



## NUCLEAR REGULATORY COMMISSION

### 10 CFR Part 34

[Docket No. PRM-34-6; NRC-2017-0022; NRC-2008-0173]

### Industrial Radiographic Operations and Training

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Notification of interpretation, request for comment.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is issuing a notification of interpretation on industrial radiographic operations at temporary radiography jobsites and an Agreement State Compatibility Category change. The interpretation and Compatibility Category change are effective immediately with a 30-day post-promulgation comment period. The NRC is taking this action to respond to a petition for rulemaking from the Organization of Agreement States (OAS).

**DATES:** This interpretation and Compatibility Category change is effective [INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]. Submit comments by [INSERT DATE 30 DAYS FROM DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]. Comments received after this date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received before this date.

**ADDRESSES:** You may submit comments by any of the following methods:

- **Federal Rulemaking website:** Go to <https://www.regulations.gov> and search for Docket ID NRC-2017-0022. Address questions about NRC dockets to Dawn

Forder; telephone: 301-415-3407; e-mail: Dawn.Forder@nrc.gov. For technical questions contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **E-mail comments to:** [Rulemaking.Comments@nrc.gov](mailto:Rulemaking.Comments@nrc.gov). If you do not receive an automatic e-mail reply confirming receipt, then contact us at 301-415-1677.
- **Mail comments to:** Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.
- **Attention:** The Public Document Room (PDR), where you may examine and order copies of public documents, is currently closed. You may submit your request to the PDR via email at [PDR.Resource@nrc.gov](mailto:PDR.Resource@nrc.gov) or call 1-800-397-4209 between 8:00 a.m. and 4:00 p.m. (EST), Monday through Friday, except Federal holidays.

For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the SUPPLEMENTARY INFORMATION section of this document.

**FOR FURTHER INFORMATION CONTACT:** Gregory R. Trussell, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-6244, e-mail: [Gregory.Trussell@nrc.gov](mailto:Gregory.Trussell@nrc.gov).

## **SUPPLEMENTARY INFORMATION:**

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## I. Obtaining Information and Submitting Comments

### A. Obtaining Information

Please refer to Docket IDs NRC-2017-0022 and NRC-2008-0173 when contacting the NRC about the availability of information for this action. You may obtain publicly-available information related to this action by any of the following methods:

- **Federal Rulemaking website:** Go to <https://www.regulations.gov> and search for Docket IDs NRC-2017-0022 and NRC-2008-0173.
- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly-available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's PDR reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the "Availability of Documents" section.

### B. Submitting Comments

Please include Docket IDs NRC-2017-0022 and NRC-2008-0173 in your comment submission. When preparing and submitting your comments, see "Tips for Submitting Effective Comments" in the "Availability of Documents" section.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <https://www.regulations.gov> as well as enter the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying

or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

## **II. Background**

### **A. Industrial Radiographic Operations and Training Rulemaking**

On May 28, 1997, the NRC issued § 34.41(a) of title 10 of the *Code of Federal Regulations* (10 CFR), “Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiographic Operations,” commonly called “the two-person rule,” which requires a second qualified individual (radiographer or radiographer’s assistant) to be present during industrial radiography operations at temporary jobsites. (62 FR 28948). In the preamble for the two-person rule, the NRC stated, “the purpose of the second individual is to provide immediate assistance when required and to prevent unauthorized entry into the restricted area.” (62 FR 28955). The second individual should have “... sufficient radiography and safety training to allow him/her to take charge and secure the radioactive material, provide aid where necessary, and prevent access to radiation areas by unauthorized persons.” (62 FR 28955). The NRC has consistently interpreted 10 CFR 34.41(a) to require the second qualified individual to directly observe radiographic operations.

### **B. Integrated Materials Performance Evaluation Program Review**

The Integrated Materials Performance Evaluation Program (IMPEP) is a review process that evaluates the adequacy and compatibility of each Agreement State and NRC radioactive materials program. In June 2001, during an IMPEP review, the NRC preliminarily identified that implementation of the two-person rule by the State of Texas Department of Health (Texas) was not compatible with the provisions of 10 CFR

34.41(a).<sup>1</sup> Specifically, the NRC concluded that Texas's regulations are not compatible with 10 CFR 34.41(a) because Texas does not require the second individual to "observe" the operations. For example, the second qualified individual is permitted to perform other job-related duties, such as developing radiographic film in a nearby darkroom, during radiographic operations. In such a case, the second person would not be deemed available to observe and provide immediate assistance in the case of an accident or injury. However, the final IMPEP report found that Texas's performance was satisfactory based on additional performance information provided by Texas at that time. The final IMPEP report recommended that the NRC, in coordination with the Agreement States, reconsider how the rule could be implemented.

