U.S.NRC
UNITED STATES NUCLEAR REGULATORY COMMISSION
Protecting People and the Environment

FACT SHEET

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License Application for Depleted Uranium at U.S. Army Sites

The U.S. Army Installation Command has applied to the Nuclear Regulatory Commission for a license to possess and manage residual quantities of depleted uranium (DU) at various Army installations where DU munitions – specifically the M101 Spotting Round – were used in training exercises. These installations include the Schofield Barracks on Oahu and Pohakuloa Training Area (PTA) on the Island of Hawaii.

The license, once granted, will require the Army to perform specific functions designed to protect public health and safety and the environment. These include a radiation monitoring program and physical access control consistent with NRC's regulations for protecting the public against radiation. Should DU be discovered elsewhere on Army installations, the Army will conduct an environmental survey to determine if that area needs to be included in the monitoring and access control programs under the license. These programs will support future site decommissioning and cleanup.

Background

Depleted uranium is a byproduct of uranium enrichment, part of the process of manufacturing fuel for nuclear power plants. When uranium is enriched in the U235 isotope, the leftover uranium is depleted in U235. DU is useful in certain commercial and military applications because of its high density – about twice the density of lead. It is only slightly radioactive, but it poses some chemical toxicity danger to the kidneys if ingested – either through inhaling dust or drinking contaminated water, for example.

A number of Army installations across the United States have residual DU contamination resulting from the testing of the M101 Spotting Round. The M101 was a 20mm low-speed projectile, weighing approximately a pound, which was used with the Davy Crockett recoilless rifle system from 1960-1968.

The Davy Crockett weapons system, including the M101 Spotting Round, was classified in the 1960s, and records of its use were closely guarded. In 2005 the Army discovered tail assemblies from the M101 Spotting Round during a range clearance exercise at the Army's Schofield Barracks target impact area in Hawaii[1]. The Army then began investigating various sites where the M101 Spotting Round may have been used, and characterization studies have determined that NRC licensable quantities of DU exist at several sites in the form of M101 fragments. Since the Army does not currently possess a Source Material License, as required by NRC regulations, a license application for the possession of DU has been submitted to the NRC.

Nuclear Regulatory Commission Role

Part of NRC's role as a regulatory agency is the oversight of licensed source material, such as depleted uranium at Army sites. The NRC requested the Army include environmental radiation monitoring plans and security plans as part of its license application. Two generic plans – applicable to all sites where DU has been found – were provided for NRC review titled, "Physical Security Plan for Depleted Uranium From the M101 Spotting Round" and "Environmental Radiation Monitoring Plan for Depleted Uranium From the M101 Spotting Round." Additionally, two site-specific environmental radiation monitoring plans were provided for Schofield Barracks and the Pohakuloa Training Area. Additional Army sites with residual DU will be added to the license after a site characterization has identified DU and a site-specific environmental radiation monitoring plan has been provided.

As a source material licensee, the Army will be required to comply with NRC regulations and standards for protecting the public and the environment from exposure to radiation. The NRC will provide oversight of the Army's monitoring programs through periodic inspections and reviews.

M101 Spotting Round (Source: U.S. Army)[2].

[1] Information Booklet, Depleted Uranium (DU) in Hawaii. U.S. Army Installation Management Command-Pacific. Fort Shafter, Hawaii.

[2] Information on Depleted Uranium and the M101 Spotting Round for the Davy Crockett, U.S. Army. May 17, 2007.

Additional References

NRC Regulations:

- 10 CFR 40 – Domestic Licensing of Source Material
- 10 CFR 20 – Standards for Protection Against Radiation

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