OFFICE OF THE UNDER SECRETARY OF DEFENSE
3000 DEFENSE PENTAGON
WASHINGTON, DC 20301-3000

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Cindy Bladey, Chief, Rules, Announcements, and Directives Branch (RADB)
Office of Administration
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U.S. Nuclear Regulatory Commission
Washington, DC 20555-001

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For NRC Docket ID No. NRC-2011-0146:

The Department of Defense (DoD) appreciates the opportunity to review and comment on the Nuclear Regulatory Commission (NRC) Draft Regulatory Issue Summary (RIS) 2011-XX; NRC Regulation of Military Operational Radium-226. As requested in the Federal Register Notice dated July 8, 2011, enclosed is a complete set of comments for your consideration and inclusion in NRC Docket ID No. NRC-2011-0146.

DoD appreciates the discussion that took place at the public meeting held at NRC on November 1, 2011, and we look forward to a continued collaborative dialogue prior to finalization of any policy. Our concern is that additional policy would increase uncertainty, and duplicate regulatory requirements and efforts already covered by the Comprehensive Environmental Response, Compensation, and Liability Act process and oversight. To avoid this situation, DoD recommends working cooperatively with the NRC staff in an interagency dialogue. The Cleanup subcommittee under the Interagency Steering Committee for Radiological Standards could provide an appropriate forum. My office will be pleased to coordinate participation by DoD remediation experts for such a dialogue.

My point of contact for this issue is Ms. Deborah Morefield, who can be reached at (703) 571-9067, deborah.morefield@osd.mil. Please contact her if you have any questions or if you need additional information.

Sincerely,

S. A. Chaudhury ACTING

for Maureen Sullivan
Director, Environmental Management

Enclosure:
As stated

SUNSI Review Complete
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Add = R. Johnson (RJ2)

Department of Defense Comments on the Nuclear Regulatory Commission's Proposed "Draft NRC Regulatory Issue Summary 2011-XX; NRC Regulation of Military Operational Radium-226" (76 Federal Register 40282 (July 8, 2011) and 76 Federal Register 57006 (Sept 15, 2011))

The Department of Defense (DoD) appreciates the opportunity to review and comment on the Nuclear Regulatory Commission's (NRC) Draft Regulatory Issue Summary (RIS), "NRC Regulation of Military Operational Radium-226." DoD also was pleased to participate in the November 1, 2011 public meeting on this subject; it gave DoD a clearer understanding of NRC's views, and accordingly DoD responds below to particular concerns NRC expressed, as well as to other issues.

DoD requests that NRC carefully consider DoD's comments and recommendations. Some of DoD's significant concerns with this NRC proposed RIS are summarized below and explained in depth later. DoD also requests and is fully supportive of continued collaborative dialogue among DoD and NRC staff to resolve these important issues and other concerns prior to NRC issuing any final policy (e.g., Regulatory Issue Summary).

- DoD believes NRC's proposal in the RIS to extend jurisdiction over radium-226 on military installations would duplicate regulatory requirements already imposed by existing environmental cleanup laws, and conflict with the NRC objectives cited as the basis for the proposal, without an added health or safety benefit. All DoD remediation actions are already comprehensively regulated under existing cleanup laws and are required to be protective of human health and the environment.
- DoD also believes that the NRC lacks jurisdiction over radium-226 on military installations under the Energy Policy Act of 2005 (EPAct) and that the proposed RIS will significantly change by policy NRC's prior 2007 interpretation of this statute. Some of the major concerns raised by the jurisdictional changes in the proposed RIS include:
    - Extension of NRC jurisdiction over training and testing on operational military ranges, which are "military operations" and should continue to be clearly excluded from the scope of NRC jurisdiction.
    - Discriminatory retroactive application of NRC licensing and decommissioning requirements from a 2005 change in the law to military disposals of material containing radium-226 without application of same retroactive application to private-party disposals of similar radium-226 materials.
- The NRC in the proposed RIS raises significant licensing issues. Among them are conflict with the statutory bar to imposing permit requirements in Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the consequences to transfers of military real property, additional costs that would be imposed on DoD, and inconsistency with National Environmental Policy Act implementation.
- The proposed RIS also raises significant implementation issues that must be resolved before finalizing this policy. Not doing so may result in additional uncertainty with concomitant schedule and resource costs.

DoD recommends an approach consistent with the NRC's 2007 formal regulatory interpretation of the EPAct that radium-226 within military control is not subject to NRC jurisdiction, and that remediation of radium-226 is governed by existing environmental laws. DoD is supportive of joint discussions with NRC on how the NRC can be appropriately involved in future cleanups at DoD facilities, including evaluation of promulgated NRC cleanup standards as relevant and appropriate requirements under CERCLA to

avoid duplication of regulatory requirements and efforts. DoD recommends using the Cleanup subcommittee under the Interagency Steering Committee for Radiological Standards to continue the cooperative interagency dialogue on these issues, and elevating the issues above the staff-level if needed. DoD suggests inclusion of DoD remediation experts to this existing subcommittee for improved understanding of the issues among radiological and remediation experts to help establish practical interagency guidelines that recognize the authorities of the multiple laws and federal agencies.

The following is a more detailed discussion of the legal and policy issues of significant concern to DoD.

1. **Radium-226 Remediation.** NRC expressed concern that DoD's non-NPL remediation efforts will not comply with these CERCLA requirements nor have adequate regulatory oversight. This is an incorrect assumption. DoD has and will comply with all environmental regulatory requirements to be protective of public health and the environment in its remediation efforts. Environmental regulatory agencies, such as the U.S. Environmental Protection Agency (EPA), have and will monitor compliance with these requirements and take regulatory action if necessary.

