

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 30 and 150

[NRC-2011-0146]

**Proposed Generic Communications; Draft NRC Regulatory Issue Summary 2011-XX;
NRC Regulation of Military Operational Radium-226**

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of availability of draft Regulatory Issue Summary (RIS) for public comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is proposing to issue a RIS that clarifies those discrete sources of radium-226 under military control that are subject to NRC regulation pursuant to the Energy Policy Act of 2005 (EPAAct), as interpreted in the policy statement issued by the NRC in the final rule, "Requirements for Expanded Definition of Byproduct Material" (72 FR 55864; October 1, 2007), (hereinafter referred to as the NARM Rule). The clarification defines with greater specificity the term "military operations" as it is used to delineate that naturally-occurring and accelerator-produced radioactive material (NARM) subject to NRC jurisdiction. The RIS also describes acceptable regulatory approaches to adequately implement NRC's regulatory requirements for contamination and items and equipment containing NARM, and outlines a general plan of implementation for use with the military services. The NRC is seeking comment from interested parties on the clarity and utility of the proposed RIS.

DATES: Submit comments by (**INSERT DATE: 60 days from publication**). Comments received after this date will be considered if it is practical to do so, but the NRC is able to assure consideration only for comments received on or before this date.

ADDRESSES: Please include Docket ID **NRC-2011-0146** in the subject line of your comments. Comments submitted in writing or in electronic form will be posted on the NRC Web site and on the Federal rulemaking Web site, <http://www.regulations.gov>. Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including any information in your submission that you do not want to be publicly disclosed.

The NRC requests that any party soliciting or aggregating comments received from other persons for submission to the NRC inform those persons that the NRC will not edit their comments to remove any identifying or contact information, and therefore, they should not include any information in their comments that they do not want publicly disclosed. You may submit comments by any one of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for documents filed under Docket ID **NRC-2011-0146**. Address questions about NRC dockets to Carol Gallagher, telephone: 301-492-3668; e-mail: Carol.Gallagher@nrc.gov.
- **Mail comments to:** Cindy Bladey, Chief, Rules, Announcements, and Directives Branch (RADB), Office of Administration, Mail Stop: TWB-05-B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.
- **Fax comments to:** RADB at 301-492-3446.

You can access publicly available documents related to this notice using the following methods:

- **NRC's Public Document Room (PDR):** The public may examine and have copied, for a fee, publicly available documents at the NRC's PDR, O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.
- **NRC's Agencywide Documents Access and Management System (ADAMS):** Publicly available documents created or received at the NRC are available online in the NRC Library at <http://www.nrc.gov/reading-rm/adams.html>. From this page, the public can gain entry into ADAMS, which provides text and image files of the NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's PDR reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The draft RIS is available electronically under ADAMS Accession Number **ML111510163**.
- **Federal Rulemaking Web Site:** Public comments and supporting materials related to this notice can be found at <http://www.regulations.gov> by searching on Docket ID **NRC-2011-0146**.

FOR FURTHER INFORMATION CONTACT: Robert L. Johnson, Office of Federal and State Materials and Environmental Management Programs, Division of Waste Management and Environmental Protection, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone: 301-415-3152, e-mail: Robert.Johnson2@nrc.gov.

SUPPLEMENTARY INFORMATION:

DRAFT NRC REGULATORY ISSUE SUMMARY 2011-XXXX; NRC REGULATION OF MILITARY OPERATIONAL RADIUM-226

ADDRESSEES

All U.S. Air Force and U.S. Navy Masters Materials License (MML) contacts; all U.S. Army contacts with specific NRC licenses; all Agreement State Radiation Control Program Directors and State Liaison Officers.

INTENT

The NRC is issuing this RIS to clarify which discrete sources of radium-226 under military control are subject to NRC regulation as byproduct material under the Atomic Energy Act of 1954, as amended (AEA) and as discussed in the NARM Rule. See "Requirements for Expanded Definition of Byproduct Material" (72 FR 55864; October 1, 2007). The RIS describes regulatory approaches to implement NRC's authority for military contamination and items and equipment containing NARM. The guidance also outlines a general plan of implementation for use with the military services.

