

**POLICY ISSUE  
(Notation Vote)**

August 1, 2014

SECY-14-0082

FOR: The Commissioners

FROM: Mark A. Satorius  
Executive Director for Operations

SUBJECT: JURISDICTION FOR MILITARY RADIUM AND U.S. NUCLEAR  
REGULATORY COMMISSION OVERSIGHT OF U.S. DEPARTMENT OF  
DEFENSE REMEDIATION OF RADIOACTIVE MATERIAL

PURPOSE:

Inform the Commission of the outcome of discussions with the U.S. Department of Defense (DoD) to address DoD's comments on the draft Regulatory Issue Summary (RIS) for military radium-226 (hereafter referred to as radium) and recommend finalization of the draft RIS and the completion and implementation of a comprehensive Memorandum of Understanding (MOU) for the U.S. Nuclear Regulatory Commission's (NRC) oversight of DoD remediation of radium and other unlicensed radiological contamination. The staff is providing this notation vote paper because it is recommending an MOU instead of the licensing approach previously approved by the Commission in SRM-SECY-11-0023 and included in the draft RIS. The potential for an MOU was noted in the summary of public comments given to the Commission on February 9, 2012.

SUMMARY:

In a March 24, 2011, Staff Requirements Memorandum (SRM-SECY-11-0023), the Commission approved the staff's recommendation to prepare a guidance document and *Federal Register*

CONTACT: Richard Chang, FSME/DWMEP  
(301) 415-5563

notice clarifying the types of radium in the military's possession subject to NRC regulation, and describing regulatory approaches to be used to implement the NRC's authority. On July 8, 2011, the staff's proposed guidance, in the form of a draft RIS, was published in the *Federal Register* (76 FR 40282) for public comment. The DoD opposed the proposed clarification of the NRC's jurisdiction over military radium and identified several implementation challenges, particularly concerns about licensing. Despite its opposition, DoD expressed support for further joint discussions on how the NRC can be appropriately involved during the military's remediation activities. Seven formal discussions were conducted from February 2012 to July 2013, to address preliminary responses to DoD's major comments on the draft RIS. This paper summarizes the outcomes of these discussions, including the staff's recommendation to finalize an MOU providing for NRC involvement with DoD remediation of radium and other Atomic Energy Act of 1954, as amended (AEA), material subject to the NRC's regulatory authority. On August 1, 2013, the DoD submitted a letter supporting the remediation MOU and stating that this cooperative approach would resolve its concerns with the draft RIS ([Enclosure 1](#)).

#### BACKGROUND:

On February 16, 2011, the staff provided the Commission with a notation vote paper (SECY-11-0023) that informed the Commission of regulatory issues related to military radium and recommended approaches to resolve those issues. In a March 24, 2011, SRM, the Commission approved the staff's recommendation to prepare a guidance document and *Federal Register* notice clarifying the types of radium-226 in the military's possession subject to NRC regulation, and describing regulatory approaches to be used to implement NRC authority for radium contamination and radium in items and equipment in the military's possession. On July 8, 2011, the staff's proposed guidance, in the form of a draft RIS, was published in the *Federal Register* (76 FR 40282) for a 60-day public comment period. The DoD requested a 75-day extension of the public comment period so that it could meet with the NRC staff and prepare its formal comments. The staff granted the DoD request and reopened the public comment period until November 29, 2011 (76 FR 57006; September 15, 2011). During this extended public comment period, on November 1, 2011, the staff conducted a public meeting with the DoD, including representatives from the Air Force, Army, and Navy, to discuss the draft RIS and DoD preliminary concerns. On November 28, 2011, DoD submitted its formal comments on the draft RIS. The NRC received nine additional comments from other entities.

Five commenters supported the proposed clarifications in the draft RIS, and four commenters were neutral, but raised implementation challenges. The DoD opposed the proposed clarification of the NRC's jurisdiction over military radium and identified several implementation challenges, particularly concerns about licensing. Despite its opposition, DoD expressed support for further joint discussions on how the NRC can be appropriately involved during the military's remediation activities so as to avoid duplication of regulatory requirements and effort. [Enclosure 2](#) provides a summary of the public comments, a list of comments received, and the Agencywide Document Access and Management System accession numbers that allow electronic access to each comment letter.

## DISCUSSION:

### 1. Discussions with DoD to Address DoD Comments

A joint NRC-DoD working group was established to discuss resolution of DoD's comments. The working group consisted of NRC staff and Environmental Restoration program managers and legal staff from the Office of the Under Secretary of Defense, U.S. Department of the Air Force, U.S. Department of the Army, and U.S. Department of the Navy.

Seven formal interactions were conducted from February 2012 to July 2013, as well as numerous informal discussions for planning, coordination, and clarification purposes. These interactions primarily focused on preliminary responses to DoD's major comments on the draft RIS for radium in the following areas: remediation, legal issues, licensing, operational firing ranges, items and equipment, and implementation. The working group also discussed three new issues. The first issue concerns DoD's remediation of unlicensed radioactive material subject to the NRC's jurisdiction under the AEA, such as strontium-90 and cesium-137, using the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process. The second issue concerns DoD's remediation of buildings where there is no release to the environment and, as such, CERCLA does not apply. In these instances DoD uses a CERCLA-like process for the remediation, but is not bound by the requirements of CERCLA. The third issue relates to DoD's view that it is not authorized to pay the NRC fees for the NRC's activities conducted under a license or MOU. These new issues and proposed resolution are described in [Enclosure 3](#) along with DoD's major comment areas.

Discussions with DoD were constructive and provided an opportunity for both the NRC and DoD staff to discuss the complexities of their respective programs and clarify approaches to address the DoD's comments on the draft RIS. The majority of attention during these meetings was given to developing and discussing the pros and cons of various options for the NRC oversight of DoD's remediations occurring under the CERCLA process. Staff proposed a possession-only license (POL) that acknowledged the use of the CERCLA process instead of the NRC AEA-based decommissioning process as a specific way to coordinate the licensing approach that was directed by the Commission. However, DoD opposes any form of NRC licensing. This position is based primarily on DoD's view that the POL would be imposing permit requirements on its CERCLA remediation activities contrary to §121(e)(1) of CERCLA (42 U.S.C. §9621(e)(1)),<sup>1</sup> commonly referred to as the CERCLA permit waiver. Furthermore, DoD expressed the concern that the NRC's licensing process and requirements could impact the costs and schedules of DoD's remediation and transfers of property. As a result, DoD proposed an MOU option to document the extent of NRC's involvement with DoD's remediation of AEA material, including radium, at unlicensed sites. The MOU option would render the permit waiver issue moot. Although the NRC and DoD discussions also indicated continued differing views regarding the NRC's legal jurisdiction for military radium under the AEA, both the NRC staff and DoD agree that the MOU option would be an acceptable implementation approach for the NRC's involvement with the remediation of radium and other unlicensed AEA material. The working group discussed a draft remediation MOU. Further discussions resulted in the staff providing DoD with the key provisions of the proposed MOU to show a revised organization of the provisions and full scope of the MOU ([Enclosure 4](#)). At the staff's request, DoD provided an

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<sup>1</sup> 42 U.S.C. §9621(e)(1) provides, in pertinent part, "[n]o Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely onsite, where such remedial action is selected and carried out in compliance with this section." (Emphasis added).

