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Rulemaking Issue

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PROPOSED RULE
(54 FR 47089)

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NUCLEAR REGULATORY COMMISSION

10 CFR PART 34

RIN 3150-AD35

ASNT Certification of Industrial Radiographers

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission proposes to amend its regulations at 10 CFR Part 34, "Licenses for Radiography and Radiation Safety Requirements for Radiographic Operations," to provide license applicants the option to affirm that all of their active radiographers will be certified in radiation safety by the American Society for Nondestructive Testing (ASNT) prior to commencing duties as radiographers, in lieu of current licensing requirements to submit descriptions of planned initial radiation safety training and qualification procedures. The Commission believes that the ASNT "Certification Program for Industrial Radiography Radiation Safety Personnel" provides an acceptable method of ensuring that radiographers are adequately trained in the radiation safety subjects listed in Appendix A of 10 CFR Part 34. The intent of this proposed rulemaking is to recognize this program and to encourage industrial radiography licensees to participate in the ASNT program. This proposed rule also solicits comments on the costs and benefits of third-party

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radiation safety certification which will be used by the Commission in its consideration of a planned subsequent rulemaking that would require radiographer certification.

DATE: The public comment period expires (90 days) from date of publication. Comments received after this date will be considered if it is practical to do so, but the Commission is able to assure consideration only for comments received on or before this date.

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

Deliver comments to: 2120 L Street, NW (Lower Level), Washington, DC, between 7:30 a.m. and 4:15 p.m. Federal Government workdays.

Copies of the draft regulatory analysis and comments received may be examined at: the NRC Public Document Room at 2120 L Street, NW (Lower Level), Washington, DC.

FOR FURTHER INFORMATION CONTACT: Alan K. Roecklein, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 492-3740.

SUPPLEMENTARY INFORMATION:

Background

Current NRC sealed source radiography licensing requirements (10 CFR 34.11) specify that an applicant will have an adequate program for training

radiographers and will submit to NRC a schedule or description of the program including initial training, periodic retraining, on-the-job training, and the means to be used by the licensee to determine the radiographer's knowledge and understanding of, and ability to comply with, Commission regulations and licensing requirements, and the operating and emergency procedures of the applicant. Section 34.31(a) specifies conditions under which an individual is permitted to act as a radiographer. In addition, Appendix A of part 34 outlines the radiation protection training requirements.

The NRC is proposing to permit applicants to affirm, in lieu of submitting descriptions of their initial radiation safety training and radiographer qualification program, that all individuals permitted to work as radiographers will be certified in radiation safety through the Industrial Radiography Radiation Safety Personnel Program of the American Society for Nondestructive Testing (ASNT), Inc. prior to commencing duties as radiographers. Contingent upon an analysis of the costs and benefits of third-party certification and demonstrated success of the ASNT certification program, the NRC is considering the initiation of a subsequent rulemaking which would require third-party certification of all radiographers.

The high activity radioactive sources used in industrial radiography pose serious hazards if radiation safety procedures are not adhered to rigorously. A significant fraction of occupational overexposures and serious radiation injuries reported to the NRC and the States have occurred in industrial radiography operations. The State of Texas determined that 42 percent of all overexposures reported in that State in 1987 were attributable to industrial radiographic operations. The Commission is determined to work with the licensees and the States to make every effort

to improve the radiation safety record in industrial radiography. This rulemaking is consistent with and complements other recent NRC actions such as the proposed radiography device safety rule and the previously published quarterly performance inspection requirement (§34.11(d)).

Investigations by the NRC and Agreement States have indicated that inadequate training is often a major contributing factor to radiography accidents. Proposals to require third-party certification of radiographers have been advanced by NRC staff, the Ad Hoc Radiography Steering Committee and ASNT. In 1987, the Texas Bureau of Radiation Control implemented a comprehensive testing program for radiographers as a means of improving and verifying training and radiation safety practices in the industry. To date, approximately 2,000 individuals have been tested and issued industrial radiography ID cards by that State.

Preliminary evaluation of the effectiveness of the Texas program is encouraging. There is an indication of a downward trend in overexposures since Texas radiographers began preparing for the examination, but the data are not yet definitive. Inspectors report observing radiographers studying safety training documents and a general improvement in job site performance.