BACKGROUND

The EAct expanded the AEA's definition of byproduct material to include discrete sources of radium-226, discrete sources of naturally occurring radioactive material, and accelerator-produced radioactive material for use for a commercial, medical, or research activity (collectively, these materials are referred to as NARM). The NRC has received recent inquiries from the military services regarding the scope of the NRC's jurisdiction over discrete sources of radium-226 used by the military for military operations. Because it is necessary to distinguish between commercial, medical, and research uses covered by the EAct and military uses not included in the expanded jurisdiction of the EAct, the focus of this RIS is on how to categorize discrete sources used by the military. Specifically, Section 651(e)(3)(A) of the EAct (§11e.(3)

of the AEA; 42 U.S.C. 2014(e)) amended the definition of byproduct material to include “any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after [August 8, 2005,] for use for a commercial, medical, or research activity.” On November 30, 2007, NRC implemented this provision of the EAct by amending the definition of byproduct material in 10 CFR Parts 20, 30, 50, 72, 150, 170, and 171. See NARM Rule (72 FR 55864; October 1, 2007). Additionally, NRC established a definition for the term “discrete source” to be used for the purposes of the new definition of byproduct material as this term was not specifically defined by the EAct. Accordingly, NRC’s regulations in 10 CFR Parts 20, 30, 110, and 150 define a discrete source as “a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.” In addition, the Statement of Consideration (SOC) for the NARM Rule noted that “once a discrete source meets the definition of *Byproduct material*, any contamination resulting from the use of such discrete sources of this byproduct material will also be considered byproduct material” (72 FR 55871).

Under the EAct the NRC has jurisdiction over discrete sources of radium-226 used by the military in medical or research activities, or in a manner similar to a commercial activity; however, the NRC does not have jurisdiction over radium-226 used by the military in military operations because, as the NRC noted in the NARM Rule, to do otherwise would “vitate any distinction that the EAct intended to make for military use . . .” (72 FR 55867) In the SOC, the NRC defined the term “military operations” to include that which is traditionally understood as the military’s primary mission for national defense, i.e., warfare, combat, battlefield missions, and training for such missions, as well as “material still under control of the military, i.e., in storage, or material that may be subject to decontamination and disposal.” *Id.*

In accordance with the Commission’s directives contained in the May 14, 2007, staff

requirements memorandum for the NARM Rule (SRM-SECY-07-0062; M070514; ADAMS Accession No. ML071340237), the SOC provided that NRC would interact with the U.S. Department of Defense to obtain a common understanding of the uses of discrete sources of radium-226 and resolve any potential conflicts on a case-by-case basis. See also 72 FR 55867. Consequently, the staff has had numerous interactions with the military services on this matter discussing the historical uses, current military activities, and management of discrete sources of radium-226. Through these interactions it has become apparent to the staff that there is confusion over the precise meaning and scope of the phrase “material still under control of the military, i.e., in storage, or material that may be subject to decontamination or disposal.” This confusion and uncertainty has led staff to believe that a generic solution is required in order to assure that NRC regulations are appropriately implemented.

On February 16, 2011, the NRC staff prepared a Commission paper that discussed uses of military radium-226; identified issues; and recommended approaches to clarify and implement NRC’s regulatory jurisdiction over certain types of radium-226 used by the military (SECY-11-0023; ADAMS Accession No. ML110110345). On March 24, 2001, the Commission responded to the staffs’ recommendations in SECY-11-0023 by giving the following direction in SRM-SECY-11-0023 (ADAMS Accession No. ML110830952):

The Commission has approved the staff’s recommendation to prepare a guidance document and *Federal Register* notice that clarifies the radium-226 under military control that would be subject to NRC regulations, and describes the regulatory approaches to be used to implement NRC authority for radium-226 contamination and radium-226 in items and equipment.

SUMMARY OF ISSUE

This RIS describes: 1) jurisdictional issues; 2) clarification of military radium-226 that is subject to NRC regulation; 3) acceptable regulatory approaches to implement NRC's jurisdiction for contamination and items and equipment; and 4) a general plan for implementing NRC's jurisdiction.

Jurisdictional Issues

As previously noted, the NRC expanded the category of radium-226 excluded from NRC jurisdiction by defining the term "military operational" material to include "material still under control of the military, i.e., in storage, or material that may be subject to decontamination or disposal" (72 FR 55867). This expanded definition led to questions from the military and the State of California about NRC's jurisdiction over some of the military's ongoing and planned remediation activities. In particular, new issues emerged from the staff's discussions about the military's ongoing remediation activities at the Navy's Hunters Point Shipyard (HPS) site and the Air Force's McClellan site in California. After remediation, these sites or portions of these sites are planned to be released to the public for redevelopment, similar to other Base Realignment and Closure (BRAC) sites. The following key issues have been identified by the staff based on interactions with the military and the State of California.