August 1, 2013, letter supporting the MOU option ([Enclosure 1](#)). The licensing and MOU options are further discussed below and described in [Enclosure 5](#) along with pros and cons for each option.

## 2. Interactions with the U.S. Environmental Protection Agency (EPA)

The staff also conducted two conference calls with the EPA, including EPA staff from the Office of General Counsel, Office of Regional Counsel in Region 9, Federal Facility Restoration and Reuse Office, and the Office of Superfund Remediation and Technology. The EPA Region 9 had provided comments on the draft RIS. The primary purpose of these calls was to gain an understanding directly from EPA regarding: the permit/licensing exclusion under §121(e)(1) of CERCLA, views on the licensing and MOU options, dispute resolution under an MOU, and EPA's role at sites not listed on the National Priority List (NPL). Specifically, the staff explained that the intent behind the POL was not to regulate the CERCLA remedial action or mandate the use of the NRC's decommissioning process. Instead, the POL would authorize the possession of the AEA material on the site and the NRC would conduct activities and use its decommissioning expertise to independently gain additional confidence that, upon the completion of the CERCLA remedial action, the site would be eligible for unrestricted or restricted release and the NRC license could be terminated. The EPA acknowledged that it had not confronted this exact issue in its past CERCLA actions, but questioned whether an NRC license was necessary for the NRC to achieve its goals. The EPA did; however, indicate that if the remedial action was occurring on only a portion of the site and AEA material was also on another portion of the site that was not subject to the CERCLA action, NRC licensing of the latter portion of the site would in no way be affected by the permit waiver. The EPA also indicated that the MOU approach would be generally beneficial, but dispute resolution may be difficult under an MOU compared to licensing. The EPA confirmed the NRC staff understanding that EPA's authority and role is different for NPL and non-NPL sites. The EPA has regulatory oversight and the final word at NPL sites, but does not have the same authority or involvement at non-NPL sites.

## 3. Evaluation of Options for NRC Involvement

The licensing and MOU options for the NRC's involvement with DoD's remediation under the CERCLA process, including pros and cons, are described in [Enclosure 5](#). Additional details about the scope of the MOU are also provided in the key provisions of the MOU in [Enclosure 4](#); a description of the NRC's involvement under an MOU is presented in [Enclosure 6](#).

In summary, the licensing option using a POL would retain NRC's licensing authority to resolve difficult disputes. In the staff's opinion, the POL would also reduce unnecessary dual regulation and be consistent with the CERCLA permit waiver because only the possession of the AEA material would be licensed and the POL would recognize that DoD's actual remediation of the site is occurring under the CERCLA process instead of the NRC decommissioning process. However, this form of licensing could be complicated to implement by both NRC and DoD, because this type of POL has not been implemented previously by either NRC or DoD. Further, DoD continues to object to any form of licensing and would likely challenge imposition of the POL. The MOU, on the other hand, appears to be the most constructive and consistent way to manage jurisdictional overlap and avoid unnecessary dual regulation. While it gives flexibility for the NRC involvement, the staff remains concerned that resolution of disputes that arise under the MOU could be difficult without the NRC's regulatory authority under a license. Finally, DoD's August 1, 2013, letter states that it believes an MOU would establish a cooperative NRC

and DoD process and would address DoD's concerns regarding the draft RIS ([Enclosure 1](#)). For these reasons, the staff recommends proceeding with the MOU option because it is the most practical way to ensure that the NRC remains informed and involved in the remediation of radioactive materials while simultaneously avoiding prolonged, resource intensive challenges from DoD. However, the staff recommends periodically evaluating the effectiveness of the MOU, particularly for dispute resolution, and taking appropriate actions, including regulatory actions, if the MOU is found to be ineffective. As discussed in [Enclosure 6](#), the MOU, in lieu of licensing, would be used at all DoD unlicensed sites containing any type of AEA licensable material. Similarly, the MOU would apply whether the remedy DoD was pursuing would result in restricted or unrestricted release of the site.

#### 4. NRC Fees for Implementing the MOU at Specific Sites

Under Section 161w of the AEA and the Omnibus Budget Reconciliation Act of 1990, the NRC lacks the statutory authority to charge DoD fees under either Part 170 (fees for services) or Part 171 (annual fees) because DoD is not a license applicant, licensee, or certificate holder. Accordingly, the regulatory costs associated with this MOU must be recovered through either annual fees to other licensees or included in the 10 percent of the NRC's budget that is off the fee base and recovered through Congressional appropriations. This latter approach would entail creating a new fee relief category for the regulatory activities under the MOU. This fee relief option has been discussed with the Office of the Chief Financial Officer and is considered preferable primarily because it would not result in raising the fees of other NRC licensees, and fairness dictates that licensees should not have to pay for services if they are not receiving any benefits from those services.

#### 5. Recommended Path Forward

- Finalize and implement a comprehensive remediation MOU and periodically evaluate its effectiveness.

The working group would develop the specific wording of the MOU based on Commission direction and the key provisions identified in [Enclosure 4](#). The completed MOU would be noticed in the *Federal Register*. The staff would implement the MOU and begin its site-specific involvement using a graded approach as described in [Enclosure 6](#).

- Finalize the RIS.

The staff would finalize the RIS based on the Commission's direction and DoD's view that agreeing to an MOU would resolve its concerns with the draft RIS. Most of the draft RIS will remain unchanged, particularly the NRC's clarification of jurisdiction over certain types of radium. However, two major changes will be made in response to DoD's comments. First, the licensing approach noted in the draft RIS would be replaced by the MOU approach. The second change would clarify that radium on operational firing ranges would not be subject to the NRC's jurisdiction, but the MOU would apply to the remediation of radium on closed ranges. See further discussion of firing ranges and this change in [Enclosure 3](#). The final RIS would also include the staff's responses to all the public comments received on the draft RIS, including the DoD comments. The final RIS would be noticed in the *Federal Register*.

- Potential Schedule

The staff recommends the following implementation schedule, but notes that this schedule is dependent on the Commission's decision and DoD participation that is supportive and timely.

- Complete MOU by early Fiscal Year (FY) 2015.
- Complete RIS by early FY 2015.
- Complete initial DoD site inventory and planning discussions in FY 2015.
- Begin monitoring and training at pilot sites during early FY 2016.
- Full monitoring during FY 2017.

## 6. Resolution of Issues

In the Naturally Occurring and Accelerator Produced Radioactive Material Rule Statement of Considerations, the Commission directed the staff to interact with DoD and resolve issues related to military radium. As a result of the staff's site visits to Air Force and Navy sites since 2007, and the more recent meetings with DoD regarding the draft RIS, the following key issues would be resolved by completing the MOU and final RIS. [Enclosure 7](#) gives a description of each issue and its resolution.