   DoD addresses the risk posed at its cleanup sites using a holistic approach, evaluating all contaminants across all media to assess potential threats to human health and the environment to the military and neighboring communities. DoD engages its stakeholders, including appropriate State technical experts, to ensure regulatory acceptance of a remedy that will effectively achieve the cleanup objectives.

   Regulatory involvement is an integral part of the DoD cleanup process. Under the Defense Environmental Restoration Program (DERP, 10 USC 2700 et seq), DoD is required to implement all remediation in accordance with CERCLA (42 USC Sections 9601-9675) and in consultation with the EPA at both National Priorities List (NPL) and non-NPL sites. All radionuclides, including Radium-226, are a listed CERCLA hazardous substance (see 40 CFR Section 302.4, Appendix B.) For over twenty years, potential releases of radium-226 upon DoD property have been investigated and remediated by DoD pursuant to Sections 104, 120, and 122 of CERCLA, 42 U.S.C. Sections 9604, 9620, and 9622, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP, 40 CFR Part 300), the DERP, and Executive Order 12580. EPA has also addressed radium-226 at privately owned sites under its CERCLA authority.

   CERCLA remedial actions at DoD sites addressing radium-226 are approved by environmental regulatory agencies in final CERCLA Records of Decision (RODs) and are, as required by CERCLA and the NCP, fully protective of human health and the environment. These remedial actions have generally consisted of either: 1) excavation and disposal of radium-226 to achieve concentrations that no longer present an unacceptable risk for unrestricted land use; or 2) containment remedies (e.g., cap/cover for a landfill) protected by durable and reliable CERCLA institutional controls (ICs) when radium-226 is left in place at levels that would otherwise pose unacceptable risk for unrestricted land use. Section 120(h) of CERCLA, 42 U.S.C. Section 9620(h), requires that any real property transferred by the federal government to a non-federal owner must include a covenant that all necessary remedial action has been taken in order to adequately protect human health and the environment.

   Asserting NRC active license jurisdiction over radium-226 at DoD real property in the DoD CERCLA cleanup program will have the effect of unnecessarily and inappropriately delaying DoD's remediation and BRAC real property disposal efforts to address the additional procedural NRC

requirements contemplated by the proposed RIS. Such delays may conflict with enforceable schedules for remediation that DoD has entered into with environmental regulators. NRC's proposal would work against several of the objectives NRC identified in its Federal Register notice, including the elimination of unnecessary dual regulation and the need for finality and clarity at military remediation sites. The proposal also undermines finality and certainty by exposing future non-DoD owners of the property to the possibility that NRC will "reopen" CERCLA decisions to require additional remediation. Potential recipients of military property have repeatedly indicated that they will not accept transfer of title to DoD BRAC property that is encumbered by an NRC license and such associated uncertainties and liabilities.

In the proposed RIS, it is not apparent whether NRC has acknowledged or evaluated the increased costs that would be incurred by DoD or demonstrated additional benefit to human health and the environment as a result of NRC's proposal. Such costs include the costs of implementing additional administrative, procedural, and documentation requirements in addition to those required by CERCLA, as well as costs related to delays in the cleanup process. Costs would also be incurred for historic landfills or other closed cleanup sites, and any additional cleanup if it will be required. If any closed disposal areas have to be removed, this cost could be extremely large. Since the remedial actions taking place under CERCLA must already be protective of human health and the environment, including considering NRC decommissioning standards for the remediation, these added costs would not result in any additional protection to the public or the environment. Given the increasing financial constraints during this time of budget austerity, these increased costs without any gain in protection of human health and the environment would be undesirable.

a. *National Priority List (NPL) versus non-NPL sites*. The NRC proposal differentiates between NPL and non-NPL sites in a manner that does not reflect cleanup oversight requirements and DoD authorities. Congress has provided DoD with specific direction on implementing the DERP. Under DERP, DoD is required to conduct all cleanups in accordance with CERCLA and in consultation with the EPA (see 10 USC 2701), regardless of whether they are listed on the NPL or not. Review by EPA and State and local authorities, as well as public input, is required for all DoD proposed response actions, and specific public participation forums can be established (see 10 USC 2705 and 32 CFR Part 202). Under CERCLA, all cleanup actions must follow a detailed regulatory process that documents the public and regulator participation in cleanup decisions. The comprehensive CERCLA regulatory process, referred to as the National Contingency Plan (NCP), applies at both NPL and non-NPL sites. The NRC proposal also does not consider that certain radiological contamination cleanup also occurs under the Resource Conservation and Recovery Act (RCRA); with this type of non-NPL cleanup also under DERP for DoD and conducted consistent with CERCLA. The NRC proposal appears to be based on the presumption that regulatory oversight is not occurring at non-NPL sites. The NRC proposal also does not consider that radium-226 is typically not the only constituent of concern at the DoD cleanup action. As any potential radiological exposure concerns are usually only a small component of the cleanup action, the broader scope of CERCLA and RCRA (e.g., there are over 1,000 listed CERCLA hazardous substances, including radiological substances) is more appropriate. This is especially true with the landfills/disposal sites where radium dials were historically disposed along with numerous other items. These landfills on a military installation are not nuclear waste disposal sites but conventional landfills similar to municipal landfills that may contain some radium dials commingled with many other wastes. Other hazardous substances that migrate readily in a vapor or liquid state may be present in these landfills and those may pose a more significant

risk to human health or the environment than the radium dials. The EPA presumptive remedy of capping landfills considers the significant threat posed to workers and the public from opening up a waste pile and attempting to move its contents, which may result from a separate requirement for Radium 226 as contemplated by the current proposed RIS.

