope" of Part 55, Section 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 50.54(i) through (m), already imposes Part 55 requirements on facility licensees, and Part 55 already specifies requirements for facility licensees (e.g., 55.23, 55.25, 55.27, 55.45(b), and 55.59(c)). This change is administrative in nature and serves to codify already existing regulatory requirements.

The existing requirements will be reduced in that 10 CFR 55.57(b)(2)(iv) will be deleted. Each licensed individual will no longer be required to pass an NRC-conducted requalification examination during the term of his or her license for the purpose of license renewal.

The existing requirements will be increased in that facility licensees will be required to submit to the NRC their annual requalification operating tests and comprehensive requalification written examinations 30 days prior to the conduct of these tests and examinations. This requirement codifies the staff's current practice of requesting examination material for the purpose of conducting NRC examinations and the material being required (generally only exams) is a reduction in the scope of material previously requested.

4. The proposed method of implementation along with the concurrence (and any comments) of OGC on the method proposed. The concurrence of affected program offices or an explanation of any non-concurrences:

OGC has indicated that no legal objection exists relative to the proposal. The proposed method of implementation is to review licensees' written requalification examinations and operating tests, and conduct performance-based inspections of facility licensee requalification programs.

5. Regulatory analyses generally conforming to the directives and guidance of NUREG/BR-0058 and NUREG/CR-3568.

See the Regulatory Analysis referenced in the Federal Register Notice.

6. Identification of the category of reactor plants to which the generic requirement or staff position is to apply.

The revisions to Part 55 apply to all categories of reactor plants. They also apply to all licensed operators.

7. For backfits other than compliance or adequate protection backfits, a backfit analysis as defined in 10 CFR 50.109. The backfit analysis includes, for each category of reactor plant, an evaluation which demonstrates how action should be prioritized and scheduled in light of other ongoing regulatory activities. The backfit analysis documents for consideration information available concerning the following factors as may be appropriate and any other information relevant and material to the proposed action:

The addition of the requirement that facility licensees submit to the NRC their annual requalification operating tests and comprehensive requalification written examinations 30 days prior to the conduct of these tests and examinations may require modification or addition to the procedures required to operate a facility. See the Backfit Analysis in the Federal Register Notice.

- (a) Statement of the specific objectives that the proposed action is designated to achieve:

The staff seeks to improve 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. The staff'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 staff could more effectively allocate its examiners 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 examiners to inspect programs, the staff expects to find and correct programmatic weaknesses more rapidly than by having them continue to conduct requalification examinations for each individual licensed operator.

- (b) General description of the activity that would be required by the licensee or applicant in order to complete the action:

The licensed operators need take no additional actions. Each operator will 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 this rule change, the facility licensees will be required to submit to the NRC their annual operating tests and comprehensive written examinations used for operator requalification. The staff will audit these examinations for conformance with 10 CFR 55.59. The staff will conduct this audit and review other information already available to the staff to determine the focus of the onsite inspections of facility licensee requalification programs. The NRC will 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) Potential change in the risk to the public from the accidental offsite release of radioactive material:

The staff believes that it could continue to ensure, and improve, 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. The staff'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 examiners to perform on-site inspections of facility requalification examination and training programs in accordance with indicated programmatic weaknesses rather than scheduling examiners in accordance with the number of individuals requiring license renewal. By redirecting the examiners to inspect programs, the NRC expects to find and correct

programmatic weaknesses more rapidly and thereby improve operational safety. This may result in a reduction of the risk to the public from the accidental offsite release of radioactive material.

- (d) Potential impact on radiological exposure of facility employees and other onsite workers:

This rule change is not expected to have any impact on occupational radiological exposure of facility employees or other onsite workers.

- (e) Installation and continuing costs associated with the action, including the cost of facility downtime or the cost of construction delay:

The staff expects that each facility licensee would continue in its present manner of conducting requalification programs.

The amount of material that each facility licensee will be required to submit under the proposed amendments is expected to be much smaller than the amount each facility licensee currently submits to the NRC for the routine NRC-conducted requalification examinations. Currently, in order to assist the NRC in the development of NRC-conducted requalification examinations, facility licensees typically submit their examination banks (written, simulator and job performance measures), requalification training material including all lesson plans, Technical Specifications, and procedures (operating, surveillance, administrative, abnormal, emergency operating and emergency plan).