- Confusion over what radium in military possession is subject to NRC regulatory authority.
- Potential for dual regulation from the overlap of AEA and CERCLA jurisdiction for DoD's remediation of AEA radioactive material.
- The DoD remediation of unlicensed AEA material subject to the NRC's authority.
- Potential for reopening of completed military remediation and impacts on redevelopment.
- Independent Federal oversight to ensure protection of public health and safety.

RECOMMENDATIONS:

The staff recommends that the Commission approve:

- 1) Completing the MOU for the NRC's involvement with DoD remediation of confirmed radiological contamination consistent with the key provisions;
- 2) Using a graded approach described in [Enclosure 6](#) to implement NRC's involvement under the MOU;
- 3) Establishment of a new fee relief category for the monitoring of DoD unlicensed sites; and
- 4) Completing the RIS as described above and publishing it in a *Federal Register* notice.

AGREEMENT STATE COORDINATION:

The Agreement States were initially involved with this issue during the development of SECY-11-0023, and subsequently, in July 2011 the Agreement States were notified that the draft RIS was available for public comment. Two State of California agencies provided comments. On April 25, 2013, the staff provided a status briefing in a monthly call with the Organization of Agreement States and Conference of Radiation Control Program Directors. This briefing summarized the NRC/DoD discussions of DoD's comments, the option for a comprehensive remediation MOU instead of licensing, and the general schedule for completing the MOU and RIS at the time of the briefing. A few States asked about the scope of the MOU and NRC monitoring. One State raised concerns about NRC's lack of authority under an MOU with DoD based on its experience with DoD's remediation.

RESOURCES:

The resource implications associated with NRC's involvement at military radium sites are addressed within Enclosure 8, which is non-public.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections. The Office of the Chief Financial Officer has reviewed this paper for both the fee relief issue and resource implications and has no objections.

*/RA by Roy P. Zimmerman for/*

Mark A. Satorius  
Executive Director  
for Operations

Enclosures:

1. DoD's August 1, 2013, Letter Supporting an MOU for NRC Involvement with DoD Remediation
2. Summary of Public Comments on the Draft RIS for Military Radium
3. NRC Staff Views on Resolution of Major DoD Comment Areas and New Concerns Identified in Discussions with DoD
4. Key provisions of a MOU between the NRC and the DoD for Remediation of DoD sites with Radioactive Material Subject to NRC Regulatory Authority
5. Options for NRC Involvement with DoD Remediation
6. Description of NRC Involvement under an MOU with DoD
7. Resolution of Issues Regarding NRC's Involvement with DoD Remediation of Radium and other Radioactive Material Subject to NRC Regulatory Authority
8. Resource Implications for NRC's Involvement at Military Radium Sites

Commissioners' completed vote sheets/comments should be provided directly to the Office of the Secretary by COB Monday August 18, 2014

Commission Staff Office comments, if any, should be submitted to the Commissioners NLT August 11, 2014, with an information copy to the Office of the Secretary. If the paper is of such a nature that it requires additional review and comment, the Commissioners and the Secretariat should be apprised of when comments may be expected.

**DISTRIBUTION:**

Commissioners

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**U.S. Department of Defense's August 1, 2013, Letter  
Supporting a Memorandum of Understanding for  
U.S. Nuclear Regulatory Commission Involvement with  
U.S. Department of Defense Remediation  
ML13277A566**



OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3000

AUG 01 2013

ACQUISITION,  
TECHNOLOGY  
AND LOGISTICS

Mr. Larry W. Camper, Director  
Division of Waste Management and Environmental Protection  
Office of Federal and State Materials and Environmental Management Programs  
U.S. Nuclear Regulatory Commission  
Rockville, MD 20852

Dear Mr. Camper:

Over the past two years, Department of Defense (DoD) and Nuclear Regulatory Commission (NRC) staff met regarding NRC's draft Regulatory Issue Summary (RIS), *NRC Regulation of Military Operational Radium-226*, 76 Federal Register 40282 (July 8, 2011) and 76 Federal Register 57006 (Sept 15, 2011)). DoD expressed a number of concerns with the proposed RIS in correspondence and as a result discussions between NRC and DoD started in late 2011.

Our staffs have worked hard to understand each other's concerns, discussing NRC's involvement at DoD cleanup sites with a confirmed presence of radioactive material. We share the same goals for these sites: protect the public and workers' health and safety, efficiently use limited resources to remediate contamination, and minimize duplicative processes under radiological and environmental cleanup laws and regulations.

Based on these efforts, our staffs believe a Memorandum of Understanding (MOU) between the agencies would address the concerns regarding the draft RIS and establish a cooperative NRC and DoD process at appropriate DoD cleanup sites to avoid the following challenging topics:

- Permitting exclusion for removal or remedial actions conducted onsite under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).
- NRC's charging of fees.
- Project delays and increased site costs that would likely result from duplicative regulatory procedures and monitoring in an already heavily regulated cleanup program.
- Radium jurisdictional issues.

The MOU approach maximizes efficiencies by leveraging regulatory and DoD processes already in place, while incorporating NRC monitoring into the existing CERCLA program at sites where the Environmental Protection Agency is not already involved as a regulator. DoD supports moving forward with the MOU, based on the following key provisions:

- DoD will provide NRC an annual inventory of DoD cleanup sites with confirmed releases of Atomic Energy Act regulated radioactive materials and Radium. This inventory will include

summary of site-level information, projected cleanup schedules, and State and Federal regulatory agencies providing site monitoring and regulatory support.

- NRC will review the inventory, will confer with the DoD Components on project specific questions, and determine which DoD sites NRC will review in greater detail.
- The proposed MOU will establish a process for communication and coordination between DoD and NRC, including a dispute resolution process.

We appreciate the collaboration between NRC and DoD staff, and believe it has resulted in an acceptable path forward. My point of contact on this matter is Ms. Deborah Morefield, who can be reached at 703-571-9067.

Sincerely,

A handwritten signature in black ink, appearing to read "MSullivan", with a small circle above the "i".

Maureen Sullivan  
Director, Environment, Safety and Occupational Health

cc:  
DASA (ESOH)  
DASN (E)  
SAF-IEE  
DES-E

## **Summary of Public Comments on the Draft Regulatory Issue Summary for Military Radium**

Ten public comment letters were received during the public comment period. The commenters include: Concerned California Agreement State Licensees<sup>1</sup>, Jared Washburn, the U.S. Environmental Protection Agency (EPA) Region 9, the California Department of Toxic Substances Control (CDTSC), the California Department of Public Health (CDPH)<sup>2</sup>, the U.S. Department of Defense (DoD), and four anonymous submitters.