b. *Extensive opportunities for independent oversight.* All CERCLA and all DoD remediation actions (including any concurrent RCRA corrective actions) go through the following stages with the corresponding regulatory oversight and documentation in an Administrative Record for the cleanup:

- Remedial Investigation (RI). During the RI, DoD collects detailed information to characterize site conditions, determine the nature and extent of the contamination, and evaluate risks to human health and the environment posed by the site conditions by conducting a baseline ecological and human health risk assessment.
- Feasibility Study (FS). During the FS, DoD develops, screens, and evaluates remedial cleanup alternatives in detail; assesses the performance of remediation options; and presents such information so the decision maker (e.g., EPA and DoD at NPL sites, EPA or the delegated State at RCRA corrective action sites, DoD as lead agency at non-NPL sites) can select a permanent solution that is protective of human health and the environment and attains any Applicable or Relevant and Appropriate Requirements (ARARs). CERCLA and the NCP establish nine mandatory criteria for the evaluation of remedial alternatives and the final selection of the remedy at 40 CFR 300.430(e)(9)(iii). DoD provides the appropriate regulatory agencies and the public an opportunity to review the FS pursuant to section 10 U.S.C. 2705(a) and (b) of DERP. State regulator and community acceptance are two of the nine CERCLA remedy selection criteria. These nine remedy selection criteria, which also include protection of human health and compliance with ARARs, apply at all DoD CERCLA cleanups, including non-NPL cleanups.
- Proposed Plan. In the proposed plan, DoD summarizes the RI/FS, highlighting the key factors that led to identifying the preferred alternative. At a minimum, it provides a brief description of the remedial alternatives evaluated; provides a discussion of the rationale that supports the preferred alternative; and provides a summary of any formal comments received from any supporting agencies. DoD makes the proposed plan available for public comment, notifies the stakeholders of the opportunity to review and comment, provides an opportunity for a stakeholder meeting, and includes the proposed plan in the information repository and the administrative record. DoD prepares a written summary of all significant comments, criticisms, new or relevant information submitted during the public comment period along with the DoD response to the issues raised.
- Decision Document. The decision document presents the cleanup action, the applicable legal authority for the response, and the hazards and unacceptable risks necessitating the response.

DERP requires that "an adequate opportunity for timely review and comment be afforded to the [EPA] Administrator and to appropriate State and local officials after making a proposal [for necessary response actions] and before undertaking an activity or action...." (see 10 U.S.C. 2705(b)). For all cleanups, the State and DoD use technical experts specific to the constituents of concern when discussing the appropriate cleanup. This includes State experts on radioactive materials, who have often attended in-depth training by the NRC in

Agreement States. In addition, DoD radiological experts and specially qualified contractors are involved in response actions for radionuclides.

c. *Incorporation of NRC decommissioning standards into existing cleanup process where appropriate.* DoD suggests that NRC work through the Interagency Steering Committee for Radiological Standards to develop guidance to clarify appropriate consideration of promulgated NRC cleanup standards in the existing DoD cleanup processes for future radium-226 cleanups. One option for DoD and NRC to explore is including clarification on this issue in the Multi-Agency Radiological Site Investigation Manual that is currently being updated.

Section 121(d) of CERCLA and the NCP (40 CFR Part 300) require cleanup actions to be protective of human health and the environment (in general meaning risk-based standards based on site-specific exposures), and comply with ARARs. NRC radium dose limitations for decommissioning should be evaluated to determine if they qualify as "relevant and appropriate requirements" on a site-specific basis. An interagency guidance would clarify appropriate consideration of promulgated NRC standards into all radium remediation conducted by DoD under DERP. The scenario posed by DoD sites that may contain radium is similar to the situation reviewed by the NRC in 1999 concerning NRC jurisdiction over U.S. Army Corps of Engineers (USACE) cleanup at the Department of Energy's (DOE's) Formerly Utilized Sites Remedial Action Program (FUSRAP); the Director's Decision was to refrain from regulating these USACE cleanups. This decision was based upon the specific statutory authority provided to the USACE under FUSRAP that required the cleanup activities to be subject to CERCLA, that CERCLA waives permit requirements for onsite activities, that certain substantive NRC regulations are ARARs, and that Congress had not given clear direction to NRC to oversee FUSRAP cleanups. The Director concluded that "in these circumstances, we are disinclined to read our statutory authority expansively, and to commit scarce NRC resources to establish and maintain a regulatory program in an area where, under congressional direction, a sister federal agency already is at work and has committed itself to following appropriate safety and environmental standards." (Conclusion, NRC Director's Decision, March 26, 1999). All of these criteria equally apply to DoD cleanups in its DERP authority, which specifically requires implementation of CERCLA. The Commission should adopt the same March 26, 1999 conclusion regarding DoD cleanups.

2. **Jurisdictional Issues.** DoD has several concerns with the change in jurisdiction proposed by NRC. DoD believes the proposal is not consistent with the EPAct statutory requirements and is a significant change to the NRC's 2007 statutory interpretation concerning radium-226.