The proposed amendment would reduce the burden on the facility licensee because each facility licensee would have its administrative and technical staff expend fewer hours than are now spent to assist in developing and administering the NRC requalification examination. Currently, facility evaluators assist NRC examiners to develop, validate, and administer the NRC examinations, to ensure that the NRC examinations are valid and appropriate for the facility at which the examinations are being given.

- (f) The potential safety impact of changes in plant or operational complexity, including the relationship to proposed and existing regulatory requirements and staff positions:

See answer to 7(c).

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 powerplant operators, supervisors, technicians and other appropriate operating

personnel." Such regulations or guidance were to "establish simulator training requirements for applicants for civilian nuclear powerplant operator licenses and for operator requalification programs; requirements governing NRC administration of requalification examinations; requirements for operating tests at civilian nuclear powerplant simulators, and instructional requirements for civilian nuclear powerplant licensee personnel training programs."

The staff believes the proposed amendments will continue to meet the requirements of Section 306 of the NHPA without the requirement for each licensed individual to pass an NRC-conducted requalification examination during the 6-year term of the individual's license. The regulations will continue to require facilities to have requalification programs and conduct requalification examinations. The NRC will maintain active oversight of these programs and examinations through inspections. In addition, Section 55.59(a)(2)(iii) provides that the NRC may conduct requalification examinations in lieu of accepting the facility licensee's certification that a licensed individual has passed the facility-conducted requalification examination. The NRC may find that in some cases this option is warranted because of the results of an on-site inspection of the facility's requalification program and may periodically conduct all or portions of the requalification examinations. The proposed amendments will not affect the regulatory or other appropriate guidance required by Section 306 of the NHPA and established in Section 55.59(a)(2)(iii) for conducting NRC requalification examinations in lieu of facility-conducted examinations.

Verifying licensee requalification programs through the NRC inspection process is consistent with the proposed rule changes for 10 CFR Parts 50 and 52, "Training and Qualification of Nuclear Power Plant Personnel," that also addressed the directives of Section 306 of the NHPA.

- (g) The estimated resource burden on the NRC associated with the proposed action and the availability of such resources:

The staff believes that the proposed amendments to 10 CFR Part 55 would reduce the cost to regulate the administration of the NRC's requalification program requirements. The staff also believes that the current NRC resources used in the operator licensing program could more effectively be used by allocating examiners 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 administering individual requalification examinations for the purpose of license renewal.



- (h) The potential impact of differences in facility type, design or age on the relevancy and practicality of the proposed action:

The staff believes there is no potential impact of differences in facility type, design or age on the relevancy and practicality of the proposed action because these factors are not germane to the proposed amendments. However, comments on the applicability of the proposed amendments to research and test reactor facilities are especially solicited, as are suggestions for alternatives to the proposed rulemaking methods.

- (i) Whether the proposed action is interim or final, and if interim, the justification for imposing the proposed action on an interim basis:

The proposed action will be final upon issuance of a final rule. No interim action is proposed.

8. For each backfit analyzed pursuant to 10 CFR 50.109(a)(2) (i.e., not adequate protection backfits and not compliance backfits) the proposing office director's determination, together with the rationale for the determination, that (a) there is a substantial increase in the overall protection of public health and safety or the common defense and security to be derived from the proposal; and (b) the direct and indirect costs of implementation, for the facilities affected, are justified in view of this increased protection:

See the answers to 7(c) and (e).

9. For adequate protection or compliance backfits evaluated pursuant to 10 CFR 50.109(a)(4), (1) a documents evaluation and (2) an evaluation of immediate actions that were taken without prior CRGR review:

The revisions to Part 55 are not backfits evaluated pursuant to 10 CFR 50.109(a)(4). No immediate actions have been taken.

10. For each evaluation conducted for proposed relaxations or decreases in current requirements or staff positions, the proposing office director's determination, together with the rationale for the determination that (1) the public health and safety would be adequately protected if the proposed reduction in requirements or positions were implemented, and (2) the cost savings attributed to the action would be substantial enough to justify taking the action:

The public health and safety will be adequately protected if the proposed reduction in requirements is implemented, and the cost savings attributed to the action will be substantial enough to justify taking the action. For the rationale, see the answers to 7(c), (e) and (g).

11. For each request for information under 10 CFR 50.54(f) an evaluation that includes (a) a problem statement that describes the need for the information in terms of potential safety benefit, (b) the licensee

actions required and the cost to develop a response to the information request, (c) an anticipated schedule for NRC use of the information, and (d) a statement affirming that the request does not impose new requirements on the licensee, other than for the requested information:

The revisions to Part 55 do not include requests for information under 10 CFR 50.54(f).

