



## POLICY ISSUE (Notation Vote)

DATE: July 28, 2020 SECY-20-0068

FOR: The Commissioners

FROM: Margaret M. Doane  
Executive Director for Operations

SUBJECT: REINTERPRETATION, AGREEMENT STATE COMPATIBILITY  
CATEGORY CHANGE, DISCONTINUATION OF A RULEMAKING AND  
DENIAL OF PETITION FOR RULEMAKING ON INDUSTRIAL  
RADIOGRAPHIC OPERATIONS (PRM-34-6; NRC-2017-0022)

PURPOSE:

The purpose of this paper is to request Commission approval to discontinue a planned rulemaking activity and deny the associated petition for rulemaking (PRM-34-6), and instead change the Agreement State Compatibility Category for and reinterpret the underlying regulation.

SUMMARY:

The staff is recommending that the U.S. Nuclear Regulatory Commission (NRC) reinterpret the responsibilities of the second qualified individual involved in radiographic operations at temporary radiographic jobsites as defined in § 34.41(a) of Title 10 of the *Code of Federal Regulations* (10 CFR). In the *Federal Register* notice for the 1997 revision to § 34.41(a), the Commission interpreted § 34.41(a) to require the second qualified individual to directly observe radiographic operations. The staff recommends that the Commission reinterpret § 34.41(a) to require that the second qualified individual must be cognizant of the site-specific circumstances when radiographic operations are in progress but can perform other tasks nearby without

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directly maintaining surveillance of the radiographic operations. The experience of some Agreement States applying a similar interpretation supports that less direct observation can provide reasonable assurance that licensed activities will be conducted safely. The staff also recommends changing the Agreement State Compatibility Category designation for 10 CFR 34.41(a) related to the conduct of radiographic operations from B to C to afford Agreement States the flexibility to choose to adopt the new position or to retain their current programs. Finally, based on the reinterpretation and Compatibility Category change, the staff recommends that the NRC deny a related PRM dated November 3, 2005, submitted by the Organization of Agreement States (OAS) and discontinue the associated rulemaking activity. If the Commission approves the staff's recommendations, the staff plans to publish this proposed interpretation in the *Federal Register* (FR) under the "notice of interpretation" action heading with immediate effect and a 30-day post-promulgation comment period consistent with 10 CFR 2.804(d)–(f).

#### BACKGROUND:

On May 28, 1997, the NRC issued the final rule, "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.

In June 2001, during an Integrated Materials Performance Evaluation Program (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's Office of the General Counsel 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 be developing radiographic film in a nearby darkroom during radiographic operations. In such a case, the second person was deemed not available to observe and provide immediate assistance in the case of an accident or injury. However, the final IMPEP report indicated that Texas' performance was found satisfactory based on additional performance information provided by Texas to the IMPEP team 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 PRM to the NRC with a request

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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 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.

On November 3, 2005, the OAS submitted a PRM to the NRC (ADAMS Accession No. ML053190112) requesting amendments to the NRC 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 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 petition was docketed as PRM-34-6. The petitioner asserted that the NRC's interpretation of the two-person rule added unnecessary cost to the industry. The implementation of the two-person rule in some Agreement States does not specifically require the second qualified person to directly observe the operations. The petitioner posited that in a temporary jobsite situation in which the crew consists of two qualified radiographers, and the surveillance requirement can be met, that the second individual should be available to be involved in job-related duties other than observation of radiographic operations, but still be able to provide immediate assistance to the radiographer. Therefore, the petitioner requested flexibility for the second individual to be in the darkroom or performing other job-related duties "nearby, but available to provide immediate assistance." In terms of training, the petitioner asserted that one of the primary factors identified as a root cause of a large number of industrial radiography overexposures was lack of radiation safety training.

The staff 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 rated a medium priority. Resources were applied to this rulemaking in fiscal year (FY) 2018.

## DISCUSSION:

### *Interpretation of the Two-Person Rule*

The NRC currently interprets 10 CFR 34.41(a) to require both the radiographer and the second qualified individual to maintain direct observation when radiographic operations are being conducted at a temporary jobsite.<sup>5</sup> The regulation uses the term "observe" rather than "directly observe," but also requires that the second qualified individual "be capable of providing immediate assistance to prevent unauthorized entry." The NRC's current interpretation is that *direct* observation is required to ensure the second individual can provide immediate assistance.