a. *Operational ranges.* DoD is particularly concerned that NRC is proposing to expand its radium-226 jurisdiction onto operational military ranges. The NRC proposal states that it would extend its radium-226 jurisdiction to "associated contamination on firing ranges." 76 Fed. Reg. at 40283 (July 8, 2011). While targets placed on military ranges years ago may include vehicles with radium-226 dials or gauges, firing ranges are the type of "military operations" that should continue to be clearly excluded from the scope of NRC jurisdiction. Even under the NRC's July 2011 proposal, radium use and any associated contamination on military ranges would clearly qualify as "traditional military operations" which are excluded from coverage. Starting in the mid-1990s, DoD policies have required removal of hazardous or radioactive materials, including radium-226, from targets prior to placing them on the

range. Moreover, DoD explosive safety standards at DoD Directive 6055.9-STD limit access to target areas, and thus there is limited exposure to areas on an operational range that may contain radium-226. Additionally, the following DoD policies further define DoD's safety and environmental practices on operational ranges: DoDD 3200.15 Sustainment of Ranges and Operating Areas; DoDI 3200.16 Operational Range Clearance and DoDI 4715.11 Environmental and Explosive Safety Management on Operational Ranges within the United States. In addition, DoD has an Operational Range Assessment Program (DoDI 4715.14) to evaluate if constituents are migrating off the range. If off-range contamination issues are identified, they are addressed under CERCLA, the principal federal cleanup law. Furthermore, once the military range is closed, it is addressed under CERCLA. DoD is concerned with operational ranges being included in this NRC proposal as DoD is already experiencing conflicts in DoD's training mission with another radionuclide, depleted uranium. The NRC restrictions on depleted uranium are limiting DoD's current use of an operational range for mission essential live-fire training due to the presence of Depleted Uranium from past use within controlled impact areas on that range. Training and testing on operational military ranges are "military operations" and should continue to be clearly excluded from the scope of NRC jurisdiction.

DoD maintains strict control over access and use of land based military ranges. Typically these ranges have an impact area surrounded by a buffer zone (open land that provides for an extra safety margin), with targets that may have contained radium-226 only in the impact area. Items that are removed are the result of official and highly controlled clearance activities that rarely involve any intrusive activities due to the potential explosion hazard. These removed materials must undergo screening for unexploded ordnance and radioactive materials to prevent unnecessary hazards to personnel. As a result of these location, design and use conditions, a military range creates a large distance barrier between any small amounts of residual radium that may be present in some impact areas and military personnel or other persons. Members of the general public are kept at great distance from any military range impact area and not allowed access to these restricted zones.

For example, all Army land ranges are located in remote areas where there are as few habited areas in the vicinity as possible, with buffer areas included in the overall range design. Even with development encroaching on installations, the Army has established a program in cooperation with local governments to purchase or impose easements and restrictive zoning on areas where development threatens to reduce suitable buffer areas around installation boundaries. Because of the inherent danger on Army operational ranges from training with live ammunition and explosive safety hazards from unexploded ordnance, the Army imposes and aggressively enforces strict controls on access in the range complex and in particular to live-fire impact areas. Army Regulation (AR) 350-19 "Army Sustainable Range Program", and AR 385-63 "Range Safety", and DA Pamphlet 385-64 "Ammunition and Explosives Safety Standards" outline strict policy related to access into both live-fire and non-fire impact areas. AR 350-19 requires Garrison Commanders to establish and implement procedures to control access into impact areas and restrict that access to essential activities such as maintenance of targetry. All access is coordinated in advance with the "controlling range officer" and is strictly monitored. Installations are required to assess the risk of unauthorized access into impact areas and range complexes and put into place procedures to prevent unauthorized entry. Additionally, AR 35-19 requires Garrison Commanders to establish proactive education programs for all installation personnel,

families, and the public related to the dangers of unexploded ordnance (UXO) and trespassing into impact areas. The Army instituted a program in the mid-1980's to remove radioactive materials including radium dials from all targets then located on operational ranges, and thereafter removed all such materials from equipment before placing it on a range for use as a target.

The other Military Components have similar policies and control over access to their operational ranges.

b. *Statutory interpretation of EPAct's radium-226 amendment.* In 2005, Congress in the EPAct amended the Atomic Energy Act's (AEA) definition of "byproduct material" to include a limited reference to radium-226: "any discrete source of radium-226 that is produced ... for use for a commercial, medical, or research activity." As required by the EPAct, the NRC issued a final regulation in 2007 (72 Federal Register 55864 (Oct 1, 2007)) that interpreted this expanded definition. The NRC Statement of Consideration accompanying the final regulation explained that the EPAct radium amendment did not apply to military uses, and thus distinguished military activities and uses from "use for a commercial, medical, or research activity" covered in the EPAct:

"Notwithstanding that a discrete source of radium-226 may have originated from a commercial supplier, the Commission has determined that discrete sources of *radium-226 still in control of the military do not constitute 'commercial use' under the EPAct, and are therefore, outside the Commission's jurisdiction*. Defining 'commercial use' to include all material supplied to the military from a commercial supplier would result in virtually all military use of this material to be 'commercial use.' This would vitiate any distinction the EPAct intended to make for military use, as opposed to commercial use, by excluding military use from its coverage." Id. at 55867 (emphasis added).

The NRC went on to explain in 2007 that if radium-226 *"is intended for use in military operations, it is excluded from the coverage of this rule* notwithstanding the fact that it was originally produced by a commercial supplier." Id. (emphasis added). The NRC also explained that "military operations" *includes "material still under the control of the military, i.e., in storage, or material that may be subject to* decontamination and *disposal."* Id. (emphasis added). This 2007 NRC statutory interpretation asserted NRC jurisdiction over radium-226 used by the military in medical or research activities, or in a manner similar to a commercial activity (e.g., museum).

It appears the NRC is proposing in the RIS to reverse its 2007 NRC statutory interpretation by now considering a policy to "clarify which discrete sources of radium-226 under military control are subject to NRC regulations as byproduct material." 76 Fed. Reg. 40282 (July 8, 2011). The NRC proposes that "[w]hen 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." *Id.* at 40284. *Thus NRC jurisdiction over radium 226 is now proposed to extend to:*

- Confirmed contamination resulting from the military's prior use of radium-226, including in soil, groundwater, firing ranges, and landfills. Contamination can be on

active military installations or Base Realignment and Closure (BRAC) lands that are planned for transfer out of DoD.