The ASNT's "Certifications Program for Industrial Radiography Radiation Safety Personnel" was approved by its Board of Directors in March of 1989. The program, which would use a written examination developed and validated by the State of Texas, has been reviewed widely. NRC headquarters and Regional staff provided extensive comment on the program. The ASNT program will offer certification for both isotope and x-ray users. Application for certification requires documentation of 40 hours of classroom training in radiation safety topics specified by ASNT

(including those subjects outlined in Appendix A of 10 CFR Part 34), documentation of 520 hours of direct experience with radiography sources under the control of an NRC or Agreement State licensee, and proof of successful completion of a practical examination on safety procedures administered by an institution recognized by the ASNT. ASNT recognizes government or private institutions that are licensed by the NRC or an Agreement State for the use of radiography sources.

Upon approval of an application for certification by ASNT, a candidate radiographer would then be eligible to take the State of Texas written examination. The examination would be administered by the ASNT or the Conference of Radiation Control Program Directors (CRCPD). The examination covers radiation protection principles, regulations, basic equipment operation, and radiation safety procedures applicable to industrial radiography. In addition, a candidate must sign an acknowledgement that he/she will abide by the ASNT Rules of Professional Conduct.

Certification is for a period of 5 years, and a candidate for renewal must document continued active permanent employment in radiography for at least 24 out of the last 36 months. In addition, the renewal candidate must document at least 8 hours of annual formal classroom training on radiation safety topics including new safety regulations or requirements. If these renewal criteria are not met, the candidate would be required to repeat the examination process.

ASNT plans to implement an initial trial of its certification program in December of 1989. It is expected that the program will be fully capable of certifying approximately 10,000 radiographers within 2 to 3 years. The NRC staff will monitor the trial program prior to initiating rulemaking which would make third-party certification a requirement.

More detailed information regarding the certification program is available from the American Society for Nondestructive Testing, Inc., 4153 Arlingate Plaza, P.O. Box 28518, Columbus, Ohio 43228-0518.

. Description of Proposed Amendment

The proposed amendment to 10 CFR 34.11 would apply to all applicants for NRC industrial radiography licenses. The proposed rule would provide radiography license applicants the option to affirm that all individuals acting as radiographers will be certified in radiation safety through the Industrial Radiography Radiation Safety Personnel program of the American Society for Nondestructive Testing, Inc. prior to commencing duties as radiographers. This would be in lieu of the current requirement for submitting a description of the applicant's initial training and testing program on radiation safety subjects listed in Appendix A of 10 CFR Part 34. It is not the intent of this rulemaking to waive the training requirements outlined in §34.11, §34.31 and Appendix A of 10 CFR Part 34. This rule also would not change requirements for radiographers' assistants, and descriptions of periodic retraining and training in operating and emergency procedures would continue to be required.

Future Rulemaking

This proposed rule also solicits comments on the costs and benefits of third-party radiation safety certification which will be used by the Commission in its consideration of planned subsequent rulemaking that would require radiographer certification.

Impact

The ASNT has estimated the cost to the industry for certification to be approximately \$1000 per radiographer, which includes exam fees and costs, travel, and administrative costs and lodging at the testing site. Certification is for a period of 5 years, and a candidate for renewal must document continued active permanent employment in radiography for at least 24 out of the last 36 months. In addition, the renewal candidate must document at least 8 hours of annual formal classroom training on radiation safety topics including new safety regulations or requirements. If these renewal criteria are not met, the candidate would be required to repeat the examination process. The NRC expects use of the ASNT certification program by the license applicant would not affect licensee training costs because present NRC regulations require training and would continue to do so, and because the ASNT eligibility requirements include documented training. Some small reduction in cost will be associated with the application process because if a radiography license applicant elects to have its radiographers certified, the applicant would not have to submit a detailed description of a planned initial radiation safety training and testing program covering the topics listed in Appendix A.

The ASNT estimates that as many as 12,000 radiographers could be involved in certification. The total cost to the industry is estimated to be \$6.7 million in 1989 dollars based on a 30-year period beginning in 1989.

The NRC believes that voluntary participation in the ASNT certification program has the potential to significantly improve safety awareness and performance.

Environmental Impact: Categorical Exclusion

The NRC has determined that this regulation is the type of action described as a categorical exclusion in 10 CFR 51.22(c)(3)(i). Therefore, neither an environmental impact statement nor an environmental assessment has been prepared for this proposed rule.

Paperwork Reduction Act Statement

This proposed rule does not contain a new or amended information collection requirement subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). Existing requirements were approved by the Office of Management and Budget approval number 3150-0120.

Regulatory Analysis

The Commission has prepared a draft regulatory analysis on this proposed regulation. The analysis examines the costs and benefits of the alternatives considered by the Commission. 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 draft analysis may be obtained from Alan K. Roeklein, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone (301) 492-3740.

The Commission requests public comment on the draft regulatory analysis. Comments on the draft analysis may be submitted to the NRC as indicated under the ADDRESSES heading.