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

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

The staff is proposing an interpretation that recognizes that the word “observe” in § 34.41(a) does not require direct observation to meet the purpose of the rule.<sup>6</sup> As mentioned above, 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 staff believes that an acceptable resolution of the issue raised in the petition could be achieved through a reinterpretation of the regulation that requires the second qualified individual to be 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, without direct observation. Under this interpretation, the second individual could 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.

The experience gained by some Agreement States in applying a similar interpretation of the two-person rule demonstrates that the proposed interpretation can provide reasonable assurance that licensed activities will be conducted safely. The two regulatory approaches to the two-person rule have existed for over 20 years with demonstrated equivalent protection of public health and safety and without adverse radiographic operating experience.

The reinterpretation would 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 more than two individuals present to prevent unauthorized 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.

The NRC staff is requesting Commission approval because this interpretation is a necessary part of the staff’s proposed approach to resolve the issues raised in PRM-34-6.

#### *Training Request in PRM-34-6*

As part of the potentially updated requirements, the petition requested that the NRC regulations in 10 CFR 34.43 be amended to require the second individual to complete a specified amount or level of radiation safety training prior to conducting industrial radiography activities. The petitioner provided information and data to support this proposal.

The training requirements in 10 CFR Part 34 provide individuals conducting radiographic operations with sufficient knowledge and understanding of the regulations, safety requirements, and familiarity with the equipment that they will use in the performance of their work. The training requirements for a radiographer’s assistant in 10 CFR 34.43(c) include receiving copies of and instructions in: 10 CFR Parts 19, 20, 34, and 71; applicable Department of Transportation regulations; the license; and the licensee’s Operating and Emergency procedures. In addition, the radiographer’s assistant is required to receive equipment training on radiographic devices, sources, associated equipment, radiation survey equipment, and the

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<sup>6</sup> Note that under 10 CFR 34.51, “Surveillance,” at least *one* of the two individuals present at a temporary jobsite must “maintain continuous direct visual surveillance of the operation.” The NRC’s current interpretation of 10 CFR 34.41(a) effectively extends that requirement to apply to both individuals.

daily inspection requirements on the equipment. Appendix E in NUREG-1556, Volume 2, outlines training for radiographers and radiographer's assistants.

The staff has reviewed reportable events in the National Materials Events Database since 1997 and concludes that the training requirements for the second qualified individual in 10 CFR 34.43(c) have proven sufficient to ensure safe radiographic operations. Therefore, the staff recommends no changes to the training requirements.

#### *Denial of Petition*

If the Commission approves the staff's recommendation to reinterpret the regulations, PRM-34-6 should be denied in accordance with 10 CFR 2.803(i)(2). The proposed interpretation would address the issues raised by the PRM regarding what is required of the second qualified individual and the remaining issues raised by the petition do not present significant new information or arguments to warrant the requested changes to the regulations. Because the PRM was accepted for consideration in rulemaking, the NRC staff also recommends discontinuation of that planned rulemaking.

#### *Compatibility of Agreement State Regulations*

In conjunction with the reinterpretation, the staff is recommending a change of the Agreement State Compatibility Category designation for 10 CFR 34.41(a) from B to C. Regulations in Compatibility Category B need to be adopted by Agreement States in an essentially identical manner in order to ensure uniformity of regulation on a nationwide basis. Regulations in Compatibility Category C may be 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. Under 10 CFR 34.41(a), the essential objective is to have a second qualified individual maintain awareness of the radiographic operations, maintain direct communications, and be capable of providing immediate assistance to the radiographer to prevent unauthorized entry. Based on over 20 years of experience with Agreement States' implementing differing interpretations of the two-person rule, the staff concludes that requiring essentially identical implementation is not necessary to provide an orderly pattern of regulation. Despite variance in implementing the two-person rule differently, the staff is not aware of any cross-jurisdictional boundary issues for the National Materials Program.

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. This approach would allow Agreement States the flexibility to align their programs with the staff's reinterpretation, continue their current implementation of the two-person rule, or adopt another more restrictive approach. The Standing Committee on Compatibility has reviewed the draft *Federal Register* notice (FRN) that is enclosed to this paper and had no comments.

#### *Path Forward*

The staff is recommending that the proposed interpretation be published under the "notice of interpretation" action heading in the FR. The notice would also include the redesignation of Agreement State Compatibility Category and the PRM denial and concomitant discontinuation of rulemaking. The staff believes that combining these actions is an effective and efficient way

to disseminate the proposed interpretation and compatibility category change to Agreement States for their use.

