JANUARY 9, 2001

Doug Rokke, Ph.D.
2737 N. 1200 East
Rantoul, Illinois 61866

Dear Dr. Rokke:

This letter responds to the petition you filed by electronic mail dated June 1, 2000, with the U.S. Nuclear Regulatory Commission (NRC), pursuant to Section 2.206 of Title 10 of the *Code of Federal Regulations* (10 CFR 2.206). In your petition, you requested that the NRC hold a hearing to consider "the revocation of the master DU (depleted uranium) license for the U.S. Department of Defense and all services, implementation of substantial fines, and consideration of personal criminal liability."

On September 8, 2000, the NRC staff acknowledged receiving your petition, and stated that pursuant to 10 CFR 2.206 your petition was being referred to me for action, and that it would be acted upon within a reasonable time.

The NRC staff requested the U.S. Department of the Air Force, the U.S. Department of the Army, and the U.S. Department of the Navy to respond to the petition. The licensees responded on October 30, 2000, and the information provided was considered by the staff in its evaluation of the petition.

As discussed in the enclosed Director's Decision, I have determined that your petition should be denied.

A copy of the Director's Decision (DD-01-01) will be filed with the Secretary of the Commission for the Commission to review in accordance with 10 CFR 2.206(c). As provided by this regulation, this decision will constitute the final action of the Commission 25 days after the date of the decision unless the Commission, on its own motion, institutes a review of this decision within that time. The documents cited in the enclosed decision are available for inspection at the Commission's Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland, and from the ADAMS Public Library component on the NRC's Web site, *http://www.nrc.gov* (the Public Electronic Reading Room).

I have also enclosed a copy of the notice of “Issuance of the Director’s Decision Under 10 CFR 2.206" that has been filed with the Office of the *Federal Register* for publication.

I acknowledge your effort in bringing your safety concerns to the attention of the NRC. Please contact Roberto J. Torres at 301-415-8112 to discuss any questions related to this petition.

Sincerely,

/RA/
William F. Kane, Director
Office of Nuclear Material
Safety and Safeguards

Docket Nos. 030-28641, 030-29462,
& 040-08767

Enclosures: Director’s Decision 01-01
Federal Register Notice

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United States of America
Nuclear Regulatory Commission
Office of Nuclear Material Safety and Safeguards
William F. Kane, Director

In the Matter of

U.S. DEPARTMENT OF DEFENSE
USERS OF DEPLETED URANIUM

Docket No. 030-28641
License No. 42-23539-01AF
Department of the Air Force

Docket No. 030-29462
License No. 45-23645-01NA
Department of the Navy

Docket No. 040-08767
License No. SUC-1380
Department of the Army

(10 CFR 2.206)

DIRECTOR'S DECISION UNDER 10 CFR 2.206

I. INTRODUCTION

By electronic mail dated June 1, 2000, Doug Rokke, Ph.D. (Petitioner), requested that the U.S. Nuclear Regulatory Commission (NRC) hold a hearing to consider "...the revocation of the master DU (depleted uranium) license for the U.S. Department of Defense and all services, implementation of substantial fines, and consideration of personal criminal liability." As the basis for this request, the Petitioner stated that "...the continuing deliberate use of DU munitions during battle and during peacetime is resulting in serious health and environmental consequences." The Petitioner also requested "...formal protection under the "whistle blower" statutes for himself and all others who are trying to obtain medical care for all DU casualties and completion of environmental remediation of all DU contamination." The NRC staff accepted this electronic mail as a petition pursuant to section 2.206 of Title 10 of the U.S. Code of Federal Regulations (10 CFR 2.206). The petition may be viewed in the NRC Agencywide Document Access and Management System (ADAMS), under accession number ML003736826.

NRC contacted the Petitioner via telephone on July 25, 2000. During that conversation, the NRC staff explained the 10 CFR 2.206 process to the Petitioner, and offered him an opportunity to make a personal presentation of his concerns to the NRC staff. This telephone conversation was confirmed by a followup letter dated August 4, 2000.

The Petitioner did not respond to the letter; therefore NRC informed him, by letter dated August 24, 2000, that the petition would be evaluated based on the information he had previously submitted.

II. BACKGROUND

The Petitioner stated that he served as a health physicist for the DU team in Operation Desert Storm (ODS) and subsequently as the Department of Defense (DOD)/Army Depleted Uranium Project Director. The Petitioner stated that the recommendations made by the DU team, during ODS, regarding contamination control and medical care, were not followed by DOD. Also with respect to ODS, the Petitioner asserts that DOD failed to satisfy NRC requirements for training and notices to workers, radiation protection programs, and dose assessments for those exposed to DU. The Petitioner stated that he was exposed to DU during ODS, and again in 1994 during the conduct of an experiment at the Nevada Test Site, and alleged that he did not receive a prompt dose assessment for this exposure. The Petitioner stated that he became sick from DU exposure and that DOD subsequently denied him medical care. The Petitioner also provided general comments about the adverse environmental and health effects of DU.

