

Basis for Withdrawal of Regulatory Guide 8.21

“Health Physics Surveys for Byproduct Material at NRC-Licensed Processing and Manufacturing Plants”

(1) What did the Regulatory Guide support?

RG 8.21 was issued in October 1979 to provide guidance for compliancy with the regulations in Title 10 of the Code of Federal Regulations Part 20 (10 CFR 20), "Standards for Protection Against Radiation." The regulations in 10 CFR Part 20 required that each licensee make, or cause to be made, such surveys as may be necessary to comply with the regulations.

(2) What was the purpose of the Regulatory Guide?

This guide described the methods and procedures considered acceptable by the NRC staff in 1979 to comply with the survey requirements found in 10 CFR Part 20. The term “survey” in 10 CFR Part 20, is defined as an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

(3) How was the Regulatory Guide used?

The NRC staff issued RG 8.21 in 1979 to provide guidance to support health physics surveys for byproduct material at NRC licensed processing/manufacturing plants.

(4) Why is the Regulatory Guide no longer needed?

RG 8.21 was issued in 1979 to provide guidance for compliancy with the regulations in 10 CFR Part 20. It described the methods and procedures considered acceptable by the NRC staff in 1979 to comply with the survey requirements found in 10 CFR Part 20. Although 10 CFR Part 20 was revised in 1991, RG 8.21 was not updated.

Since the staff had consolidated and followed the latest guidance pertinent to materials licensees found in NUREG-1556, “Consolidated Guidance About Materials Licenses.” RG 8.21 became outdated. Issues identified during the periodic reviews of RG 8.21 in 2012 and 2023 include: 1) the citations to the regulations described in RG 8.21 were not consistent with those listed in the 1991 revision of 10 CFR 20, 2) several of the references were outdated (e.g., some references were dated from the 1950’s and no longer available to the public), and 3) the latest advances since 1979 in survey/measurement techniques and equipment that have been effective since 1979 were not included in RG 8.21. Because NUREG-1556 provides current health physics survey guidance to NRC byproduct material licensees, the staff determined that RG 8.21 is no longer needed and should be withdrawn.

(5) What guidance is available once the Regulatory Guide is removed?

NUREG-1556 is updated periodically and includes the latest guidance on health physics surveys and compliance with 10 CFR Part 20. Also, RG 8.2, “Administrative Practices in Radiation Surveys and Monitoring,” provides guidance on consolidated specific guidance for materials licensees (such as medical, academic, and industrial uses of byproduct material) on administrative

practices for radiation surveys and monitoring. In addition, NUREG-1736, "Consolidated Guidance: 10 CFR Part 20 - Standards for Protection Against Radiation," consolidates guidance into a single comprehensive source by reference to numerous guidance documents and it complements the guidance in the NUREG-1556 series.

(6) Is the Regulatory Guide referenced in other documents and what are the “ripple effects” on these documents if it is withdrawn?

RG 8.21 is referenced in NRC guidance documents RG 8.15, “Acceptable Programs for Respiratory Protection” and RG 8.25, “Air Sampling in the Workplace.” However, these are only informational references. The staff anticipates that future revisions of these documents would reference the applicable volume of the NUREG-1556 series.

The NUREG-1556 series references RG 8.21 in several volumes:

- 8.21 referenced on page 8-34 of Volume 7
- 8.21 referenced on page 8-38 of Volume 11
- 8.21 referenced on page 8-41 of Volume 12
- 8.21 referenced on page 8-43 of Volume 13
- 8.21 referenced on page 8-45 of Volume 18
- 8.21 referenced on page 8-37 of Volume 21

Staff anticipates that the next revision of these NUREG-1556 volumes will make the appropriate changes regarding the withdrawal of RG 8.21.

(7) What is the basis for believing that no guidance like that in the Regulatory Guide will ever be needed?

NUREG-1556 includes the guidance needed by the staff and licensees to comply with the regulations in 10 CFR Part 20.

(8) Will generic guidance still be needed?

Yes.

(9) What is the rationale for withdrawing this Regulatory Guide instead of revising it?

RG 8.21 is based on the NRC’s requirements in 1979 and includes outdated regulatory processes and technical information. NUREG-1556 series provides more up-to-date regulatory guidance regarding health physics surveys.

(10) Do other agencies rely upon the Regulatory Guide, e.g., Agreement State programs, National Aeronautical and Space Administration, Department of Energy?

No other agencies are known to be using this RG. Although it is possible that some Agreement States could still be referencing RG 8.21, they would be notified of the withdrawal of RG 8.21. Also, the Agreement States have access to the NUREG-1556 series, and they are aware that it includes the up-to-date guidance.