- Military equipment/items in storage that contain radium- 226, are not currently in use, and are not intended to be used in the future in traditional military operations.

DoD does not view this NRC proposed change by policy in statutory interpretation as a "clarification" but instead a contradiction and a significant change to the NRC's 2007 interpretation. DoD does not view the proposal as consistent with the plain meaning of the words used in the 2005 EPAct amendment. The AEA, as amended by the EPAct, only covers radium-226 "use for a commercial, medical, or research activity." DoD historically used radium-226 for its luminescence qualities in gauges and dials on military aircraft, ships, and vehicles. DoD stopped using radium-226 in approximately 1970. Radium-226 stored or disposed on a military installation was used for a military activity in these dials. In those limited circumstances where radium-226 has been used by the military in a medical or research activity, it has subjected those uses to NRC jurisdiction since 2007.

NRC proposes that when radium-226 "is no longer being used for traditional military operations...it would revert to its initial classification as byproduct material" that "originated from a commercial supplier." 76 Fed. Reg. at 40284. That interpretation is not supported by the EPAct. The AEA, as amended by the EPAct, does not define radium-226 that originated from a commercial supplier as byproduct material. Rather it says byproduct material means "radium-226 that is produced...for use for a commercial, medical, or research activity." There is a significant difference between "use for a commercial activity" and "originated from a commercial supplier." Since 1946, the AEA has clearly distinguished between "commercial" and "military" use. See, for example, section 7 of the 1946 AEA ("Whenever in its opinion any industrial, *commercial*, or other *nonmilitary use*..."). NRC's proposal would blur this longstanding distinction.

NRC's proposed interpretation also appears inconsistent with the legislative history on this EPAct radium amendment. The legislative history focuses on NRC regulation of radium use at commercial, medical, or research activities because "radium...could be used in a dirty bomb and therefore should be regulated by NRC." 151 Cong. Rec. S9335-01. Due to the security procedures in place to access DoD installations these security concerns are not present when DoD has radioactive material within its control

c. *Retroactive application*. The NRC proposal provides the Commission with jurisdiction over confirmed contamination resulting from the military's prior use of radium-226 approximately 40 years ago; use that occurred prior to the 2005 EPAct amendment and the effective date of the 2007 regulation on radium. When the NRC issued the final radium-226 regulation in 2007, it applied it prospectively, not retroactively. 72 Federal Register 55864 (Oct 1, 2007) ("This final rule is effective on November 30, 2007"). AEA regulations are typically applied only prospectively (e.g., 10 CFR 30.18-those acquiring byproduct material before Sept 25, 1971 [effective date of regulation] are exempt from license requirements). This is of course consistent with the general presumption against retroactive application of statutes unless the legislature clearly manifests a contrary intent. *Landgraf v. USI Film Products*, 511 U.S. 244, 265 (1994); *United States v. Security Industrial Bank*, 459 U.S. 70, 79-80, 74 L. Ed. 2d 235, 103 S. Ct. 407 (1982) ("The first rule of construction is that legislation must be considered as addressed to the future, not to the past.") (quoting *Union Pac. R. Co.*

v. Laramie Stock Yards Co., 231 U.S. 190, 199, 58 L. Ed. 179, 34 S. Ct. 101 (1913)). Thus, unless the language of a statute or its legislative history indicates otherwise, a statute is to be applied prospectively. *People of the State of Cal. ex rel. Dept. of Transp. v. United States*, 27 Fed. Cl. 130, 138 (1992).

The EPAct radium amendment added the following to the definition of "byproduct material" in section 11(e)(3) of the AEA: "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." The phrase "produced, extracted...before, on, or after August 8, 2005" does not support a retroactive application to NRC jurisdiction over "use for a commercial, medical, or research activity." The "before, on, or after" 2005 date modifies production or extraction, not *use* of the radium. As the NRC explained in 2007, "[m]any of these products have not been made for some time, so some of the provisions in this rule are limited to items manufactured in the past, *which may still be in use or in storage*." 72 Fed. Reg. at 55871 (Oct. 1, 2007), emphasis added; see also *Id.* at 55887. The NRC also stated "the NRC was given regulatory authority over the new byproduct material when the EPAct became effective." Id. at 55910. That NRC jurisdiction does not extend to use prior to the EPAct of 2005 is supported by section 81 of the AEA which states that NRC jurisdiction over byproduct material extends to prospective use only ("The Commission is authorized to issue general or specific licenses to applicants *seeking to use* byproduct material for research or development purposes, for medical therapy, industrial uses...."). 42 U.S.C. 2014 (e)(3), emphasis added.

The 2007 regulation specifically states that its requirements *"shall apply to Government agencies...on November 30, 2007"* for a Government agency that "possesses *and uses*" radium-226 and a license amendment is required. 10 CFR 30.3(b). It also states that the requirements "shall apply to all persons, other than those included in paragraph (b)(1) of this section, on August 8, 2009" who "possess *and use*" radium-226. 10 CFR 30.3(c), emphasis added. In 2000, an NRC Director's Decision was issued on a similar situation involving whether another section of the "byproduct material" definition should be retroactively or prospectively applied. *In the Matter of Envirocare of Utah and Snake River Alliance*, DD-00-06, Dec. 13, 2000. While the NRC Director's Decision concedes it was a "difficult question of statutory construction," he concludes that the focus of Section 83 of the AEA "is on facilities 'licensed' on or after UMTRCA's effective date" in 1978. *Id.* at 7-8. Thus, the Director states that "While the NRC does not have authority over pre-UMTRCA mill tailings from FUSRAP sites, we believe that the Resource Conservation and Recovery Act (RCRA) and state permitted facilities that the [Army] Corps is using for disposal of this material provide sufficient health and safety protection for both workers and the public." *Id.* at 22.

