

September 25, 2000

Commander  
U.S. Army Soldier and Biological Chemical Command  
ATTN: AMSSB-RCB-RS  
Aberdeen Proving Ground, MD 21010-5424

SUBJECT: NRC INSPECTION REPORT 040-08838/2000001(DNMS)

Dear Sir:

This refers to the routine inspection conducted at the Jefferson Proving Ground on September 20, 2000. The enclosed copy of our inspection report details the results of the inspection.

Within the scope of the inspection, no violations of NRC requirements were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available **electronically** for public inspection in the NRC Public Document Room **or** from the *Publicly Available Records (PARS) component of NRC's document system (ADAMS)*. *ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).*

Should you have any questions regarding the inspection, please do not hesitate to contact Dr. Peter Lee at (630) 829-9870 or me at (630) 829-9615.

Sincerely,

*/RA/*

Bruce L. Jorgensen, Chief  
Decommissioning Branch

Docket No. 040-08838  
License No. SUB-1435

Enclosure: Inspection Report 040-08838/2000001(DNMS)

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 040-08838  
License No: SUB-1435

Licensee: Department of the Army

Facility: Jefferson Proving Ground

Location: Madison, Indiana

Date: September 20, 2000

Inspector: P. J. Lee, Ph.D.,CHP, Radiation Specialist

Approved By: Bruce L. Jorgensen, Chief  
Decommissioning Branch  
Division of Nuclear Materials Safety

## **EXECUTIVE SUMMARY**

### **Jefferson Proving Grounds NRC Inspection Report 040-08838/2000001(DNMS)**

This was a routine safety inspection to evaluate the licensee's security program of the depleted uranium (DU) contaminated firing range impact area. The inspector determined that the licensee's site security program and postings were adequate. The procedures and practices for contamination control should be enhanced for objects and people leaving the DU area.

No violations of NRC requirements were identified.

## Report Details

### **1.0 Background**

Jefferson Proving Ground (JPG) was originally issued Source Material License No. SUB-1435, on December 16, 1983, which authorized the possession of depleted uranium (DU) for DU projectile testing. The DU projectiles were fired at soft targets and impacted on the ground beyond the targets in the Delta Impact Area. Projectiles were periodically recovered from the impact area and stored onsite prior to shipment back to the manufacturer. Firing of DU projectiles continued until September 1994.

Approximately 80,000 kilograms of DU projectiles remain in the impact area. Overall, the JPG firing range comprises 52,000 acres. The DU impact area comprises approximately 2,000 acres located in the south central portion of the firing range.

On October 11, 1995, representatives from the Indiana State Department of Health contacted the NRC Division of Waste Management, regarding concerns about the degraded condition of the fence line surrounding the firing range. The NRC issued a Confirmatory Action Letter (CAL) dated October 13, 1995, confirming actions to be taken regarding the fencing and security of the firing range as agreed upon during an October 12, 1995, conference call with Army staff. The CAL also confirmed the NRC's understanding that Army staff would provide a plan to ensure adequate security of radioactive material at JPG and ensure that perimeter gates were monitored or locked.

### **2.0 Security and Posting**

#### a. Inspection Scope

The inspection interviewed individuals responsible for site security and toured the perimeter of the DU impact area and the security fence surrounding the facility.

#### b. Observations and Findings

To provide for security, a fence surrounds the JPG facility, and all gates (except the main gate) are locked 24 hours a day. Guards are posted at the main gate 24 hours a day, and access to the site is restricted to those individuals authorized by the Site Manager.

A full-time employee monitors and maintains the security fence. The security fence was inspected daily. Sufficient funds have been set aside to allow timely repair of any damage to the fence. The inspector noted during the tour that the security fence appeared to be well maintained and in good repair.

All roads approaching the DU area were barricaded. Warning signs were posted with the Radiation Hazard symbol and the words "Caution, Radioactive Materials" around the perimeter of the DU area. The distances between the signs were within 200 feet and the condition of the signs was inspected weekly. This addressed the concern about the timely inspection of signs and distances between postings during the previous inspection.

c. Conclusions

The security program at JPG appeared to be adequate.

**3.0 Contamination Control**

a. Inspection Scope

The inspector evaluated the licensee's program of contamination survey and control for objects and people leaving the DU area.

b. Observations and Findings

The licensee was using GM (Geiger-Mueller) probes with a wall thickness of 30 mg/cm<sup>2</sup> for their contamination surveys. GM pancake probes with a window thickness of 1.5 to 2.0 mg/cm<sup>2</sup> are more appropriate for DU and these should be used for the contamination surveys.

The licensee was monitoring for contamination at the check station located in the containment area. This monitoring should be performed before leaving the DU area.

c. Conclusions

The procedures and practices for contamination control should be enhanced for objects and people leaving the DU area.

**2.0 Exit Meeting**

The inspectors met with K. Knouf, Site Manager of JPG on September 20, 2000, summarizing the preliminary findings.

**PARTIAL LIST OF PERSONS CONTACTED**

\*K. Knouf, Site Manager, JPG  
P. Mann, Engineering Technician, JPG

\*Indicates individual present during the exit meeting on September 20, 2000.

**INSPECTION PROCEDURE USED**

IP 87104: Decommissioning Inspection Procedure for Materials Licensees