- Potential for unnecessary dual regulation under the AEA and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and lack of finality of the military remediation if NRC is not involved during military remediation and before the transfer of remediated property to non-military owners;
- Potential for significant impacts to community redevelopment and reuse of remediated military property unless NRC is involved during remediation;
- Regulatory uncertainty and inconsistent understanding regarding NRC's jurisdiction

unnecessarily complicates military remediation;

- Regulatory uncertainty regarding jurisdiction over storage and decontamination of equipment and items containing radium-226; and
- Potential implications for health and safety from the unregulated sites being remediated and the uncharacterized sites with suspected radium-226.

Clarification of Radium-226 Under Military Control that should be subject to NRC Regulation

Discrete sources of radium-226 under military control that would be subject to NRC regulation under the NARM Rule as byproduct material include:

- Contamination. Examples include contamination in structures; soil; groundwater; sewers or storm drains; targets and associated contamination on firing ranges; and degraded devices and residue from radium paint shops buried in landfills. NRC's jurisdiction applies to radium-226 contamination that has been confirmed based on survey data or records documenting the actual existence of the contamination. Contamination that is only suspected, based on historical activities conducted on a military base, should be tracked and appropriately controlled by the military. These suspected sites should come under NRC's jurisdiction when confirmed. Contamination can be on active military installations where remediation has either not started or where parcels are being remediated. The military's remediation activities associated with contamination can also be on BRAC sites that are planned for transfer to the public and redeveloped by local governments or others after remediation (e.g., HPS and McClellan sites).
- Items or equipment not currently used in traditional military operations and no longer intended for future use in traditional military operations. Examples include vehicles, aircraft, or other equipment in storage that the military is no longer using and that is not intended to be used in the future and which could be decontaminated by removing

radium-226 instruments, dials and/or components in preparation for release of the equipment or vehicles to the public. This could also be items such as dials or gauges that the military decides are no longer intended for future use in traditional military operations.

This RIS resolves an existing ambiguity by clarifying that military radium-226 that originated from a commercial supplier is byproduct material, except during its use by the military in traditional military operations. When the commercially-produced radium-226 is no longer being used for traditional military operations and is not intended for future traditional military operational use, it would revert to its initial classification as byproduct material. Under this clarification, the SOC discussion that contamination resulting from degradation of byproduct material would also be considered byproduct material would therefore apply to military radium-226 contamination. For example, degradation of buried markers can result in contamination of the surrounding soil or groundwater. In addition, the storage of material or equipment not intended for future military operations, removal of dials and gauges after their usable life, and remediation of radium-226 are similar to commercial activities and are consistent with the SOC statement “that other military possession and uses of radium-226 in a manner similar to commercial use, e.g., military museums, are subject to NRC’s regulatory authority.” For the above reasons, the clarification is consistent with the definition of byproduct material in the EPA Act and the NRC’s regulations. Finally, as noted previously, the above clarifications are consistent with NRC’s practice of regulating military radioactive material except when the material is used or useful in traditional military operations.

Regulatory Approaches for Contamination

The NRC staff would use the graded approach outlined below for implementing NRC regulation of confirmed radium-226 contamination. This approach provides levels of regulatory

involvement taking into account the broad range of site-specific conditions expected, such as: the radionuclides present; the type and extent of contamination; the remediation status and types of remedies; and other Federal agency or State oversight. This approach provides a flexible yet consistent framework for the military services. The NRC staff also considered other implementation issues as noted below.

- 1) No ongoing or planned remediation. Confirmed contamination on sites that are currently not being remediated or where remediation would be done in the future would be included as a possession-only permit under the existing Air Force or Navy MMLs or an Army possession-only license under the appropriate regulations for the radionuclides present.
- 2) Remediation of National Priorities List (NPL) sites. For military remediation of sites listed on the NPL, NRC staff would use an approach similar to that approved by the Commission for the HPS site where NRC determined that it could rely on the CERCLA process and the Federal regulatory oversight by the U.S. Environmental Protection Agency (EPA) (SECY-08-0077; ADAMS Accession Nos. ML080800110 and ML081780111). These sites would not be actively regulated, although the Air Force and Navy sites would be permitted under the Air Force and Navy MMLs and the Army sites would be licensed. NRC would take a limited involvement approach to stay informed as it now does for the HPS site and the McClellan site. The Navy and Air Force would continue their existing role under CERCLA for these sites. However, NRC would reserve the option of providing comments to EPA on the military remediation, if necessary, to justify continued reliance on the CERCLA process and EPA oversight. If the NRC staff determines that the CERCLA process and EPA oversight is no longer sufficient, the NRC staff would more actively regulate the site as appropriate. The NRC staff considered the option of immediately regulating these sites, but prefers the approved approach for the HPS site because it would avoid or minimize dual regulation.