12. An assessment of how the proposed action relates to the Commission's Safety Goal Policy Statement.

The revisions to Part 55 do not relate directly to the Safety Goal Policy Statement as this Statement only implicitly addresses plant operations. However, the staff recognizes that how well a plant is operated is a vital component of plant safety and believes that it could continue to ensure and improve operational safety at each facility by directing its examiners to inspect and oversee facility requalification programs rather than conducting requalification examinations. In this regard, the staff believes that the proposed revision to Part 55 meets the intent of the Commission's Safety Goal Policy Statement.



"AE 39-2"  
"PDR"



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

SEP 29 1992

MEMORANDUM FOR: The Chairman  
Commissioner Rogers  
Commissioner Curtiss  
Commissioner Remick  
Commissioner de Planque

FROM: William C. Parler  
General Counsel

SUBJECT: LEGAL ISSUES ASSOCIATED WITH NRR'S PROPOSAL TO  
AMEND THE REQUALIFICATION EXAMINATION PROCESS  
FOR LICENSED OPERATORS

On June 2, 1992, the Commission was briefed by the NRC staff on the status of the licensed operator requalification program and complex simulator scenarios. During the briefing, the staff noted its intent to develop a proposed rule change which would eliminate the requirement for a written examination and operating test conducted by the NRC during the term of the operator's 6-year license.

Currently, 10 C.F.R. 55.57(b)(2)(iii) requires licensed operators to pass facility requalification examinations and annual operating tests, while 10 C.F.R. 55.57(b)(2)(iv) requires licensed operators to "pass a comprehensive requalification examination and operating test administered by the NRC during the term of a 6-year license." The staff of the Office of Nuclear Reactor Regulations (NRR) is proposing that the NRC shift its present focus from the examination of the individual applicant to regulation oversight of the facility licensee requalification programs through existing regulations and by a systematic assessment of programmatic weaknesses. NRR advocates this approach as one which will increase the overall level of operational safety in these facilities. The staff points out that over the last few years the NRC and nuclear industry have been working together to develop a more useful approach to requalification examinations consistent with the NRC's policy of encouraging licensees to develop training programs that avoid (as one Commission Memorandum put it) "prescriptive and voluminous regulations that serve as a negative factor in nuclear safety."

The Commission SRM dated June 23, 1992, requested that the Office of the General Counsel (OGC) review the legal issues associated with NRR's proposed approach, including a discussion of the extent to which this approach comports with §306 of the Nuclear Waste Policy Act of 1982 (NWPA) and with any statements and assurances that the Commission might have made in the litigation of the training provisions of this statute. The principal legal issue raised by NRR's proposed approach pertains to whether Congress intended that the NRC conduct operator licensee requalification

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examinations based on Congress' use of the language "requirements governing NRC administration of requalification examinations" in NWPA and related legislative history. If not, the question remains as to whether NRR's proposal to supervise the facility licensee requalification programs rather than conduct its own requalification examination of operator licensees, is appropriate and reasonable in light of the statutory language of § 306 in its entirety.

OGC has reviewed the legal issues associated with NRR's proposal, and has concluded that the statute's language will permit a revision of NRC regulations eliminating NRC-conducted requalification examinations, in lieu of which, the NRC would regulate facility licensee requalification programs. In addition, no statements or assurances have been made in the "training provisions" litigation of § 306 with regard to provisions regarding operator licensee requalification.

#### Section 306 -- Its Legislative History and Case Law

In Chevron,<sup>1</sup> the Court held that in deciding a question of statutory interpretation, a reviewing court must consider whether Congress has spoken directly to the precise question at issue. If Congress has done so unambiguously, the court will uphold Congress' intent. The Court indicated, however, that where statutory intent has been silent or ambiguous, the courts will show considerable deference to administrative constructions. The Court pointed out that as a complex regulatory scheme develops, an agency needs the flexibility to make a program function effectively.

Section 306 of NWPA states:

"The Nuclear Regulatory Commission is authorized and directed to promulgate regulations, or other appropriate Commission regulatory guidance, for the training and qualification of civilian nuclear powerplant operators, supervisors, technicians and other appropriate operating personnel. Such regulations or guidance shall establish simulator training requirements for applicants for civilian nuclear powerplant operator licenses and for operator requalification examinations; requirements governing NRC administration of requalification examinations .... Such regulations or other regulatory guidance shall be promulgated by the Commission within the 12-month period following enactment of this Act ...."