The staff recommends publishing the proposed reinterpretation directly in the FR, as opposed to through a separate document such as a regulatory guide, because the reinterpretation is a change from the policy described in the preamble to the final rule, and thus Commission approval is required. The staff sees this “notice of interpretation” process as a transformative procedure that both enables efficient Commission review, before significant staff resources have been expended, and allows Agreement States and licensees to immediately take advantage of the flexibility afforded by the proposed interpretation. More complete guidance, such as through a regulatory guide, is not necessary in this case because conformance to the current guidance would continue to meet the regulation under the staff’s proposed interpretation. At a later time, the staff plans to add an addendum to NUREG-1556, Volume 2, and revise Inspection Procedure 87121, “Industrial Radiography Programs in FY 2021.” In addition, several Agreement States have been implementing an interpretation consistent with the staff’s proposed reinterpretation for two decades.

The staff further recommends the interpretation be issued with immediate effect and a 30-day post-promulgation comment period under 10 CFR 2.804(e)(2). If significant public comments are received, staff would prepare a draft to adopt the reinterpretation FRN responding to comments for Commission approval consistent with 10 CFR 2.804(f). However, the staff does not anticipate receiving significant comments that would change the interpretation. The staff would follow the notice of interpretation with revisions to the appropriate guidance in one to two years, as described below.

#### AGREEMENT STATE CONSIDERATIONS:

The change in compatibility and the staff’s proposed interpretation of 10 CFR 34.41(a) would allow an end to the practice of holding compatibility findings for these inconsistencies in abeyance during the IMPEP reviews.<sup>7</sup> The Standing Committee on Compatibility has reviewed the staff’s proposed interpretation of 10 CFR 34.41(a) and the change in compatibility category and had no comments or concerns.

#### RESOURCES:

The NRC and the Agreement States who choose to adopt the reinterpretation will incur the cost of implementing the interpretation. Licensees that avail themselves of the increased flexibility afforded by the new interpretation will incur implementation and ongoing operational costs that are estimated to be minimal. If the Commission approves the staff’s recommendations listed below, after the notice of interpretation becomes effective, the staff plans to add an addendum to NUREG-1556, Volume 2, and revise Inspection Procedure 87121. The staff anticipates completing these revisions in one to two years. The estimated total cost of implementing the proposed interpretation and updating the guidance is \$155,000. If this recommendation is approved by the Commission, funding will be reallocated through the Planning, Budgeting, and Performance Management Process.

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<sup>7</sup> Letter from Paul H. Lohaus, NRC, to all Agreement States, Minnesota, and Pennsylvania, “Results of the Management Review Board’s Consideration on the Working Group’s Report on the Re-evaluation of 10 CFR 34.41(a) Commonly Known as the ‘Two-Person Rule’ (STP-05-025),” dated March 25, 2005 (ADAMS Accession No. ML050870344).

RECOMMENDATIONS:

The staff recommends that the Commission:

- (1) Approve the reinterpretation of 10 CFR 34.41(a) as described above.
- (2) Approve the change to the compatibility category designation of 10 CFR 34.41(a) from B to C.
- (3) Approve discontinuance of the planned rulemaking and deny PRM-34-6.
- (4) Approve publication of the enclosed FRN.
- (5) The staff will inform the appropriate congressional committees of these actions.
- (6) Staff will develop an addendum to the current version of NUREG-1556, Volume 2, and revise Inspection Procedure 87121.

COORDINATION:

The Office of the General Counsel has no legal objection to this action. The Office of the Chief Financial Officer has reviewed this paper and has identified no concerns with the estimated resources in the enclosure. The Office of Management and Budget has informed the staff that this action is not a "major rule" as defined in the Congressional Review Act (5 U.S.C. 804(2)).

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Enclosures:

1. Federal Register Notice
2. Letter to the Petitioner

REINTERPRETATION, AGREEMENT STATE COMPATIBILITY CATEGORY CHANGE,  
DISCONTINUATION OF A RULEMAKING AND DENIAL OF PETITION FOR RULEMAKING  
ON INDUSTRIAL RADIOGRAPHIC OPERATIONS (PRM-34-6; NRC 2017-0022)  
DATED: July 28, 2020

**ADAMS Accession Nos.: ML20093D804 (Pkg.); ML20093D808(SECY Paper);  
ML20093D806 (Enclosure – FRN); ML20093D812 (Enclosure –Letter to the Petitioner) \*via  
email**

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