

November 30, 2010

Dr. Robert Cherry, Radiation Safety Officer
US Army Installation Management Command
11711North IH35, Suite 110
San Antonio Texas, 78233

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION STAFF REVIEW OF THE U.S. ARMY'S APPLICATION FOR A RADIOACTIVE MATERIALS LICENSE FOR DEPLETED URANIUM FROM THE DAVY CROCKETT MUNITIONS SYSTEM

Dear Dr. Cherry:

I am writing in response to the U.S. Army's application for a radioactive materials license, dated November 6, 2008, as supplemented by letters, dated July 8, 2009, September 13, 2010, and February 24, 2010. The July 8, 2009, letter included a generic Physical Security Plan, a generic Environmental Radiation Monitoring Plan (ERMP) and site-specific ERMPs for the Schofield Barracks and Pohakuloa Training Area. The September 13, 2010, letter provided the site-specific ERMP for the Fort Benning, Georgia installation and discussed the submission of the site-specific ERMPs for other U.S. Army installations. The February 24, 2010, letter replaced Gregory Komp with Dr. Robert Cherry as the individual responsible for the Radiation Safety Program for the subject license application.

This also responds to the Army's September 9, 2010, letter responding to the NRC's letter of March 11, 2010, which requested that the Army submit license applications for the remaining depleted uranium (DU) facilities, including site specific environmental monitoring plans, within 6 months of the date of the letter (i.e., September 11, 2010). The September 9, 2010, letter requested a two week extension to September 24, 2010, to respond to the NRC's March 11, 2010, request.

The NRC staff has reviewed the Army's application and supplemental information and has determined that the additional information is needed in order for the NRC staff to complete our review of the application. The NRC staff's comments on the Army's application and the additional information necessary to complete our review, is summarized in the enclosed (Enclosure 1). I have also enclosed guidance that the Army should review and use in developing responses to our comments and developing ERMPs for your installations (Enclosures 2 & 3).

As discussed in the enclosed, the Army will need to provide site-specific Radiation Safety Programs, Physical Security Programs and Training Programs for each installation where DU is identified. In addition, the Army should review the generic ERMPs in the broader context described in the enclosed and provide a revised generic environmental monitoring program. The Army should also review the site-specific ERMPs in the broader context described in the enclosed and develop revised ERMPs for the Schofield Barracks, Pohakuloa, and Fort Benning sites.

In order to ensure that the U.S. Army's responses to our comments, and the additional information requested is of adequate detail and quality, I suggest that our technical staff's meet to discuss the items summarized in the enclosed as soon as possible. During that meeting, NRC and U.S. Army staff should develop a schedule for the submission of the additional information by the Army, and the completion of the review by the NRC.

Regarding the September 9, 2010 letter, it appeared that the Army was requesting a two week extension so that the remaining ERMPs could be submitted for the outstanding Army installations. However, based upon the September 13, 2010 letter, the ERMPs will be submitted on a monthly basis until plans covering all sites will be submitted. The NRC finds this schedule acceptable. However, the schedule for the next submittal will be 30 days following the submittal of the revised generic ERMP.

In accordance with 10 CFR 2.390 of the U.S. NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," a copy of this letter will be available electronically for public inspection in the U.S. NRC's Public Document Room or from the Publicly Available Records component of the U.S. NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the U.S. NRC Website at <http://www.nrc.gov/reading-rm/adams.html>.

Please contact Dominick A. Orlando by phone, at (301)415-6749 or by email, at dominick.orlando@nrc.gov to arrange the meeting, or if you have any questions concerning the NRC staff's comments.

Sincerely,

/RA/

Paul Michalak, Branch Chief
Materials Decommissioning Branch
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket: No.: 40-9083

Enclosures:

1. NRC Comments
2. Environmental Monitoring Guidance
3. Sample Monitoring Plan

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OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION COMMENTS ON THE US ARMY'S LICENSE APPLICATION, INCLUDING THE GENERIC PHYSICAL SECURITY AND ENVIRONMENTAL MONITORING PLANS (ERMPs) AND THE SITE SPECIFIC ERMP FOR THE SCHOFIED BARRICKS, POLAKUHOA TRAINING AREA AND FORT BENNING INSTALLATIONS