Five commenters support the proposed clarifications in the draft Regulatory Issue Summary (RIS). The CDPH supports the U.S. Nuclear Regulatory Commission (NRC) jurisdiction. The CDTSC requests that the NRC's jurisdiction be broadened to also include military landfills with "suspected" contamination. Individual commenters, claiming detailed knowledge of the ongoing military remediation work in California, provided many comments suggesting that the proposed clarifications in the draft RIS do not go far enough, including comments such as: the draft RIS has a "backseat role" at sites under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process; more NRC involvement is needed; NRC should regulate restricted release sites with burials; and DoD is avoiding NRC's more stringent decommissioning requirements for restricted release. Concerns also were expressed about the Navy's cleanup practices at the Treasure Island site in California and that NRC's master materials licenses (MMLs) with the Air Force and Navy should include military remediation.

Four commenters are neutral, but raise implementation challenges. The EPA Region 9 believes that the NRC licensing proposed in the draft RIS could complicate military cleanup, and that the Agreement State role after completion of military remediation and property transfer (i.e., ability to impose licensing requirements on subsequent property owners) could have a potential impact on the finality of military remediation. The remaining three individual commenters identified implementation challenges such as: explaining the application of NRC regulations for capping buried landfills and waste consolidation units, and explaining how to address state regulations that are more restrictive than NRC regulations.

The DoD comments opposed the proposed clarification of NRC's jurisdiction over military radium-226 and identified several implementation challenges, particularly concerns about licensing. Despite its opposition, DoD expressed support for further joint discussions on how NRC can be appropriately involved during the military's remediation activities so as to avoid duplication of regulatory requirements and effort. The DoD concerns were discussed with the staff during the November 1, 2011, public meeting and then documented in the DoD comment letter. The principal concerns raised by DoD are: the clarifications in the draft RIS are inconsistent with the Energy Policy Act of 2005, and NRC's proposed licensing of non-National Priorities List (NPL) sites would result in dual regulation with the CERCLA process that would duplicate military cleanup efforts and cause additional cleanup costs and delays. The staff proposed licensing/permitting of the military's possession of the licensable material under an MML, coordinating the CERCLA process with NRC's decommissioning process, and providing NRC oversight at those sites where EPA does not provide regulatory oversight. The DoD states

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<sup>1</sup> The Concerned California Agreement State Licensees is **not** an affiliate of the Organization of Agreement States.

<sup>2</sup> CDPH is the designated organization in California to implement the Agreement State program.

that it has a statutory requirement to conduct all remediation under the CERCLA process and that the CERCLA permit waiver prevents NRC licensing/permitting of military remediation conducted under CERCLA. The DoD also believes there is independent oversight of remediation at non-NPL sites where states are involved; such as when states provide review and comment.

**List of Public Comments and Agencywide Document Access and Management System  
(ADAMS) Accession Numbers**

(Also, search ADAMS using the case reference no. NRC-2011-0146)

<b>Comment number</b>	<b>Date</b>	<b>Author/Organization</b>	<b>ADAMS number</b>
Comment 1	August 5, 2011	Anonymous	ML11220A262
Comment 2	August 4, 2011	Anonymous	ML11224A018
Comment 3	July 31, 2011	Anonymous	ML11227A266
Comment 4	August 10, 2011	Concerned California Agreement State Licensees	ML11231A252
Comment 5	August 12, 2011	Jared Washburn	ML112370043
Comment 6	August 14, 2011	Anonymous	ML112370044
Comment 7	August 16, 2011	Deborah Morefield, DoD (request for 75-day extension of public comment period)	ML11243A147
Comment 8	September 6, 2011	Robert Carr, EPA Region 9	ML11252B049
Comment 9	November 9, 2011	Stewart Black, CDTSC	ML11325A241
Comment 10	November 28, 2011	Maureen Sullivan, DoD	ML11334A056
Comment 11	November 29, 2011	John Fassell, CDPH	ML12019A118

## **U.S. Nuclear Regulatory Commission Staff Views on Resolution of Major U.S. Department of Defense Comment Areas and New Concerns Raised in Discussions with U.S. Department of Defense**

The following U.S. Department of Defense (DoD) comment areas, new concerns, and resolution approaches were discussed within the U.S. Nuclear Regulatory Commission (NRC)-DoD working group. The NRC staff believes that the approaches developed to resolve these comments have substantially reduced unnecessary dual regulation and the potential for cost and schedule impacts raised by DoD in its comments on the draft Regulatory Issue Summary (RIS). The DoD's August 1, 2013, letter (Enclosure 1) also states that the Memorandum of Understanding (MOU) option would address its concerns regarding the draft RIS.

### Major DoD Comment Areas

#### 1. Remediation of radium contamination

The DoD commented that it was statutorily required by the Defense Environmental Restoration Program (DERP) to remediate using the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. Discussions of this topic established a mutual recognition of the overlap of jurisdiction for both the radioactive materials and the NRC decommissioning process under the Atomic Energy Act of 1954, as amended (AEA) and the remediation process under CERCLA. The NRC understands that DoD is statutorily required under DERP to remediate its properties using the CERCLA process and that radioactive materials are defined as hazardous substances under CERCLA. The DoD acknowledged that under the AEA, the NRC has regulatory authority over certain radioactive material. Therefore, the need for developing a process to manage this "overlap" in jurisdiction was also discussed. The NRC noted that it has encountered this "overlap" before and has often established MOUs to define a process to coordinate and cooperate.

The NRC's draft RIS proposed the NRC involvement with DoD remediation under the CERCLA process would be implemented in a way that would reduce unnecessary dual regulation. As a result, one of the principal regulatory approaches in the draft RIS for remediation of sites on the National Priorities List (NPL) that are regulated by the Environmental Protection Agency (EPA) was to rely on the CERCLA process and the regulatory oversight, but stay informed. This approach was previously approved by the Commission and the staff and DoD have successfully implemented this approach for the past 5 years at the Navy's Hunters Point and Alameda sites and the Air Force's McClellan site. The DoD did not comment on this approach proposed in the draft RIS.

For DoD remediation of sites without the EPA regulatory oversight (e.g., sites not listed on the NPL; i.e., non-NPL sites) the staff identified in the draft RIS that the NRC should have an oversight role. The staff had proposed in the draft RIS a licensing approach that would be coordinated with the CERCLA process. These sites have some degree of state oversight. The staff did not propose relying on state oversight as a general policy in the draft RIS because the Agreement States cannot regulate federal entities. Also, other state agencies involved with the CERCLA process may not have radiological expertise or experience in decommissioning complex sites contaminated with radioactive

material and would need to arrange for assistance. For these types of sites, the staff proposed that it could rely on the CERCLA process and documents instead of requiring the NRC decommissioning process and documents, but it would need to provide independent oversight.

To achieve this oversight, the staff initially proposed a possession only license (POL) for just the AEA material subject to the NRC's jurisdiction, thereby avoiding dual regulation of the ongoing DoD remediation that is taking place under CERCLA. Although the NRC continues to believe this approach would eliminate the unnecessary administrative costs associated with licensing, the DoD continued to object to the NRC's proposed POL, primarily due to the permit exclusion under § 121(e)(1) of CERCLA and because of its concern about the potential for impacts on the cost and schedule of the DoD's remediation and agreements for the transfer of property under the Base Realignment and Closure process.