Regulatory Flexibility Certification

Based upon the information available at this stage of the rulemaking proceeding and in accordance with the Regulatory Flexibility Act, 5 U.S.C. 605(b), the Commission certifies that, if promulgated, this rule will not have a significant economic impact upon a substantial number of small entities.

The proposed rule would affect all industrial radiography license applicants. Currently, license applicants are required under 10 CFR Part 34.11(b) to provide descriptions of initial training, testing and periodic safety performance appraisals of all radiographers in their employ. The proposed rule would add a provision that would permit substitution of ASNT certification for the existing requirement to submit detailed descriptions of initial radiation safety training and testing procedures in license applications. Because the cost of ASNT certification per radiographer is estimated at approximately \$1000 for a certification period of 5 years and recertification without reexamination is estimated at approximately \$70.00 per radiographer, and the potential improvement in safety awareness and performance is considered to be significant, the overall industry benefits are considered to outweigh the economic impact on small industrial radiography licensees. However, the NRC is seeking comments and suggested modifications of the proposed rule because of the widely differing conditions under which small industrial radiography licensees operate.

Any small entity, subject to this regulation which determines that, because of its size, it is likely to bear a disproportionate adverse economic impact, should notify the Commission of this in a comment that indicates --

(a) The applicants' size in terms of annual income or revenue, number of employees, and the number of radiographic tests performed annually;

(b) How the proposed regulation would result in a significant economic burden upon the applicant as compared to that on a larger applicant;

(c) How the proposed regulation could be modified to take into account the applicants' differing needs or capabilities;

(d) The benefits that would be gained or the detriments that would be avoided by the applicant if the proposed regulation were modified as suggested by the commenter; and

(e) How the regulation, as modified, would still adequately protect the public health and safety.

Backfit Analysis

The NRC has determined that the backfit rule, 10 CFR 50.109, does not apply to this proposed rule, and therefore, that a backfit analysis is not required for this proposed rule, because these amendments do not involve any provisions which would impose backfits as defined in 10 CFR 50.109(a)(1).

List of Subjects in 10 CFR Part 34

Packaging and containers, Penalty, Radiation protection, Radiography, Reporting and recordkeeping requirements, Scientific equipment, Security measures.

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, and 5 U.S.C. 553, the NRC is proposing to adopt the following amendment to 10 CFR Part 34.

PART 34 - LICENSES FOR RADIOGRAPHY AND
RADIATION SAFETY REQUIREMENTS FOR
RADIOGRAPHIC OPERATIONS

1. The authority citation for Part 34 continues to read as follows:
AUTHORITY: Secs. 81, 161, 182, 183, 68 Stat. 935, 948, 953, 954, as amended (42 U.S.C. 2111, 2201, 2232, 2233); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841).

Section 34.32 also issued under sec. 206, 88 Stat. 1246 (42 U.S.C. 5846).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 34.22, 34.23, 34.24, 34.25(a), (b), and (d), 34.28, 34.29, 34.31(a) and (b), 34.32, 34.33(a), (c), and (d), 34.41, 34.42, and 34.43(a), (b) and (c), and 34.44 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); and §§ 34.11(d), 34.25(c) and (d), 34.26, 34.27, 34.28(b), 34.29(c), 34.31(c), 34.33(b) and (e), and 34.43(d) are issued under sec 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

2. In § 34.11, paragraph(b)(5) is redesignated as paragraph(b)(6) and a new paragraph(b)(5) is added to read as follows:

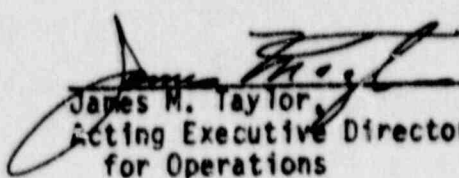
§ 34.11 Issuance of specific licenses for use of sealed sources in radiography.

* * * * *
(b) * * *

(5) In lieu of describing an initial training program for radiographers in the subjects outlined in Appendix A and required in § 34.31 of this part and the means used to determine the radiographer's knowledge and understanding of these subjects, the applicant affirms that all individuals acting as radiographers will be certified through the Certification Program for Industrial Radiography Radiation Safety Personnel of the American Society for Nondestructive Testing, Inc. prior to commencing duties as radiographers. (This paragraph does not relieve a licensee from compliance with the training requirements of Section 34.31(a) of this part.)

* * * * *
Dated at Rockville, Maryland, this 30th day of October, 1989.

For the Nuclear Regulatory Commission.


James M. Taylor,
Acting Executive Director
for Operations