The retroactivity issue applies even though the NRC has indicated it will only extend its jurisdiction to ongoing or future cleanups involving radium-226. Because DoD can demonstrate that radium-226 material disposed in a military landfill was disposed prior to the November 2007 effective date of the regulation, DoD is not 'possessing and using' this radium-226 after 2007. The military appears to be treated differently from private parties in this respect. NRC is not seeking jurisdiction over ongoing or future private party cleanups involving historic disposals of radium-226 or municipal landfills that likely contain radium-226 materials if they were operated prior to 1980. Radium-226 was prevalently used in

commercial air, marine, and land vehicles as well as time pieces, gauges, and even consumer products at one time, but the NRC is not retroactively asserting jurisdiction over these historic disposal practices that may involve cleanup actions. In the NRC's response to comments on the 2007 rule, it noted "the NRC does not intend to require nonlicensed owners of properties that may be contaminated with radium-226 to obtain licenses." 72 Fed. Reg. at 55902 (Oct 1, 2007). Instead, only if the site "presents a significant threat to the public health and safety" then the NRC "*may* order the owner to obtain a license and to perform decommissioning of the site. In addition, the NRC may seek assistance from EPA to consider listing the site on EPA's National Priority List and cleanup up the site under the CERCLA or Superfund Program." *Id.* The NRC stated: "while the NRC will not hold anyone accountable for past disposals in a landfill, these persons might be accountable under EPA's Superfund regulations." Id. at 55891. As described above, DoD already follows CERCLA and its regulations for all radium-226 cleanups.

The EPAct also states that it does not affect the authority of any entity to dispose of radium-226 at a disposal facility "in accordance with any Federal or State solid or hazardous waste law," including RCRA. 42 U.S.C. 2111b.(2). In explaining the 2007 rule, the NRC stated that the "EPAct allows these disposal sites to continue with their current practice. Therefore, nothing would change for these disposal sites under the new regulations." Disposal sites on military installations are in compliance with Federal or State solid or hazardous waste laws, and should thus also be unaffected by the radium amendments. CERCLA and RCRA are the governing statutes for cleanup up contamination stemming from historical practices. As described earlier, these regulations provide authoritative oversight of cleanup that includes radium-226. Thus the use of existing cleanup laws and processes, rather than NRC jurisdiction, avoids these issues.

d. *Regulatory change may be required.* The EPAct required the NRC to issue final regulations concerning the amendments to the "byproduct material" definition. (See section 651(4) of Public Law 109-58, "Not later than 18 months after the date of enactment of this Act, the Commission, after consultation with States and other stakeholders, shall issue final regulations establishing such requirements as the Commission determines to be necessary to carry out this section and the amendments made by this section.") The NRC complied with this requirement by issuing the final regulations in 2007. Now, however, the NRC is proposing to change its statutory interpretation of the EPAct amendments through a non-regulatory process (i.e., a policy or guidance issuance called a "Regulatory Issue Summary" (RIS)). This appears to be inconsistent with the direction from Congress to issue regulations implementing the EPAct amendments, and may also be inconsistent with the Administrative Procedures Act, and requirements to conduct a cost-benefit analysis.

A guidance or policy document, such as the RIS, is different than a "rulemaking" under the Administrative Procedures Act. While the NRC has published the proposed RIS in the Federal Register and provided an opportunity for public comments, the RIS will not be codified in the Code of Federal Regulations (CFR), is not binding, and does not explain how it integrates with existing NRC regulatory requirements in the CFR. Several NRC rulemakings that are incorporated into the CFR have been upheld under the Administrative Procedures Act. E.g., *Morris v. United States NRC*, 598 F.3d 677 (10th Cir. 2010). However, courts have held that NRC guidance and policy statements are not binding "rulemaking" under the Administrative Procedures Act, even where these policies or guidance have been published

in the Federal Register and underwent a public comment period. E.g., *New Jersey v. United States NRC*, 526 F.3d 98 (3d Cir. 2008); *Limerick Ecology Action, Inc. v. United States NRC* (3d. Cir. 1989). Additionally, other requirements apply to a rulemaking that do not apply to policy or guidance, such as the Congressional Review Act. The Congressional Review Act applies to a "major rule," which includes "a major increase in costs...for...Federal government agencies." 5 U.S.C. 804. Under this law, all federal agencies are to provide "a complete copy of the cost-benefit analysis of the rule, if any," and Congress can overrule a regulation by passage of a joint resolution. 5 U.S.C. 801.

At a minimum, a hearing under the AEA may be required because the proposed RIS appears to modify existing NRC regulations and possibly conflict with existing regulations. For example, the proposed RIS does not explain how it is consistent with the definitions of "byproduct material" or "discrete source," why the decommissioning exemption in 10 CFR 31.12(b) would not apply, or if the general license in 10 CFR 31.12(a)(3) would now apply to the military, even though the NRC previously interpreted this as only applying to "former military use vehicles no longer under the control of the military." 72 Fed. Reg. at 55891 (Oct. 1, 2007). The current regulations promulgated in 2007, in effect, excluded radium-226 associated with military operations from regulation under the EPAct. This proposal to extend regulatory jurisdiction over radium-226 to essentially all current military possession, storage, and cleanup of radium-226 is an expansion of regulatory jurisdiction through a policy. It conflicts with statements made in the 2007 rule promulgation that "military activities" would not be regulated.