Instead of the POL approach, the DoD proposed that the NRC's involvement should be under an MOU instead of licensing. The working group prepared and discussed a draft of the MOU. The staff prepared and provided the DoD with the key provisions of the draft MOU given in Enclosure 4 as a proposed revised structure for the MOU. The key provisions also summarize the current scope and approach. The MOU would include existing NRC activities at Navy's Hunters Point and Alameda sites and the Air Force's McClellan site.

## 2. Radium on firing ranges

The NRC's draft RIS had included examples of radium contamination that would be subject to the NRC regulation under the Naturally Occurring and Accelerator Produced Radioactive Material (NARM) Rule. One of the examples given in the Statement of Considerations (SOC) for the NARM Rule was for "targets and associated contamination on firing ranges..." DoD comments on the draft RIS stated that training and testing on **operational** military ranges are "military operations" and should continue to be clearly excluded from the scope of the NRC jurisdiction over radium. The DoD also commented that the NRC involvement on operational ranges could conflict with the DoD's training mission. The NRC clarified that that radium contamination on **operational** firing ranges would not be subject to the NRC regulation because of the military operational exclusion in the NARM Rule SOC and because the risk of exposure is low. The NRC recognizes that the DoD's controls of operational ranges for unexploded ordnance would limit the likelihood of an exposure to radium. Furthermore, the NRC's independent dose estimates (in the range of 0.7 to 7 mrem/yr) agree with the DoD's comment that the dose consequence is low if there were an exposure. For **closed** firing ranges, the DoD noted that the CERCLA process would be used for remediation. As a result, the NRC would be involved with the DoD's remediation of closed firing ranges under the MOU.

### 3. Radium items and equipment with no future military operational use

In its comments on the draft RIS, DoD stated that the procedural costs of the NRC licensing could be over \$20 million because without an Army Master Materials License (MML), the Army would need to obtain nearly 100 different licenses for radium. In discussions with the NRC staff on this comment area, the Army explained that after further assessment of the inventory, it had found that most of its items were already disposed of and those remaining are scheduled for disposal. Other radium items and equipment have been added to Army museum licenses. The Army controls the number of museum items to remain below the 100 items limit allowed under the NRC general license for museums. Therefore, DoD concluded that its comment on the draft RIS is no longer an issue. The NRC also confirmed that the Air Force and Navy currently regulate radium items and equipment in storage or used for calibration or research and development under the Air Force and Navy MMLs.

### 4. Clarification of NRC's jurisdiction for military radium

The DoD commented that the draft RIS is not consistent with the Energy Policy Act of 2005 (EPAAct) statutory requirement and is a significant change to the NRC's interpretation in the SOC for the 2007 NARM Rule for regulatory authority over military operational radium. Contrary to DoD's assertions, the staff considers that the draft RIS is entirely consistent with the regulatory framework established by the NRC in the NARM Rule. The SOC carefully detailed the authorization contained in 651(e) of the EPAAct that gave the NRC regulatory jurisdiction over radium. The NRC very specifically discussed the scope of this expanded jurisdiction paying close attention to its effect on the military services. The NRC acknowledged that the expanded authority did not pertain to certain military radium, but also recognized that some radium used by the military was subject to the NRC jurisdiction. The NRC stated the "exclusion from the coverage of the EPAAct only applies to a certain type of military use, i.e., NARM used for 'military operation'" (72 FR at 55867, October 1, 2001). Far from amending the scope of the NRC's jurisdiction over military radium, the draft RIS preserves the distinction by clarifying the exceptions alluded to in the NARM Rule. Specifically, the NARM Rule affirmed that if "[radium-226] is **intended** for use in military operation, it is excluded from coverage of this rule..." The draft RIS merely clarifies the converse, which is if radium in the military's possession is **not** intended for use in or used in military operations then it is subject to the NRC regulations. The draft RIS also clarifies what is meant by material in storage or that may be subject to decontamination and disposal. In order to be excluded from the NRC's regulatory authority, the radium in the military's control would have to be used, or intended for future use in military operations; and items and equipment in storage which are not being used and which are not intended for future use is subject to the NRC's regulations. The draft RIS does not change the NRC's previously adopted regulatory framework.

## New concerns identified during NRC discussions with DoD

### 5. Remediation of unlicensed AEA contamination

In addition to discussing DoD's remediation comments on the military radium draft RIS, the staff raised the concern that DoD is in possession of and remediating unlicensed AEA material subject to the NRC's jurisdiction without NRC involvement in the process. For example, some military sites currently being remediated contain licensable strontium-90 commingled with radium. Site lists provided to the NRC by DoD identify the sites where unlicensed AEA material has been confirmed. The DoD and the staff agreed that a comprehensive MOU should be developed that would provide a single, consistent approach for all AEA licensable material.

### 6. Remediation of contamination in building interiors

Staff discussions with DoD and EPA Region 9 clarified that the remediation of building interiors where there is no release or threat of release to the environment is not conducted under the formal CERCLA process. This position is consistent with EPA's Office of Solid Waste and Emergency Response Directive 9360.3-12. As a result, DoD explained that it uses a CERCLA-like process instead. The staff understands from EPA Region 9 that its reviews of building interiors is limited to final status survey reports of the buildings as part of a larger parcel of land and that EPA Region 9 relies on state reviews. While EPA Region 9 is aware of the work in buildings, it does not provide comments to DoD. The staff also understands from discussions with the state that while the state does not have formal regulatory authority for DoD's remediation of buildings, it conducts reviews and provides a release so that the property can be transferred to a non-federal owner without the potential for state licensing after transfer. Generally for these cases, the staff considers that the NRC should conduct monitoring under the MOU unless for specific buildings the remediation is clearly being conducted under the CERCLA process with EPA regulatory oversight.

### 7. NRC fees for implementing the MOU at specific sites

A significant new concern identified during the discussions with DoD pertains to the NRC fees for its activities under a license or the MOU. Under Section 161w of the AEA and the Omnibus Budget Reconciliation Act of 1990 (42 U.S.C. 2214), the NRC lacks the statutory authority to charge DoD fees under either Part 170 (fees for services) or Part 171 (annual fees) because DoD is not a license applicant, licensee, or certificate holder. Yet the Omnibus Budget Reconciliation Act of 1990 requires the NRC to recover approximately 90 percent of its budget authority through fees. Accordingly, the regulatory costs associated with this MOU must be recovered through either annual fees to other licensees or included in the 10 percent of the NRC's budget that is off the fee base and recovered through Congressional appropriations. This latter approach would entail creating a new fee relief category for the regulatory activities under the MOU.

The fee relief option would not result in raising the fees of the NRC licensees because the NRC's activities under the MOU would be included in the 10 percent of the NRC's budget that is off the fee base. The fee relief option was established in 1995 (SRM-SECY-95-017) to address issues of fairness and concerns raised by licensees.

Existing licensees should not have to pay for the NRC activities with DoD remediation under an MOU because they do not directly receive benefits from these NRC activities. The Commission would need to approve establishment of a new fee relief category because the current categories do not reflect the NRC involvement with DoD remediation under an MOU. This option would pertain to the NRC involvement under the MOU at any of the DoD sites being remediated under the CERCLA process.