The NRC has granted licenses to the U.S. Department of the Army (U.S. Army), the U.S. Department of the Navy (U.S. Navy), and the U.S. Department of the Air Force (U.S. Air Force) authorizing, in part, the possession and use of source nuclear material, including DU contained in munitions and armor, in U.S. territories. By letters dated September 8, 2000, the NRC staff requested the licensees to respond to the petition. All three licensees responded and the information provided was considered by the staff in its evaluation of the petition. The licensees' responses can be found in the NRC ADAMS under accession numbers ML003767582 (U.S. Air Force); ML003767591 (U.S. Army); ML003769942 (U.S. Army); and ML003767666 (U.S. Navy).

The U. S. Army stated that its regulated activities involving DU have been conducted safely and in compliance with NRC requirements, provided background documentation, and noted that some of the Petitioner's concerns involving ODS are outside NRC jurisdiction. With respect to personnel who were exposed to DU during ODS, the Army stated that they had received appropriate medical followup. The U. S. Air Force stated that it has implemented appropriate radiation protection programs for its DU activities, including appropriate training, and noted that some of the Petitioner's concerns are outside the scope of NRC-licensed activities. The U. S. Navy provided documentation related to DU activities in Vieques, Puerto Rico, and stated that the Navy has provided appropriate personnel training related to DU activities.

III. DISCUSSION

A) Jurisdictional Limitations: Military Operations, Department of Energy Activities, and Medical Treatment.

The Petitioner asserted that the military use of DU has caused widespread environmental contamination and serious health effects to military and civilian personnel. The Petitioner

specifically referenced the use of DU by the U.S. Armed Forces in ODS, Serbia, Kosovo, Okinawa, and Vieques.

Under the Atomic Energy Act of 1954, as amended,[1] NRC regulates most uses of source material, including DU, in the U.S. and U.S. territories. However, NRC does not regulate most of the activities conducted by the U.S. Department of Energy (DOE),[2] including, for example, testing performed at DOE test sites, nor battlefield and direct support activities thereof involving source material by the armed forces outside of U.S. territories. Therefore, NRC did not regulate the testing performed at DOE's Nevada Test Site, nor did it regulate the military use of DU munitions in ODS, Serbia, Okinawa, or Kosovo. NRC cannot grant the petition or take any other regulatory action with respect to military activities which it does not regulate.

Furthermore, with respect to the Petitioner's concerns related to the medical care and treatment of those who served in ODS, it is the NRC staff's understanding that the DOD Office of the Special Assistant for Gulf War Illnesses is the appropriate contact for these matters.

B) Event in Vieques, Puerto Rico, under NRC jurisdiction.

The Petitioner asserted that the U.S. Navy had caused widespread DU contamination on the island of Vieques, Puerto Rico. The Petitioner further asserted that there were documented adverse health effects associated with the Vieques event, which does fall under NRC jurisdiction.

On February 19, 1999, two U.S. Marine Corps aircraft expended 263 ammunition rounds containing DU on the Live Impact Area (LIA), Atlantic Fleet Weapons Training Facility on the island of Vieques. The LIA is a 2.5 square mile (6.5 square kilometer) live-fire training range used by the Navy and Marine Corps for aircraft, ship, and amphibious assault exercises. The area where the DU munitions were fired was isolated to a portion of the LIA called the North Convoy Site. The U.S. Navy's NRC Master Materials License, which regulates such activities, does not authorize the firing of DU munitions at this range. The incident was identified on March 5, 1999, when a Marine Corps Ordnance Officer reviewed a report of the expended DU ammunition and recognized that the ammunition can only be used during combat. NRC was notified of the incident by the Naval Radiation Safety Committee (NRSC) Executive Secretary that same day.

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[1]NRC was created as an independent agency by the Energy Reorganization Act of 1974, which abolished the Atomic Energy Commission (AEC), and moved the AEC's regulatory function to NRC.

[2]Except where DOE facilities and activities are subject to the licensing and related regulatory authority of the Commission under section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244); the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3021); the Nuclear Waste Policy Act of 1982 (96 Stat. 2201); and section 3(b)(2) of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (99 Stat. 1842).

On March 22 and 23, 2000, NRC conducted an inspection of the Vieques event. The NRSC had concluded that the firing of DU on the LIA was caused by administrative errors; failure to follow established procedures for issuing and receiving ammunition; a lack of awareness of restrictions placed on DU munitions by certain individuals; an over-reliance on an automated database system that contained errors in the data; and significant pressure on those directing and supporting the training mission to precisely execute a "time-on-target" training exercise. NRC inspectors agreed with NRSC's conclusions.

The corrective actions taken by the U.S. Navy to prevent recurrence include: retraining of individuals to follow written procedures for issuing ammunition; issuance of an "All-Points Administrative Message" to all commands associated with the handling, storage, or deployment of all forms of DU ammunition; development of a self-audit checklist to all commands that have DU ammunition deployed; development of training for Marine Corps detachments, to be conducted before deployments; development of new curriculum requirements, for Navy and Marine Corps entry-level training schools, that will emphasize DU ammunition restrictions and hazards; and change of the condition code for DU ammunition in the automated database system from "B" (restricted) to "N" (suspended, use for combat only). A copy of NRC's inspection report, dated April 19, 2000, is available in ADAMS (ML003767648).