One court analyzed what is required when the NRC changes policy, and determined that a hearing was required at a minimum, as well as a well-reasoned explanation based on new information so the NRC change in policy is not viewed as arbitrary and capricious:

"The Commission adhered to this policy for almost five years. Then, rather suddenly, the Commission circulated two internal staff memos that completely reversed this settled policy...The memos did not set forth any new facts, fresh information, or changed circumstances which would counsel the shift. Nor did they provide any legal analysis of how the new policy comported with, or at least did not conflict with, existing agency regulations...Moreover, the NRC's actions are inconsistent with the plain terms of the AEA, the NRC's enabling statute, which provide that in any proceeding for the issuance or modification of rules and regulations dealing with the activities of licensees,...the Commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding... 42 U.S.C. § 2239(a)(1)(A)." *Citizens Awareness Network v. United States Nuclear Regulatory Commission*, 59 F.3d 284, 291-292 (1st. Cir. 1995).

3. **A NRC license should not be required.** NRC's proposal raises significant licensing issues. In addition to the jurisdictional and cleanup issues raised above, the NRC proposal does not adequately consider the permit exclusion under CERCLA, the consequences to transfers of military property, costs, and technical implementation issues. The disadvantages involved with increased NRC licensing requirements do not appear to be outweighed by any measurable benefit in protection of human health. DoD thus recommends that NRC not pursue NRC licensing related to this proposal.

    a. *CERCLA permit exclusion*. Section 121(e) of CERCLA states that "No 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." The CERCLA 121(e) permit waiver applies to all phases of an on-site response, including the long-term operational and maintenance or monitoring phases of a capping remedy for a disposal site. Just as no permit is required under RCRA or Toxic Substances Control Act (TSCA) for disposal areas containing waste otherwise requiring a permit under RCRA or TSCA, no license is required for EPAct regulated radium-226 that remains in place as part of a CERCLA response action. It is thus inconsistent with this CERCLA statutory exemption for NRC to pursue a NRC license that would include decommissioning requirements for radium-226 cleanups. Two NRC Director's Decisions have already addressed the issue of a NRC license and the CERCLA permit exclusion, and both held that a NRC license was waived by Congress. These conclusions should likewise be adopted by the Commission in this situation. In a March 1999 NRC Director's Decision concerning USACE FUSRAP response actions, the NRC concluded that the CERCLA 121(e)(1) provision "*waives any NRC license requirements that would apply to the Corps activities at FUSRAP sites conducted pursuant to CERCLA.*" This NRC Director's Decision includes a thorough discussion of CERCLA's permit exclusion and concluded that "Congress has made it clear that the Corps is to undertake FUSRAP cleanup pursuant to CERCLA which waives permit requirements for onsite activities." These conclusions were repeated in a December 2000 NRC Director's Decision which stated "[u]nder CERCLA, the Federal lead agency is exempt from licensing and permitting regulations for work done onsite, but not from the substantive requirement of any applicable or relevant and appropriate [requirement]." Under CERCLA, substantive requirements of the NRC decommissioning regulations may be determined to be ARARs based on a site-specific analysis. CERCLA's implementing regulation, the NCP, incorporates the requirements of CERCLA 121(e) at 40 CFR 300.400(e). In explaining the broad effect of the permit exclusion, EPA stated:

"Moreover, Congress...specifically provided in section 121(e) that federal and state permits would not be required for such on-site response actions. These subsections reflect Congress' judgment that CERCLA actions should not be delayed by time-consuming and duplicative administrative requirements such as permitting, although the remedies should achieve the substantive standards of applicable or relevant and appropriate laws...EPA's approach is wholly consistent with the overall goal of the Superfund program to achieve expeditious cleanups, and reflects an understanding of the uniqueness of the CERCLA program which directly impacts more than one medium (and thus overlaps with a number of other regulatory and statutory programs). Accordingly, it would be inappropriate to formally subject CERCLA response actions to the multitude of administrative requirements of other federal and state offices and agencies." 55 Fed. Reg. at 8756 (March 8, 1990). In addition, the NCP recognizes that the permit exclusion applies to all federal agency CERCLA response actions, not only to EPA led response actions. See 40 CFR 300.400(e)(1), referring generally to response actions conducted pursuant to CERCLA Sections 104, 106, 120, 121 and 122, most of which have been delegated to DoD in Executive Order 12580, Jan 23, 1987, para. 2 and Executive Order 13016, Aug. 28, 1996, for response actions on DoD installations.

The proposed RIS cannot be viewed as only proposing a "possession" license rather than license for cleanup action, such that the CERCLA permit exclusion would not applicable. The proposed RIS specifically states it proposes to apply NRC jurisdiction to cleanup actions. This is inconsistent with CERCLA's permit exclusion, prior NRC decisions, and is also inconsistent with CERCLA's definition of "federally permitted release" which specifically includes "any

release of...byproduct material, as those terms are defined in the Atomic Energy Act of 1954...in compliance with a legally enforceable license, permit, regulation, or order issued pursuant to the Atomic Energy Act of 1954." 42 U.S.C. 9601(10)(K). Thus Congress specifically contemplated a NRC license as a federal permit, along with listing other laws in this definition, such as RCRA and the TSCA. Additionally, all NRC licenses require decommissioning upon termination, and "decommission" is defined at 10 CFR 30.4 as including to "reduce residual radioactivity to a level that permits (1) release of the property for unrestricted use...or (2) release of the property under restricted conditions..." The scope of activity covered by the broad words "reduce residual radioactivity" in this definition substantially overlaps with the cleanup activity covered by the CERCLA requirement to protect human health and the environment, as well as the definition of "remedial action" in section 101(24) of CERCLA. The legislative history of the Superfund Amendments and Reauthorization Act of 1986, which added CERCLA 121(e), also supports a broad application. It shows that an earlier version of the Bill would have required permits to be obtained for on-site actions under certain specified laws. This requirement was eliminated in the conference committee in favor of a blanket waiver. Additionally, since the EPAct of 2005 was clearly passed after Congress had been aware of the NRC's FUSRAP position, and Congress has not stepped in to override these NRC Director's Decisions or the CERCLA permit exclusion, the NRC should not attempt to limit the broad application of the CERCLA's permit exclusion.