LICENSE APPLICATION

1. The application states that NUREG-1556 was used to develop the license application. However, the application does not address the items outlined in the NUREG. The application should follow the guidance in NUREG-1556. NUREG-1556, Volumes 7 and 11 should be reviewed for further guidance in developing the application. In addition, the application references numerous Army documents with the apparent expectation that the U.S. Nuclear Regulatory Commission (NRC) staff will cull the relevant information from these documents. As the license application needs to include all of the information necessary for the NRC staff to evaluate the various Radiation Safety Programs at your facilities and perform inspections based on our regulations and commitments made in your application, the Army application should provide the information in a more concise and usable format.
2. The license application states that the purpose for which the licensed material, depleted uranium (DU), will be used is to possess and manage DU from the Dave Crockett munitions system and that activities will be limited to surveys and incidental recovery of DU fragments. However, it is not clear from the license application if the U.S. Army intends to use the ranges where DU is identified for the testing or firing of high-explosive ordnance. Department of Defense Directive 4715.11, sections 5.4.9 and 5.4.9.2 indicate that high-explosives should not be fired into ranges containing DU. Please verify that high-explosives will not be fired into ranges where DU is identified or suspected to be present and provide the procedures that will be instituted to ensure that ranges containing DU will not be used for high-explosive munitions testing and firing.
3. The license application indicates that DU possessed pursuant to the license may be disposed of at a licensed facility. This indicates that decommissioning may be contemplated by the Army at these sites. Please clarify if the Army intends to perform decommissioning activities under the license.
4. The application provides a general description of the US Army's Radiation Safety Management approach and states that the individual installations, under the direction of the Garrison Radiation Safety Officer (Garrison RSO) will develop installation specific Radiation Safety Programs. However, the application does not provide sufficient information about the Schofield Barracks and Polakuhoa installation-specific Radiation Safety Programs to allow the NRC staff to determine if the possession and management activities can be conducted safely and in accordance with NRC regulations. Please provide the Schofield Barracks and Polakuhoa installation-specific Radiation Safety Programs, as well as the names, training and qualifications specific to DU, of the Garrison RSO's for these installations.

5. The application provides a general description of the training approach that will be used at installations where DU is identified. However, the application does not provide sufficient information to allow the NRC staff to determine if the training program will ensure that individuals allowed unescorted access to areas where DU is identified will have adequate training. Please provide the Schofield Barracks and Polakahoa installation-specific training programs for the individuals that will be allowed unescorted access to areas where DU is identified.
6. The application discusses screening levels that will be used as clearance levels and references the Department of the Army Pamphlet 385-24, Table 5-2. The values included in this table have not been incorporated into NRC guidance or regulations and, as such, are not appropriate. Therefore, the application will need to be revised to incorporate current NRC guidance in Regulatory Guide 1.86.
7. The application indicates that a cost estimate was included with the application (Enclosure 2 to Lt General Robert Wilson's November 6, 2008, letter). NRC staff is unable to locate this cost estimate in our documents. Please provide this enclosure. In addition, the application references Attachments 1 and 4 but does not include references to Attachments 2 and 3. Please clarify the number and titles of the attachments included with the license application.

GENERIC PHYSICAL SECURITY PLAN

1. The Generic Physical Security provides a general description of a Physical Security Plan. However, the Generic Physical Security Plans does not include sufficient information to allow the NRC staff to determine if access to areas containing DU will be properly secured. Please provide the Physical Security Plans for the Schofield Barracks and Polakuhoa installations.

GENERIC ENVIRONMENTAL RADIATION MONITORING PLAN

1. It appears that the US Army's approach to development of the Environmental Radiation Monitoring Plan's (ERMP's) is based on the assumption that environmental radiation monitoring is triggered by a certain dose level close to regulatory limits. Environmental monitoring is used to determine if material is being released from a facility, in this case the range, which could potentially impact public health and safety or the environment. In developing ERMPs it should not be assumed that DU is not being released from a facility. Rather, it is the implementation of the ERMP that will demonstrate whether the DU is being released from the facility. If the ERMP demonstrates that DU is not being released from a range or its environs only then could consideration be given to reduce or even eliminate the particular monitoring program.
2. The current Generic ERMP is insufficient to be the framework for an ERMP as it is too limited. It needs to be broad and encompass the entire range of potential sample media and exposure pathways that can be encountered at the various installations cites in the license application.

Enclosure 2 is an example of a generic ERMP that encompasses a broad range of sample media and exposure pathways and is more representative of the type of generic monitoring plan that that Army should be using as the basis for site-specific monitoring at each of the DU sites. Enclosure 3 provides guidance on such monitoring.

SITE-SPECIFIC ERMPs - POHAKULOA TRAINING AREA, SCHOFIELD BARRACKS AND FT BENNING

1. Each ERMP should be based on the generic plan with site-specific environmental parameters and DU use (e.g., site's physical features, range activities, quantity of DU, hydrogeology, site climatology, etc.) dictating which sample media and exposure pathways are appropriate.
2. Each ERMP should include the bases and the justification for the number, types, frequency and analytical methods employed and the rational for the exclusion of certain monitoring pathways or media (i.e., the technical rational for why various types of monitoring are proposed or excluded). The Army should also provide a specific list of the monitoring equipment which will be used at each installation.
3. It is inappropriate to include, as justifications for not performing certain types of monitoring, the following: the results of RESRAD-OFFSITE calculations; site characterizations from a different site than the one for which the ERMP is developed; and the likelihood that the material will not be detected.