The NRC convened a working group with representatives from the OAS in June 2002.<sup>2</sup> The group provided options to an NRC Management Review Board.<sup>3</sup> The Management Review Board recommended that OAS or the State of Texas submit a Petition for Rulemaking (PRM) to the NRC with a request to reevaluate the two-person rule. The NRC agreed to hold in abeyance compatibility findings for inconsistencies identified during all IMPEP reviews related to the issues in the PRM until the issue is resolved.

### C. Petition for Rulemaking

On November 3, 2005, the OAS submitted a PRM requesting the NRC to amend its regulations in 10 CFR 34.41(a), 34.43(a), and 34.51 related to industrial radiographic operations to: (1) require that an individual receive a specific amount of radiation safety training before using sources of radiation for industrial radiography; (2) clarify the requirements related to the responsibilities of the second individual that is required to be present during radiographic operations; and (3) clarify how many individuals are required

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<sup>1</sup> Integrated Materials Performance Evaluation Program Review of Texas Agreement State Program August 27-31, 2001, Final Report, pp. 13-15 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML013530314) (final IMPEP report).

<sup>2</sup> STP-05-025, Results of the Management Review Board's Consideration of the Working Group's Report on the Re-evaluation of 10 CFR 34.41(a) Commonly Known at the "Two Person Rule."

<sup>3</sup> Final Memo to Management Review Board, Re-evaluation of 10 CFR 34.41(a) Commonly Known as the Two-person Rule (June 18, 2004) (ADAMS Accession No. ML041700450).

to meet visual surveillance requirements during radiographic operations. The petitioner also requested that NUREG-1556, Volume 2, "Program-Specific Guidance about Industrial Radiography Licenses,"<sup>4</sup> be revised to reflect the proposed amendments. The petitioner asserted that the NRC's interpretation of the two-person rule added unnecessary cost to the industry because the second qualified individual is unavailable to perform other job-related duties such as developing radiographic film in a darkroom. The petitioner requested the NRC delete from the two-person rule the sentence, "[t]he additional qualified individual shall observe the operation and be capable of providing immediate assistance to prevent unauthorized entry." The petitioner posited that in a temporary jobsite situation in which the crew consists of two qualified radiographers, and the surveillance requirement of 10 CFR 34.51 can be met, that the second individual should be considered available to provide immediate assistance even if the second qualified individual is engaged in job-related duties other than observation of radiographic operations. The petitioner also argued that one of the primary factors identified as a root cause of many industrial radiography overexposures was lack of radiation safety training.

The NRC reviewed the petition and determined that the issues and concerns raised in the petition merited further NRC consideration and inclusion in a future rulemaking (73 FR 27771). Because the rulemaking activity did not raise an immediate safety, environmental, or security concern, it was rated a medium priority. Resources were applied to this rulemaking in fiscal year 2018.

### **III. Interpretation**

The NRC has previously interpreted § 34.41(a) to require both the radiographer

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<sup>4</sup> NUREG-1556, Volume 2, "Program-Specific Guidance About Industrial Radiography Licenses," has been revised since the PRM was received. The August 1998 version referenced by the PRM is available at ADAMS Accession No. ML010370172. The current version, Revision 1, published in February 2016, is available at ADAMS Accession No. ML16062A091. The PRM's request for revision continues to be relevant to the current revision.

and the second qualified individual to maintain direct observation when radiographic operations are being conducted at a temporary jobsite.<sup>5</sup> This interpretation has been demonstrated, through operating experience, to be unnecessary to protect public health and safety. The NRC is now reinterpreting that requirement.