An alternative option would result in redistributing the cost of the NRC involvement under an MOU among existing NRC licensees. This would require the NRC to grant DoD a fee exemption. This would likely cause licensees to raise concerns about fairness and equity because the NRC activities do not directly benefit existing licensees. This process would require implementation via numerous letters from DoD requesting fee exemptions at specific sites due to the NRC's lack of statutory authority to assess DoD fees. This complicated implementation would result in additional effort by both DoD and NRC compared to the simpler fee relief process that would apply to all DoD sites being remediated under the CERCLA process.

**Key Provisions of a  
Memorandum of Understanding  
Between the U.S. Nuclear Regulatory Commission and the U.S. Department of Defense  
for Remediation of U.S. Department of Defense sites with Radioactive Materials subject  
to U.S. Nuclear Regulatory Commission Regulatory Authority**

The key provisions of this Memorandum of Understanding (MOU) are outlined below to give an understanding of the general scope and approach for the proposed eventual MOU. The U.S. Nuclear Regulatory Commission (NRC) and U.S. Department of Defense (DoD) staff discussions have resulted in these key provisions for a draft MOU. After Commission direction, further development of the draft MOU could proceed and provide the detailed wording of these provisions.

**ARTICLE I—PURPOSE, AUTHORITY, AND SCOPE**

Purpose

- Ensure protection of public health and safety and the environment.
- Minimize dual regulation for overlapping statutory responsibilities.
- Framework and consultation process for the NRC and DoD to work together and cooperate fully to meet respective responsibilities.

Authority

- The NRC's authority under the Atomic Energy Act of 1954, as amended (AEA) and implementing regulations.
- The DoD's authority pursuant to the Defense Environmental Restoration Program, as amended (DERP) and the Comprehensive Environmental Response, Compensation and Liability Act, as amended (CERCLA) and implementing regulations.
- The MOU neither creates nor removes any agency responsibility or authority.

Scope

- Comprehensive MOU, including the following:
  - All DoD sites with confirmed radiological material that is or may be subject to the NRC regulation under the AEA.
  - The DoD sites on active DoD installations, Base Realignment and Closure (BRAC) properties, and Formerly Used Defense Sites.
  - Buildings with contamination not addressed under CERCLA.
  - Sites with unrestricted and/or restricted release remedial actions.
  - Sites under an existing Air Force or Navy NRC Master Materials License permit, where DoD requests and NRC approves suspension of the permit during remediation under CERCLA and subsequent reinstatement and termination of the permit.
  - All steps and activities of the CERCLA process, including investigations, remediation, and 5-year reviews.

## **ARTICLE II—INTERAGENCY COMMUNICATION**

### Principal Representatives

- Identify in the MOU the positions of the principal representatives for the NRC and DoD, Army, Navy, and Air Force.
- Each agency will identify in writing its primary points of contact for day-to-day communications.

## **ARTICLE III—INVENTORY AND NRC MONITORING OF ONGOING DoD RESPONSE ACTIONS WITH RADIOLOGICAL MATERIALS**

### Annual Inventory of Sites

- The DoD prepares and updates an annual site inventory to notify NRC of sites; notify the NRC if a new site is identified during the year. Provides site-specific information for planning and coordination (information fields to be determined but might include: radionuclides making up the contamination; location of contamination (e.g., soil, groundwater, building interiors, sewer lines, landfills, firing range targets); remedial action considered or approved (unrestricted and/or restricted release); step in CERCLA process; National Priority List (NPL) or non-NPL; U.S. Environmental Protection Agency regulatory oversight; state oversight; type of site (e.g., active installation, BRAC property, Formerly Used Defense Sites); site location; and closest population center.

### NRC and DoD Coordination and Planning

- The NRC review and discussion of inventory with DoD.
- The NRC notifies DoD of sites selected for staying informed and monitoring.
- Coordinate site-specific plans and schedules annually and for site-specific NRC monitoring activities.

### NRC Access to Sites and Information

- The DoD provides NRC with access to sites to observe activities and to conduct confirmatory radiological surveys as requested.
- The DoD provides access to CERCLA documents, supporting radiological documents, and data.
- The DoD facilitates NRC monitoring activities.

### NRC Decommissioning Dose Criteria

- The DoD meets the 25 mrem/yr dose criteria in 10 CFR 1402 and/or 10 CFR 1403(b) as appropriate for a specific site or a more stringent criterion.
- The DoD CERCLA documents provide technical basis for meeting dose criteria.

### NRC Involvement

- The NRC would determine the type of involvement with DoD's remediation at specific sites--either stay informed or monitor.
- Monitoring to confirm that DoD has met the applicable NRC dose criteria identified above.
- Monitoring activities include, but not limited to, meetings for information exchange, document reviews, site visits, and confirmatory radiological surveys.
- Coordination with internal DoD radiological reviewers on their final reports.

- The DoD adjudication of the NRC comments.
- The DoD will provide a written response to the NRC comments.
- The NRC prepares a final report or letter stating the NRC's conclusion regarding DoD's completion of remediation.

#### Records

- The NRC monitoring activities, comments, and conclusions documented in letters or monitoring reports that would be public documents available in NRC's Agencywide Documents Access and Management System.
- The DoD will maintain a written record of MOU information exchanged.
- Management of restricted records.

#### NRC Technical Assistance or Regulatory Advice

- The DoD could submit a request for NRC technical assistance or regulatory advice.
- The NRC responds to DoD requests (e.g., providing appropriate NRC guidance documents).

#### Licenses for DoD Service Provider Radiological Activities

- Where DoD's radiological remediation activities are conducted by service providers, DoD will verify that its service providers use the NRC's guidance to determine whether an NRC or Agreement State license is required in order to conduct its activities.

#### NRC Fees

Note that this MOU cannot resolve the question regarding NRC fees.

### **ARTICLE IV—DISPUTE RESOLUTION**

#### Dispute Resolution

- The NRC and DoD will make every effort to fully discuss and resolve disputes.
- Raise disputes to higher levels of management for resolution.
- Each agency reserves any authority to take action.
- The NRC could document unresolved disputes in the NRC non-compliance letters.

### **ARTICLE V—AMENDMENT AND TERMINATION**

- The MOU may be modified or amended in writing by mutual agreement of the NRC and the DoD.
- Either agency may terminate its participation in the MOU by providing written notice.

### **ARTICLE VI—EFFECTIVE DATE**

- Effective date will be upon the last date of signature.
  - Signatures of both parties; NRC: Office of Federal and State Materials and Environmental Management Programs, Office Director; DoD: To Be Determined.

