

DOCKET NO: 040-08838

LICENSE NO: SUB-1435

LICENSEE: U.S. Department of the Army

FACILITY: U.S. Army Jefferson Proving Ground  
Madison, Indiana 47250

SUBJECT: SAFETY EVALUATION REPORT, AMENDMENT APPLICATION  
DATED FEBRUARY 15, 2000

## 1. Background

By application letter dated February 15, 2000, the U.S. Army (licensee) requested the Material License No. SUB-1435 be amended to: (1) authorize transfer of licensing responsibilities for the Jefferson Proving Ground (JPG) site from the U.S. Army Test and Evaluation Command (TECOM) to the U.S. Army Soldier and Biological Chemical Command (SBCCOM), (2) designate Ms. Joyce E. Kuykendall as the Radiation Safety Officer (RSO) for the site, and (3) include the revised JPG Security Plan in the license.

From 1941 to 1994, the licensee conducted ordnance testing on the JPG site, and fired more than 24 million rounds of conventional explosive. From 1984 to 1994, the licensee conducted accuracy testing of depleted uranium (DU) tank penetrator rounds at the site. An U.S. Nuclear Regulatory Commission (NRC) license was issued to authorize the U.S. Army to use, store, and perform testing of DU munitions at JPG. The DU penetrator rounds vary in size but can be generally described as rods comprised of a DU titanium alloy with a diameter of approximately 2.5 centimeters (cm) (1 inch) and a length as much as 61 cm (2 feet). The DU munitions testing contaminated approximately  $5.1 \times 10^6$  square meters ( $m^2$ ) (1260 acres) of the site with an estimated  $7 \times 10^4$  kilograms ( $1.5 \times 10^5$  pounds) of DU.

In a letter dated August 29, 1994, the licensee requested that the license be renewed and amended for possession only. In accordance with the Defense Authorization Amendments and Base Realignment and Closure Act of 1988 (Public Law 100-526), the licensee was required to close the JPG base on September 30, 1995. Currently, the licensed material is kept onsite in the restricted area known as the "Depleted Uranium Impact Area." This area is located north of the firing line, and consists of approximately  $12 \times 10^6 m^2$  (3,000 acres).

## 2. Evaluation

In the evaluation, topics considered are: (1) transfer of licensing responsibilities for the JPG site from TECOM to SBCCOM, (2) designation of Ms. Joyce E. Kuykendall as the RSO of the JPG site, and (3) inclusion of the revised JPG Security Plan in the license.

## 2.1 Transfer of Licensing Responsibilities from TECOM to SBCCOM

The licensee requested to transfer licensing responsibility for the JPG site from TECOM to SBCCOM. The recent realignment of Department of Army activities have resulted in the transfer of management of the JPG site. SBCCOM has assumed responsibility for the management of the existing Environmental Monitoring Program and will continue the oversight of the radiation safety program and NRC license until its termination.

Based on the review of the licensee's organizational structure, NRC staff has determined that it is acceptable to transfer licensing responsibility for the JPG site from TECOM to SBCCOM because the level of U.S. Army management involvement remains the same.

To reflect the change of U.S. Army Command responsible for licensed materials at the site, NRC staff has revised the following license condition:

2. U.S. Army Soldier and Biological Chemical Command  
Aberdeen Proving Ground, MD 21010-5424
10. Authorized place of use:
  - A. The licensed material shall be kept onsite, for the purpose of decommissioning, in the restricted area known as the "Depleted Uranium Impact Area." This area is located north of the firing line, at the Jefferson Proving Ground, in Madison, Indiana 47250.
  - B. This license has been transferred from the "The U.S. Department of the Army, U.S. Army Test and Evaluation Command, Aberdeen Proving Ground, Maryland 21005-5055" to "The U.S. Department of the Army, U.S. Army Soldier and Biological Chemical Command, Aberdeen Proving Ground, Maryland 21010-5424."

## 2.2 Change RSO

The licensee requested to change the RSO for the JPG site from Ms. Tanya Palmateer and/or Mr. Robert A. Aaserude to Ms. Joyce E. Kuykendall. The NRC Decommissioning Branch is changing its policy regarding listing the RSO by name in the license. Instead, the license will include the qualifications that an RSO must meet for the respective site. Accordingly, NRC staff has revised the following license condition:

11. A. Licensed materials shall be kept under the supervision of the Radiation Safety Officer, who shall have the following education, training, and experience:
  1. Education: A bachelor's degree in the physical sciences, industrial hygiene, or engineering from an accredited college or university or an equivalent combination of training and relevant experience in radiological protection. Two years of relevant experience are generally considered equivalent to 1 year of academic study.

2. Health physics experience: At least 1 year of work experience in applied health physics, industrial hygiene, or similar work relevant to radiological hazards associated with site remediation. This experience should involve actually working with radiation detection and measurement equipment, not strictly administrative or “desk” work.
  3. Specialized knowledge: A thorough knowledge of the proper application and use of all health physics equipment used for depleted uranium and its daughters, the chemical and analytical procedures used for radiological sampling and monitoring, methodologies used to calculate personnel exposure to depleted uranium and its daughters, and a thorough understanding of how the depleted uranium was used at the location and how the hazards are generated and controlled.
- B. The licensee, without prior NRC approval, may appoint a RSO provided a) the licensee maintain documentation demonstrating that the requirements of condition 11A are met and b) the NRC is informed of the name of the new RSO by letter to the Regional Administrator, Region II, within 30 days of the appointment.

### 2.3 Revise JPG Security Plan

License Condition 13 requires the implementation of an NRC-approved Environmental Monitoring Program and a Security Plan. The licensee’s July 12, 1996, submittal fulfilled this condition as stated NRC’s July 22, 1996, letter.

The licensee requested to include the revised JPG Security Plan, dated February 15, 2000, in the license. NRC staff has reviewed the this plan and determined that it is acceptable. To reflect the completion of License Condition 13, NRC staff has deleted Condition 13 and this condition reads as follows:

13. Deleted.

### 2.4 Summary

To ensure that the licensee fulfills the requirements described in its February 15, 2000, license amendment application, NRC staff has revised the following license condition:

12. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The NRC’s regulations shall govern unless the statements, representations, and procedures in the licensee’s application and correspondence are more restrictive than the regulation.
  - A. Letter and attachments for license renewal dated August 29, 1994,
  - B. Letter dated May 25, 1995,

C. Application with attachments dated September 29, 1995, and

D. JPG Security Plan included with the letter dated February 15, 2000.

### 3. Conclusion

NRC staff has reviewed the revisions and has concluded that they are acceptable. This amendment does not involve any activity or situation which would be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: S.W. Lewis

Date: June , 2000

Robert A. Nelson, Acting Chief  
Decommissioning Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

- C. Application with attachments dated September 29, 1995, and
- D. JPG Security Plan included with the letter dated February 15, 2000.

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