The regulation uses the term “observe” rather than “directly observe,” and also requires that the second qualified individual “be capable of providing immediate assistance to prevent unauthorized entry.” The NRC’s interpretation has been that direct observation is required to ensure the second individual can provide immediate assistance. The two-person rule is intended to ensure that the second individual is able “... to take charge and secure the radioactive material, provide aid where necessary, and prevent access to radiation areas by unauthorized persons.” To achieve that purpose, the word “observe” is used to ensure that the second individual can determine when it is necessary to take charge or help the radiographer and prevent unauthorized entry.

Therefore, the NRC now interprets § 34.41 such that the requirements contained in the sentence, “[t]he additional qualified individual shall observe the operation and be capable of providing immediate assistance to prevent unauthorized entry” are met if the second qualified individual is in sufficiently close proximity to the operation and sufficiently aware of the ongoing activities to be able to provide assistance or take charge when necessary and to prevent unauthorized entry. The second individual may perform other tasks nearby so long as they are cognizant of the site-specific circumstances when radiographic operations are in progress. The second individual could, for example, use remote video surveillance to maintain awareness of ongoing radiographic operations from a nearby darkroom.

This interpretation does not affect the NRC’s existing guidance for temporary jobsites that have multiple access points. As explained in NUREG-1556, Volume 2, Revision 1, licensees may need two or more individuals present to prevent unauthorized

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<sup>5</sup> See NUREG-1556, Volume 2.

entry at temporary jobsites at facilities with multiple levels and multiple access points, or where members of the public are close to the radiographic operations.

#### **IV. Compatibility of Agreement State Regulations**

The NRC is not requiring Agreement States to revise their interpretations of § 34.41. As such, and as described below, the NRC hereby changes the compatibility category of § 34.41 from B to C.

Under the “Agreement State Program Policy Statement” approved by the Commission on October 2, 2017, and published in the *Federal Register* on October 18, 2017 (82 FR 48535), NRC program elements (including regulations) are placed into compatibility categories A, B, C, D, NRC, or adequacy category Health and Safety (H&S).

Compatibility Category A program elements are those program elements that are basic radiation protection standards and scientific terms and definitions that are necessary to understand radiation protection concepts. An Agreement State should adopt Category A program elements in an essentially identical manner in order to provide uniformity in the regulation of agreement material on a nationwide basis.

Compatibility Category B program elements are those program elements that apply to activities that have direct and significant effects in multiple jurisdictions. An Agreement State should adopt Category B program elements in an essentially identical manner.

Compatibility Category C program elements are those program elements that do not meet the criteria of Category A or B, but contain the essential objectives that an Agreement State should adopt to avoid conflict, duplication, gaps, or other conditions that would jeopardize an orderly pattern in the regulation of agreement material on a national basis. An Agreement State should adopt the essential objectives of the Category C program elements.

Compatibility Category D program elements are those program elements that do



not meet any of the criteria of Category A, B, or C and, therefore, do not need to be adopted by Agreement States for purposes of compatibility.

Compatibility Category NRC program elements are those program elements that address areas of regulation that cannot be relinquished to the Agreement States under the Atomic Energy Act of 1954, as amended, or provisions of 10 CFR. These program elements should not be adopted by the Agreement States.

Adequacy Category H&S program elements are program elements that are required because of a particular health and safety role in the regulation of agreement material within the State and should be adopted in a manner that embodies the essential objectives of the NRC program.

The NRC is changing the compatibility category designation for § 34.41(a) from B to C. Instead of requiring Agreement States to adopt this regulation in an essentially identical manner, they would now be able to implement regulations that are more restrictive than the NRC requirements, provided that the essential objective is met, and the State requirements do not jeopardize an orderly pattern of regulation of agreement material on a nationwide basis. The NRC, with the benefit of over 20 years of experience with Agreement States' implementing differing interpretations of the two-person rule, has determined that essentially identical implementation is not necessary to provide an orderly pattern of regulation. Despite differences in implementation of the two-person rule, the NRC is not aware of any cross-jurisdictional boundary issues for the National Materials Program. Therefore, § 34.41(a) is hereby redesignated Compatibility Category C.

The essential objective of § 34.41(a) is to have a second qualified individual maintain awareness of the radiographic operations, maintain direct communications with the radiographer, and be capable of providing immediate assistance to the radiographer or taking charge when necessary, and to prevent unauthorized entry into a restricted area. To meet the essential objective of Compatibility Category C, the Agreement State may either adopt the NRC's position or may continue to require direct observation of

radiographic operations by the second qualified individual at temporary jobsites.