3) Remediation of non-NPL sites. NRC would actively regulate sites not listed on the NPL that are remediated by the military. Because EPA generally does not provide regulatory oversight for these sites, there would be no other independent Federal oversight of the remediation activities occurring on the non-NPL sites. Regulation would be conducted under the existing Navy and Air Force MMLs and under existing Army licenses or another appropriate licensing approach that would be established. The Navy and Air Force would permit these sites under the MML. NRC would continue its existing oversight of the Navy and Air Force MML programs, but would also review and approve key remediation/decommissioning documents for more complex sites, such as sites with groundwater contamination or restricted use sites that use institutional controls and engineered barriers. Existing NRC oversight would continue for military contractors who have NRC service provider licenses and who conduct remediation activities. Furthermore, for those non-NPL sites where the military is required to remediate using the CERCLA process, NRC would coordinate its decommissioning process with the CERCLA process to minimize duplicative remedial activity. For those sites where remediation under the CERCLA process has already started, NRC would work with the military on a site-specific approach to ensure safety and minimize the impact on military schedules. Sites where remediation has been completed by the military would not be regulated unless newly acquired information indicates that additional remediation is needed to protect public health and safety and the environment.

4) Regulatory Approaches for Items and Equipment

NRC would regulate military equipment decontamination activities and items in storage where the military has determined that there is no future traditional military operational use for this material. Regulation would be under the Navy and Air Force MMLs and either existing Army commodity licenses or another appropriate licensing approach.

5) General Plan for Implementing NRC's Jurisdiction

The NRC staff intends to develop a Radium Implementation Plan to identify the specific actions and detailed guidance needed by NRC and the military to implement the jurisdiction and regulatory approach described above. The NRC staff is considering the following general approaches for implementation:

- Work with each military service to customize actions and needs for guidance;
- Take a phased approach to implement NRC's jurisdiction, including an initial prelicensing/permitting phase to prepare for the licensing/permitting phase;
- Develop phased licensing/permitting jointly with the military services to minimize impact on the schedules for ongoing work;
- Select high priority sites identified by the military to serve as pilot sites to help develop detailed guidance. Also, identify high priority sites where NRC's attention is needed;
- Develop guidance to address questions and cases representative of each military service;
- Include guidance in the Air Force and Navy MML letters of understanding and guidance and similar documents developed for the Army;
- Interact with the Army to establish an appropriate licensing approach and guidance.

Topics where additional guidance could be developed include:

- Application of NRC's decommissioning timeliness requirements;
- Coordination of the military's use of the CERCLA process and NRC's decommissioning process in order to protect the public and the environment and minimize dual regulation;
and
- Identification of responsibilities of NRC, Air Force, and Navy under each MML.

BACKFIT DISCUSSION

This RIS requires no action or written response. Any action that addressees take to implement changes or procedures in accordance with the information contained in this RIS ensures compliance with current regulations, is strictly voluntary, and, therefore, is not a backfit under any of the backfitting provisions contained in 10 CFR 50.109, 70.76, 72.62, 76.76, or the issue finality provision of 10 CFR Part 52. Consequently, the staff did not perform a backfit analysis.

FEDERAL REGISTER NOTIFICATION

To be done after the public comment period.

VOLUNTARY RESPONSE

All addresses and the public may voluntarily submit comments regarding the military radium policy presented in this RIS. To be of use to the NRC, responses should be submitted by **(INSERT DATE 60 DAYS FROM PUBLICATION)**.

CONGRESSIONAL REVIEW ACT

This RIS is a rule as designated in the Congressional Review Act (5 U.S.C. 801-886) and, therefore, is subject to the Act.

PAPERWORK REDUCTION ACT STATEMENT

This RIS does not contain any information collection requirements and, therefore, is not subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.).

PUBLIC PROTECTION NOTIFICATION

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

CONTACT

This RIS requires no specific action or written response. If you have any questions about this summary, please contact the technical contact.

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Note: The NRC's generic communications may be found on the NRC public Web site,
<http://www.nrc.gov>, under Electronic Reading Room/Document Collections.

END OF DRAFT REGULATORY ISSUE SUMMARY

Dated at Rockville, Maryland, this 24th day of June 2011.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Keith I. McConnell, Deputy Director
Decommissioning and Uranium Recovery
Licensing Directorate
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