In this instance, there does not appear to be any statutory history regarding the language "requirements governing NRC administration

<sup>1</sup> Chevron U.S.A., Inc. v. NRDC, 467 U.S. 837 (1984).

of requalification examinations." Therefore, the term "administration" should be examined in light of the statute's objectives and policies.<sup>2</sup> First, it should be noted that there is no statutory definition of administration. Accorded its ordinary and customary meaning, "administration" has been defined as "the principles, practices, and rationalized techniques employed in achieving the objectives or aims of an organization for the accomplishment of its objectives in the long run often as distinguished from operative management."<sup>3</sup> Synonyms for "administer" include "management, government, supervision, command, guidance, directing, and oversight."<sup>4</sup> In addition, the legislative history of § 306 in which the term could be examined is non-existent. In discussing the amendment to the NWPA, Senator Weicker, the sponsor of this section, only commented on the training of licensed operators, stating that the amendment "... seeks to provide that the personnel running our nuclear powerplants receive adequate training ... and [that] it will restore some measure of public confidence in that industry...."<sup>5</sup>

In 1987 when 10 C.F.R. Part 55 was amended, INPO had not implemented the program for accrediting licensed operator requalification training. The NRC decided that NRC staff would conduct its own requalification examinations for the purpose of license renewal because it did not have "full confidence that each facility would administer its annual operating tests and written examinations in accordance with the staff's expectations for the evaluation process outlined in 10 C.F.R. 55.59(c)(4)."<sup>6</sup> The Statement of Consideration for Part 55 identifies two purposes which these examinations conducted by the NRC are expected to serve: 1) to give assurance that an operator or senior operator can operate controls in a safe manner; and 2) to provide a check on the quality of the requalification programs being conducted by facility licensees. As a result of giving the requalification examinations over a 3-year period, the staff now has confidence that facility licensees can implement their own requalification programs for evaluating licensed operators for license renewal. NRR's proposal, interpreting administration to encompass the oversight of facility licensee requalification programs rather than to conduct its own

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<sup>2</sup> See Rubin v. United States, 449 U.S. 424, 430 (1981). Also see Dole v. United Steelworkers, 110 S.Ct.929,934 (1990).

<sup>3</sup> Webster's Third New International Dictionary of the English Language Unabridged, Merriam-Webster, Inc. Publisher, 1986.

<sup>4</sup> Webster's New World Thesaurus, Prentice Hall Press, 1985.

<sup>5</sup> Congressional Record, 12/20/82.

<sup>6</sup> Issue Paper associated with proposed amendments to 10 C.F.R. Part 55, July 13, 1992.

requalification examinations, shifts the focus of NRC's role and resources but is within the objectives of the statute and is consistent with the Statement of Consideration. It should be noted that the language in 10 C.F.R. Part 55 should be reviewed and, if necessary, revised to ensure that these regulations clearly reflect NRC's role regarding "administration" of the operator licensee requalification process is NRC oversight of the facility licensee program.

There has been no litigation dealing directly with the operator licensee requalification examination program; however, in Public Citizen v. Nuclear Regulatory Commission, 901 F.2d 147 (D.C. Cir. 1990), the court examined the language of § 306 as it relates to training requirements for workers at NRC-licensed facilities. The NRC argued that in order to encourage powerplant licensees to improve training of workers at their powerplants, voluntary standards amounting to a "model training code" should be created. The court examined this argument in light of the provisions of the whole law and concluded that the NRC was required to "establish ...instructional requirements ...." in the sense of legally binding requirements. The court found that Congress' use of the word "requirements" envisioned an active role for the NRC in this process.

In contrast to the NRC's position in Public Citizen where the Commission relied on a policy statement to satisfy the "requirements" of § 306, NRR fully intends to have legally binding requirements regarding requalification examinations. NRR's proposal is grounded in Part 55 regulations and provides that the staff would conduct a performance-based inspection at each facility annually. The current regulations state that a licensee must successfully complete a requalification program developed by the facility licensee and approved by the NRC for a continuous period not to exceed 24 months; that the licensee pass a comprehensive requalification written examination and annual operating test; and that if those requirements are not met, the Commission may require the licensee to complete additional training and submit evidence of that training before returning to licensed duties.<sup>7</sup>

The regulations regarding the walkthrough portion of the requalification examination are an example of the comprehensive guidelines regarding testing procedures which address the "requirements" provision of § 306. In 1991, the General Accounting Office looked at the question of whether the NRC could contract out for examiners to perform the testing procedures involved in licensing nuclear reactor operators.<sup>8</sup> The question was particularly pertinent to the operating test (the walkthrough)

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<sup>7</sup> See 10 C.F.R. 55.59.