## Options for the Nuclear Regulatory Commission's Involvement with U.S. Department of Defense's Remediation

### Option 1: Licensing

- Description:

In SECY-11-0023 the staff recommended a licensing approach that would be coordinated with the Comprehensive Environmental Response, Compensation and Liability (CERCLA) process for the U.S. Nuclear Regulatory Commission's (NRC) involvement at U.S. Department of Defense (DoD) sites being remediated under that process, but without U.S. Environmental Protection Agency (EPA) regulatory oversight. In SRM-SECY-11-0023, the Commission approved including this approach in the draft Regulatory Issue Summary for public comment. Development of the specific method of coordinating the licensing approach with the CERCLA process was listed in SECY-11-0023 as one of the implementation challenges. As part of the discussions in the NRC-DoD working group, the staff developed and proposed a possession-only license (POL). The proposed POL could be implemented under the Air Force and Navy Master Materials Licenses (MMLs) or be site specific with respect to the Army. This approach would only license the possession of the radioactive material and not the remedy under the CERCLA process. Thus, the proposed POL would acknowledge the existing DoD remediation under the CERCLA process and not require adherence to NRC's decommissioning process or documents. The staff considers that this approach would avoid dual regulation and the CERCLA permit waiver issues. The NRC would, however, only terminate the POL for the material at a specific site if NRC had no unresolved concerns regarding protection of public health and safety and the environment. This option could apply to sites with plans for either unrestricted or restricted release. The DoD members of the working group did not agree with this option.

- Pros:

- Greater authority to resolve difficult disputes, either by taking an enforcement action or not approving the termination of the POL for the specific site under an MML.
- Difficult disputes might be avoided because of the pressure on DoD to have NRC terminate the POL so that DoD could transfer the site to a new owner who would likely not want to be licensed.

- Cons:

- The DoD would likely continue to oppose any form of licensing based on the CERCLA permit waiver and concerns about impacts to remediation cost and schedules as well as potential delays in the transfer of land for redevelopment.
- The DoD opposition could lead to lengthy DoD and the NRC disputes preventing NRC technical activities that would be beneficial to remediation by adding confidence in the protection of public health and safety and the environment.
- Disputes with DoD would preclude the NRC involvement and benefits to the remediation process, especially at high visibility sites planning transfer and redevelopment of the land after remediation.
- The use of a POL under the Air Force and Navy MMLs has not been implemented by either the NRC or DoD and, therefore, could be confusing and/or have unforeseen complications.

- A Memorandum of Understanding (MOU) or individual POLs for each site would be necessary for the Army because there is no Army MML.
- Using different processes for the services is more complicated and possibly confusing to implement than using one consistent process for all three services.
- EPA noted that it had not previously encountered this approach and that it could prove problematic.

#### Option 2: Memorandum of Understanding

- Description:

The MOU would be a written agreement, signed by the NRC and DoD senior-level official, that establishes a consultation process, exchange of information, and NRC involvement with DoD's remediation under the CERCLA process. The MOU would be comprehensive and apply to all confirmed Atomic Energy Act of 1954, as amended material subject to NRC authority, including radium, which would be remediated by any of the military services. Therefore, the MOU would apply to all types of remedial actions, including unrestricted and restricted use sites or portions of sites. Remediation of buildings and closed firing ranges would also be included under the MOU. The NRC would determine its involvement at each site, including staying informed or monitoring as described in Enclosure 6. Monitoring oversight is intended to add confidence that the outcome of DoD's remediation would be protective. Disputes would be addressed through discussions between senior management representatives at NRC and DoD, but if disputes cannot be resolved NRC could provide a letter of safety concern to DoD, EPA, state officials, and future owners or take a regulatory action.

- Pros:

- The MOU option is consistent with the Statement of Considerations for the Naturally Occurring and Accelerator Produced Radioactive Material rule which notes that NRC does not intend to require unlicensed owners of properties that may be contaminated with radium-226 to obtain licenses. Instead, the NRC will work with the facility owner to decommission the site. The NRC may order the owner to obtain a license and to perform site decommissioning if the site presents a significant threat to the public health and safety and the environment (72 FR 55902).
- Based on Commission policy decisions, the NRC has previously implemented written agreements or MOUs for the remediation of other sites where the CERCLA process is being used (e.g., the Navy's Hunters Point site; Formerly Utilized Sites Remedial Action Program sites, the Army's Lake City site, and the Homestake and Church Rock uranium mill tailings sites). The Commission's decision not to license Hunters Point included both unrestricted and restricted release areas of the site.
- The DoD's August 1, 2013, letter supports moving forward with an MOU and notes that it would establish a cooperative NRC and DoD process (Enclosure 1).
- The DoD letter notes that the MOU would avoid challenging topics such as the CERCLA permit waiver, radium jurisdictional issues, and project delays and increased costs resulting from duplicative regulatory procedures.

- The DoD letter notes that an MOU “maximizes efficiencies by leveraging regulatory and DoD processes already in place, while incorporating the NRC monitoring into the existing CERCLA program...”
  - One consistent process for all three services would be less complicated and less confusing to implement by both agencies.
  - The NRC would avoid unnecessary dual regulation by conducting its monitoring within the CERCLA process and therefore not require DoD to use the NRC decommissioning process, requirements, and documents.
  - The NRC’s monitoring activities (e.g., technical reviews and comments, site observations, and confirmatory surveys) would not be different than its typical technical activities for licensing or the staff’s activities conducted for DOE’s Waste Incidental to Reprocessing program.
  - The EPA indicated that the MOU approach would be generally beneficial.
- Cons:
    - An MOU may not provide sufficient regulatory oversight needed to resolve conflicts given the cost, schedule, and redevelopment pressures on DoD’s remediation at certain Base Realignment and Closure sites.
    - Challenging conflicts important to protection of public health and safety and the environment could arise that cannot be resolved by the provision in the MOU for conflict resolution. The NRC could only rely on either a letter expressing a significant safety concern to all affected parties or an enforcement action, that DoD could legally challenge based on the CERCLA permit waiver.
    - The EPA noted that dispute resolution may be difficult under an MOU compared to licensing.

## **Description of The U.S. Nuclear Regulatory Commission Involvement under a Potential Memorandum of Understanding with the U.S. Department of Defense**

The proposed Memorandum of Understanding (MOU) would establish a general process for consultations between the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Department of Defense (DoD). Consultations include DoD's preparing an inventory of all DoD sites with confirmed radioactive material, exchanging information about these sites, and agreeing to work cooperatively and support the NRC's involvement activities. The MOU would not prescribe how the NRC would determine its priorities or monitoring activities. The key provisions given in Enclosure 4 summarize this general process for consultations.

Two types of NRC involvement could be implemented under an MOU: "stay informed" and "monitoring." Consistent with SECY-11-0023 and the draft Regulatory Issue Summary (RIS), for sites where the U.S. Environmental Protection Agency (EPA) has regulatory authority (e.g., sites listed on the National Priority List (NPL)) the staff would take a limited involvement approach to stay informed and would rely on the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process and EPA regulatory oversight. This **stay informed approach** was approved by the Commission for the Navy's Hunters Point site (SRM-SECY-08-0077), and the staff has also used this approach for the Navy's Alameda site and the Air Force's McClellan site. The staff's use of this approach for the past 5 years has been successful. All three of these sites are planning both unrestricted and restricted remedial actions. Typically, the staff stays informed about these remedial actions by a combination of selected document reviews and annual site visits that involve meetings with the Air Force, Navy, EPA Region 9, and the state agencies involved with the remediation of these sites. Through these discussions, the staff maintains a general understanding of the progress and views on important radiological remediation issues as well as the completed and planned activities of each organization. This approach does not involve licensing and accordingly the staff does not conduct licensing reviews. However, the NRC reserves the option of providing comments to EPA on the military remediation, if necessary, to justify continued reliance on the CERCLA process and EPA oversight. Finally, the staff would continue its regulatory oversight of military contractors conducting remediation activities under an NRC service provider license.