Agreement States may also adopt other more restrictive requirements.

## **V. Request for Comment**

The NRC is requesting comments on this interpretation and the change from Compatibility Category B to C for the surveillance requirements in § 34.41(a). The NRC will publish a document in the *Federal Register* containing an evaluation of the significant comments and any revisions to this interpretation made as a result of the comments and their evaluation.

## **VI. Petition Resolution**

The NRC will evaluate comments received on this notification of interpretation to determine if the petition issues related to the two-person rule in PRM-34-6 are resolved. This notification of interpretation makes § 34.41(a) consistent with the requirement of § 34.51 that at least one of the two individuals present at a temporary jobsite “maintain direct observation of the operation.”

In addition, the NRC has reviewed the petition regarding training requirements and has concluded, based on associated operational experience since 1997, that current requirements in § 34.43(c) are sufficient to ensure safe radiographic operations. Specifically, the second qualified individual is required to receive equipment training on radiographic devices, sources, associated equipment, radiation survey equipment and the daily inspection requirements on the equipment. The training requirements in 10 CFR part 34 prepare individuals conducting radiographic operations with sufficient knowledge and understanding of the regulations and safety requirements and familiarity with the equipment that they will use in the performance of their work.

Based on this review, the NRC has preliminarily concluded that rulemaking to amend its requirements for Industrial Radiographic Operations and Training is no longer necessary and, therefore, is proposing discontinuing the rulemaking activity.

The NRC intends to develop an addendum to the current version of NUREG-1556, Volume 2, Revision 1, “Program-Specific Guidance About Industrial Radiography Licenses” and to revise Inspection Procedure 87121, “Industrial Radiography Programs” to address the interpretation of the surveillance requirements.

## VII. Availability of Documents

The documents identified in the following table are available to interested persons through one or more of the following methods, as indicated.

DOCUMENT	DATE	ADAMS ACCESSION NO. OR FEDERAL REGISTER CITATION
Tips for Submitting Effective Comments	January 16, 2020	ML20014E720
Petition from OAS PRM-34-6	November 3, 2005	ML053190112
“Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiographic Operations,” commonly known as the “Two-Person Rule”	May 28, 1997	62 FR 28948
Final Memo to MRB re: Re-evaluation of 10 CFR 34.41(a), commonly known as the “Two-Person Rule,” group report to MRB	June 18, 2004	ML041700450
Organization of Agreement States, Inc., Consideration of Petition in Rulemaking Process	May 14, 2008	73 FR 27771
NUREG-1556, Volume 2, “Program-Specific Guidance about Industrial Radiography Licenses”	August 1998	ML010370172
NUREG-1556, Volume 2, Revision 1, “Program-Specific Guidance about Industrial Radiography Licenses”	February 2016	ML16062A091
Inspection Procedure 87121, “Industrial Radiography Programs”	September 5, 2014	ML14239A234

## **VIII. Congressional Review Act**

This notification of interpretation is a rule as defined in the Congressional Review Act (5 U.S.C. 801-808). However, the Office of Management and Budget has not found it to be a major rule as defined in the Congressional Review Act.

## **IX. Conclusion**

The requirement of § 34.41(a) is met if the additional qualified individual is in sufficiently close proximity to the operation and sufficiently aware of the ongoing activities to be able to provide assistance or take charge when necessary and to prevent unauthorized entry. In addition, the compatibility category for § 34.41(a) is changed to Category C. This notification of interpretation addresses the issues identified in PRM-34-6 regarding the two-person rule. Therefore, the NRC has preliminarily concluded that rulemaking is no longer necessary and is proposing discontinuing the rulemaking activity initiated in response to PRM-34-6.

In addition, the NRC has concluded that the training requirements for the second qualified individual in § 34.43(c) are sufficient to ensure safe radiographic operations. The NRC's review of operational experience since 1997 shows that the NRC's training requirements for the second qualified individual, either a radiographer's assistant or radiographer, are adequate to protect public health and safety. Therefore, the NRC proposes denying PRM-34-6.

Dated at Rockville, Maryland, this 26th day of May, 2021.

For the Nuclear Regulatory Commission.

Wesley W. Held,  
Acting Secretary of the Commission.