b. *Costs/affects to transfers.* A NRC license requirement imposed by the proposed RIS would interfere with DoD property transfer authorities, including authorities under BRAC, and would significantly increase the Army's licensing costs. While the Air Force and Navy have Master Material Licenses, the Army does not. So not only is NRC proposing amendments to the Air Force and Navy Master Material Licenses, but under the NRC proposal the Army would have to obtain nearly 100 different licenses for radium-226 (a license for each location of radium-226 cleanup and storage). It is estimated that applying for and obtaining a NRC license could take two years or more.

   For the Army, a rough estimate of the additional procedural costs of NRC licensing and decommissioning, including required standard plans and extra sampling if this proposal is implemented, is over $20 million. In evaluating the RIS, the NRC is required to consider these and all other Federal agency costs under 5 U.S.C. 801, et seq., the Congressional Review Act as discussed above. The cost estimate for this proposal must consider all the added costs of NRC regulatory activities, procedures and reviews that would occur if the proposed RIS is implemented, including the added costs to DoD as well as the NRC. The cost estimate must therefore include the costs that NRC may seek to impose on DoD for its activities (e.g., costs to DoD in contributing to NRC's NEPA document for DoD licenses), as these are a compounding federal cost that DoD may be required to bear.

c. *NEPA implementation issues.* DoD believes that the NRC has not sufficiently considered the National Environmental and Policy Act (NEPA) and its application to NRC licensing. CERCLA does not require that NEPA documentation be prepared for cleanup action because the CERCLA process, in essence, is the "functional equivalent" of NEPA. It is DoD's understanding that the NRC requires NEPA documentation be prepared for decommissioning plans (see NUREG-1748; *Citizens Awareness Network v. United States Nuclear Regulatory Commission,* 59 F.3d 284, 292 (1st Cir. 1995)("When approving a

licensee's request to decommission, the NRC prepares either a supplemental EIS for the post-operating license stage, or an EA updating the prior environmental review for the facility, as it deems appropriate. 10 C.F.R. § 51.95(b)"). Unnecessarily and indirectly applying NEPA to DoD cleanup actions through a license/decommissioning process would add significant procedural complications, delays, and costs to the CERCLA cleanup and BRAC real property conveyance processes for sites that already have implemented active public involvement processes under DoD regulations (see, e.g., 32 CFR Part 202, Restoration Advisory Boards.)

4. ***Storage & decontamination* of radium-226.** The NRC proposal also suggests that NRC jurisdiction should extend to military equipment decontamination activities and items in storage that contain radium-226 that are not currently in use and are not intended to be used in the future in traditional military operations. When the NRC interpreted the EPAct in 2007, it specifically stated that "the Commission has determined that discrete sources of radium-226 *still in control of the military do not constitute 'commercial use'* under the EPAct, and are therefore, outside the Commission's jurisdiction... In addition, 'military operational' material includes material still under the control of the military, i.e., *in storage*, or *material that may be subject to decontamination* and disposal." 72 Fed. Reg. 55864, 55867 (Oct 1, 2007, emphasis added). The July 8, 2011 NRC proposal directly contradicts this 2007 NRC interpretation. DoD maintains military materiel in long-term storage that is not currently in use or intended with any certainty to be used, but is held in reserve in case of critical shortages or national emergency. This may include older military materiel that is still in workable condition that contains dials or gauges. This military materiel is retained for potential military operational purposes, in military control, and should not be subject to a licensing requirement that applies to commercial uses of equipment containing radium-226. In addition, NRC has not explained why additional NRC oversight is needed on military installations. DoD maintains strict control over all radiological sources, and existing NRC requirements cover any transfer of radium-226 to a non-military authorized user or disposal site. DoD rules prohibit transfer outside of DoD of military equipment containing radioactive components except to properly licensed users or permitted disposal facilities, and stringent processes ensure this control is maintained. DoD Manual 4160.21-M, *Defense Materiel Disposition Manual,* August 1997. DoD recommends that the existing application of NRC jurisdiction arise at the point where radium-226 is transferred out of DoD's possession for disposal. The existing requirements triggered by transfer out of DoD control to an authorized user or licensed or permitted disposal facility are sufficient.

5. **Additional implementation issues.** In addition to the above concerns, DoD has several implementation issues that would need to be addressed prior to NRC finalizing any policy. The NRC proposal emphasizes that several implementation issues would need to be worked out. Rather than NRC developing a "Radium Implementation Plan" after a final policy is issued, DoD recommends that all implementation issues be addressed prior to finalizing any policy, and recommends interagency guidance be issued. Examples of implementation issues include how would NRC authorities in Agreement States be affected? How would existing Master Material Licenses be affected? How would the Army, who does not have a Master Material License, be affected? How would existing decontamination processes be affected? How would the Memorandum of Understanding between NRC and the U.S. EPA be affected? How would the existing general license regulatory provisions on self-luminous radium apply (10 CFR 31.12)? How would the definition of "discrete source" be applied? How much radium-226 would trigger a requirement for a "possession" license?