The second approach for NRC's involvement is **monitoring** of sites where there is no federal oversight conducted by EPA (e.g., sites not listed on the NPL). This monitoring approach would replace the licensing approach described in SECY-11-0023 and the draft RIS if approved by the Commission. The NRC would use a graded approach to prioritize these sites and conduct the appropriate type and amount of monitoring activities for each site based on its priority. Monitoring activities could include document and data reviews, site observations, and confirmatory radiological surveys. The purpose of this monitoring would be to provide consistent federal oversight to confirm that DoD's remediation of radioactive material using the CERCLA process would result in an outcome that is protective of public health and safety and the environment. To accomplish this, NRC monitoring would determine that NRC's 25 mrem/yr dose criterion in 20.1402 is not exceeded for sites planning for unrestricted release. For sites planning to leave contamination onsite with restrictions on future land use and/or engineered controls, NRC monitoring would determine that the 25 mrem/yr dose criterion in 20.1403 (b) with institutional controls in place is not exceeded and that the plans for 5-year reviews required by CERCLA and their implementation are acceptable to ensure long-term protection. Monitoring for these sites might include reviewing the plans for institutional controls, engineered barriers

and DoD's analyses of those nine CERCLA criteria that parallel NRC's restricted release criteria, including: a cost benefit analysis of the remedy, acceptance by the state and the public, and short and long term protection. These reviews would be intended to ensure that the remedy remains effective so the 25 mrem/yr dose criterion in 20.1403 would not be exceeded in the long-term. This illustrates how the NRC monitoring can rely on the CERCLA process but provide independent federal oversight to make certain that the process is effectively implemented to ensure protection.

Monitoring under the MOU would be supplemented as needed by the NRC's regulatory oversight of DoD contractors with NRC service provider licenses to ensure contractors are conducting remediation activities safely and consistent with their license conditions.

The NRC monitoring might also consider relying on state oversight on a case-by-case basis depending on the authority of the state organizations involved and level of expertise and involvement with radiological oversight. Agreement States do not have authority to regulate Atomic Energy Act material possessed by federal entities under their Section 274 agreements. However, Agreement States can assist other agencies in the CERCLA remediation process.

**Resolution of Issues Regarding the U.S. Nuclear Regulatory Commission's  
Involvement with the U.S. Department of Defense Remediation of Radium and  
other Atomic Energy Act Radioactive Material Subject to U.S. Nuclear Regulatory  
Commission Regulatory Authority**

In the U.S. Nuclear Regulatory Commission's (NRC) Naturally Occurring and Accelerator Produced Radioactive Material Rule Statement of Considerations (72 FR 55864; October 1, 2007), the Commission directed the staff to interact with the U.S. Department of Defense (DoD) and resolve issues related to military radium. As a result of the staff's annual site visits to Air Force and Navy sites since 2007, and the more recent meetings with DoD regarding the draft Regulatory Issue Summary (RIS), the following key issues would be resolved by completing the comprehensive remediation Memorandum of Understanding (MOU) and final RIS.

1. Confusion over what radium in military possession is subject to the NRC regulatory authority.

Questions that have been raised about the NRC's regulatory authority for military radium and approaches for implementation would be clarified by the RIS. Specifically, military radium excluded and not excluded from the NRC's regulatory authority would be clearly documented. The RIS and the comprehensive remediation MOU would describe the NRC's role in monitoring DoD's remediation of radium. Both the RIS and MOU establish one consistent process for the NRC's involvement with DoD's remediation of radioactive material across the range of sites under DoD's Defense Environmental Restoration Program.

2. Potential dual regulation from the overlap of the Atomic Energy Act of 1954, as amended (AEA), and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for DoD remediation of AEA radioactive material subject to the NRC's regulatory authority.

Both the NRC and the DoD acknowledge that DoD's remediation of radium and other unlicensed AEA material would be under both the AEA and CERCLA. The RIS generally describes approaches for managing this overlap of jurisdiction. The comprehensive remediation MOU provides the responsibilities and specific activities of both the NRC and the DoD for managing the overlap of jurisdiction in a manner that would reduce unnecessary dual regulation and associated costs and schedule impacts.

3. DoD remediation of unlicensed AEA material subject to the NRC regulatory authority

In addition to radium, at some sites DoD has also identified, and is remediating, other unlicensed AEA material subject to the NRC's regulatory authority. For example, strontium-90 can be comingled with radium in disposal areas, such as at the Navy's former Alameda Air Station in California. Apart from DoD's concerns about the NRC's jurisdiction of military radium, the issue of licensing the unlicensed AEA material needs to be resolved. The NRC staff recommends using the MOU approach described in this paper instead of licensing to provide a single and consistent path forward for addressing DoD's remediation of any unlicensed AEA material subject to the NRC authority. As DoD is required to remediate all radioactive material using the CERCLA process, this appears to be the most efficient way to resolve the potential for dual regulation of the remediation of this other AEA material as well as for radium.

4. Potential for reopening of completed military remediation and impacts on redevelopment.

The fact that a remedial action has been taken and concluded by DoD does not negate subsequent NRC or Agreement State jurisdiction over the site when it is transferred to a non-federal owner, if the NRC or the Agreement State suspects or confirms the presence of radioactive material subject to its regulatory authority. In order for the NRC to ensure that no further NRC action is necessary at a military site or facility in a non-Agreement State post-remediation and after transfer of the property to a non-federal owner, some level of NRC involvement is needed during DoD's CERCLA remediation of these sites. This would avoid the NRC having to take a licensing action against the new owner after property transfer and "reopen" the completed DoD remediation. It might also assist a State in the NRC's Agreement State program in deciding whether a licensing action by the State would be necessary. However, the NRC cannot prevent an Agreement State from taking an action under its compatible regulations or applicable requirements. Thus, the NRC involvement is intended to support finality and avoid dual regulation that would result from "reopening" the completed DoD remediation. Avoiding "reopening" would also avoid impacts on potential redevelopment plans of future non-federal owners.

5. Independent federal oversight to ensure protection of public health and safety.

The NRC believes that independent and consistent federal oversight of DoD's remediation is needed for those sites without the Environmental Protection Agency regulatory oversight. The NRC's monitoring of these sites will add confidence that the DoD's remediation of the radioactive material has been conducted and completed so that future use by the public will be safe. The NRC monitoring makes available the staff's technical expertise and years of experience with the decommissioning of a full range of nuclear facilities.