The NRSC had identified the use of DU ammunition at Vieques as a Severity Level IV violation of the Navy's Master Materials License; specifically, a violation of naval radioactive material permit number 13-00164-L1NP. This permit is issued to the Naval Surface Warfare Center, in Crane, Indiana, and specifies the DU ammunition as war reserve material, deployed only for combat use. Based on the results of this inspection, NRC determined that the NRSC properly identified the violation and appropriately issued a Notice of Violation to the responsible command. NRC Inspection Manual Chapter 2810, "Master Material License Inspection Program," states that NRC will not take any further enforcement action for Severity Level IV violations by permittees that have already been identified and adequately corrected by the Master Material Licensee's Radiation Safety Committee. Therefore, no NRC enforcement action was taken.

From May 29 to June 12, 2000, the U.S. Navy performed radiological surveys of the LIA. An NRC inspector accompanied the surveyor during these surveys. The LIA has several target areas simulating airfields, surface-to-air missile sites, convoys, and other type of targets. The surveys conducted by the U.S. Navy, and independently observed by the NRC, concluded that there were no elevated exposure rates or count rates indicative of radioactive contamination on areas of the LIA exclusive of the North Convoy Site, where the DU was fired during the February 19, 1999, incident.

While observing the U.S. Navy survey activities between May 31 and June 12, 2000, the NRC staff also performed numerous surveys and collected soil samples. Soil samples were collected from the areas where DU penetrators had already been excavated. In addition, soil samples were collected downhill of areas known to have been impacted by the DU penetrators. Soil, vegetation, water, and sediment samples were also collected in areas accessed by the general public and in nearby towns. The purpose was to independently assess the licensee's DU recovery performance and to determine whether the surrounding environment and members of the public had been exposed to DU. The samples were

shipped to Oak Ridge Institute for Science and Education (ORISE) in Oak Ridge, Tennessee, for independent analysis.

The NRC Inspection Reports dated July 13, 2000, and September 28, 2000, document the performance and results of the environmental samples taken in June 2000. Copies of these reports are available in ADAMS (ML003767608 and ML003755565). The NRC samples demonstrated that there was no spread of DU contamination to areas outside of the LIA and that contamination from the DU inside the LIA was limited to the soil immediately surrounding the DU penetrators. With the exception of the soil samples taken from holes where the Navy had recovered DU penetrators, neither the direct measurement nor the environmental sample results identified the presence of radioactive materials exceeding those associated with naturally occurring radioactive materials routinely found in the environment. NRC concluded that members of the public outside of the LIA were not exposed to the DU that was fired into the LIA. NRC determined that members of the public could only have received measurable doses from the DU penetrator event if they directly accessed a DU penetrator for extended periods of time. NRC is not aware of anybody who may have directly accessed a DU penetrator. Based on these survey results, NRC has concluded that no member of the public is likely to have received radiation doses above applicable limits. Furthermore, the staff concludes that the corrective actions implemented by the U.S. Navy are adequate, and that the enforcement action requested by the Petitioner is not warranted.

C) Notification of Workers.

The Petitioner makes a general assertion that there is a neglect of DU training and education in the U.S. Armed Forces. The Petitioner claims that this is a violation of NRC regulation 10 CFR 19.12, “Instructions to Workers.”

Routine NRC inspections of licensed DOD activities have not identified general neglect of training and education. As discussed above, the U.S. Navy conducted retraining as part of the corrective actions for the Vieques event. Therefore, further enforcement action as requested by the Petitioner is not warranted.

D) Whistle-Blower Protection.

In his petition, the Petitioner requested formal protection under the "whistle-blower" statutes. Discrimination by an NRC licensee against an employee for engaging in protected activities, including filing a 10 CFR 2.206 petition, is prohibited under 10 CFR 30.7, "Employee Protection." The Department of Labor (DOL) is the agency from which nuclear workers may seek personal remedies when discrimination has occurred for reporting a concern. For remedies such as job reinstatement or back pay, a written complaint must be filed with DOL within 180 days of notification of the alleged discriminatory act, clearly outlining the facts and circumstances. During a telephone call on July 25, 2000, the Petitioner was notified by the NRC staff of his right to file such a complaint with the DOL.

IV. CONCLUSION

The NRC staff has considered the issues raised by the Petitioner, and has determined that a significant portion of those issues falls outside NRC-regulated activities because this portion relates to military activities outside U.S. territories. With respect to the issues that falls within NRC jurisdiction, the Petitioner does not substantiate any significant health nor safety concerns nor significant violations of NRC requirements.

Therefore, the Director of the Office of Nuclear Material Safety and Safeguards has determined that the request to hold a hearing to consider the revocation of military licenses authorizing the use of DU, implementation of substantial fines, and consideration of personal criminal liability, should be denied.

As provided in 10 CFR 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, this decision will constitute the final action of the Commission 25 days after the date of the decision unless the Commission, on its own motion, institutes a review of this decision within that time.

Dated at Rockville, Maryland, this 9th day of January 2001.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/
William F. Kane, Director
Office of Nuclear Material Safety
and Safeguards