<sup>8</sup> B-242942, August 27, 1991.



which is designed to test the individual's level of knowledge on the design and operation of the reactor and its associated plant systems. The Comptroller General held that "the detail within the agency regulations is so extensive that while the contract examiners have some discretion in choosing specific subcategories within the three main categories, the contract examiners essentially must comply with the specific mandates of the regulations once the subcategory or subcategories are selected." GAO concluded that "... there is a comprehensive grading system that precludes a contract examiner from exercising broad discretion or making extensive value judgments about an applicants score... Finally as regards the examiner's documentation and grading of the operating test, the Commission's guidance ensures that this is done uniformly."<sup>9</sup>

OGC understands that NRR's proposed rulemaking would delete 10 C.F.R. 55.57(b)(2)(iv) and would revise 10 C.F.R. 55.59(c) to read as follows:

"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.<sup>10</sup> 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."

Facility licensees would be required to submit to the NRC their annual operating tests and comprehensive written examinations used for operator requalification. Currently, facility licensees provide requalification examination development material, including selected tests and examinations to the NRC on a voluntary basis.

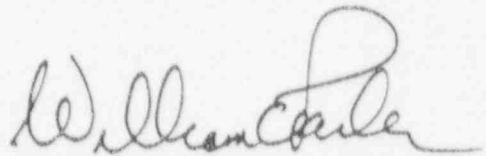
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<sup>9</sup> Id. at 5.

<sup>10</sup> Section 55.59(c)(1) through (7) set out the requalification program requirements for a facility licensee. This includes programmatic scheduling, the content of lectures, on-the-job training objectives, testing objectives, documentation of licensed operator and senior operator participation in the requalification program, how the requirements of the section may be met when the requalification program is conducted by persons other than the facility licensee, and a statement regarding the conformity of the program since all research reactor or test reactor facilities are not identical.

Conclusion

The legislative history and the court's interpretation of § 306 regarding "requirements" in Public Citizen emphasize that § 306 requires active NRC participation in the training and requalification process. Therefore, as long as NRR's proposal provides that (1) the NRC will actively oversee facility licensee requalification programs including NRC onsite inspection of the programs, and (2) Commission regulations contain legally binding requirements applicable to the conduct of operator requalification examinations by facility licensees, it would satisfy the statutory requirements contained in § 306.



William C. Parler  
General Counsel

cc: EDO  
SECY



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, D. C. 20555

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October 19, 1992

Mr. James M. Taylor  
Executive Director for Operations  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Taylor:

SUBJECT: PROPOSED AMENDMENTS TO 10 CFR PART 55 ON RENEWAL OF  
NUCLEAR POWER PLANT OPERATOR LICENSES AND REQUALIFICATION

During the 390th meeting of the Advisory Committee on Reactor Safeguards, October 8-10, 1992, we reviewed the proposed amendments to 10 CFR Part 55. During this meeting, we had the benefit of discussions with representatives of the NRC staff and of the documents referenced.

These proposed amendments would revise the current requalification regulations for licensed operators at nuclear power plants by eliminating the present requirements that they pass a requalification written examination and operating test administered by the NRC during their six-year license term. Licensed operators would continue to be required to pass the biennial requalification written examination and annual operating test administered by their plant training organizations. As part of the proposed rule change, licensees would be required to submit their examinations and operating tests for NRC review. The staff points out that these changes in the regulations will allow the redirection of NRC license examiner resources so that the examiners will be able to perform more comprehensive, programmatic inspections of licensee operator training programs.

We believe that these proposed amendments to 10 CFR Part 55 will be beneficial and recommend that they be released for public comment. We would like the opportunity to review the proposed final version of these amendments after the staff has reconciled the public comments.

Sincerely,

David A. Ward  
Chairman

References:

Memorandum dated September 11, 1992, from C. J. Heltemes, Office of Nuclear Regulatory Research, NRC, for Raymond F. Fraley, ACRS, Subject: Request for Review of Proposed Rule Change to 10 CFR Part 55 and Associated Regulatory

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Mr. James M. Taylor

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October 19, 1992

Analysis, with Enclosure 1, Commission Paper on Proposed Amendments to 10 CFR Part 55, and Enclosure 2, Status and Direction of the Licensed Operator Requalification Program, SECY-92-100, March 19, 1992