UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511

July 10, 2024

Dr. Robert Cherry, Radiation Safety Staff Officer
U.S. Army Installation Management Command
ATTN: IMSO/106, Bldg. 2261
2405 Gun Shed Road
JBSA Fort Sam Houston, TX 78234-1223

SUBJECT: NRC INSPECTION REPORT 040-09083/2024-002, FORT HUNTER LIGGETT, CALIFORNIA

Dear Dr. Robert Cherry:

This letter refers to the routine announced inspection the U.S. Nuclear Regulatory Commission (NRC) conducted on June 25, 2024, at Fort Hunter Liggett, California. This inspection examined activities conducted under your license as they relate to public health and safety, the common defense and security, and to confirm compliance with the NRC's rules and regulations and the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, interviews with personnel, and site tours.

The inspection included a review of your implementation of the radiation safety plan, physical security plan, environmental radiation monitoring plan, and quality assurance project plan. An exit meeting was held with you, Robert K. Atwell, garrison radiation safety officer, Paul L. Lewis, Director, Plans Training, Mobilization & Security, and Lieutenant Colonel Amorris O. Conley at the conclusion of the inspection on June 25, 2024. No violations were identified, and no response to this letter is required.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC's Website at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response, if you choose to provide one, should not include any personal privacy or proprietary, information so that it can be made available to the Public without redaction.

If you have any questions regarding this inspection report, please contact Troy Johnson at 817-200-1596, or the undersigned at 817-200-1249.

Sincerely,

Signed by Warnick, Gregory
on 07/10/24

Gregory G. Warnick, Chief
Decommissioning, ISFSI, and Operating
Reactor Branch
Division of Radiological Safety and Security

Docket No. 040-09083
License No. SUC-1593

Enclosure:
NRC Inspection Report 040-09083/2024-002

NRC INSPECTION REPORT 040-09083/2024-002, FORT HUNTER LIGGETT, CALIFORNIA, DATED - JULY 10, 2024

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cc:
robert.n.cherry.civ@army.mil

ADAMS ACCESSION NUMBER: **ML24184C007**

✈ SUNSI Review By: MTJ	ADAMS: ✈ Yes ☐ No	☐ Sensitive ✈ Non-Sensitive	☐ Non-Publicly Available ✈ Publicly Available	Keyword NRC-002

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U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.	040-09083
License No.	SUC-1593
Report No.	040-09083/2024-002
Licensee:	U.S. Army Installation Management Command
Location Inspected:	Fort Hunter Liggett, California
Inspection Date:	June 25, 2024
Inspectors:	M. Troy Johnson, Nuclear Systems Scientist Response Coordination Branch Division of Radiological Safety and Security Christian R. Dennes, Health Physicist Decommissioning, ISFSI, and Operating Reactor Branch Division of Radiological Safety and Security
Approved By:	Gregory G. Warnick, Chief Decommissioning, ISFSI, and Operating Reactor Branch Division of Radiological Safety and Security
Attachment:	Supplemental Inspection Information

Enclosure

EXECUTIVE SUMMARY

U.S. Army Installation Management Command (IMCOM)
NRC Inspection Report 040-09083/2024-002

The NRC performed an announced, routine inspection on June 25, 2024, at Fort Hunter Liggett, California. The inspection included a review of records, procedures, and interviews with program personnel. The inspectors concluded that the licensee was conducting activities in accordance with regulatory and license requirements. No violations were identified.

Broad Scope Academic and Research & Development Program

The inspectors determined the licensee was in compliance with the regulatory requirements associated with radiological controls of restricted areas and postings. No deficiencies in the sampling of environmental monitoring locations were noted. The inspectors determined that the licensee was in compliance with its dose assessment for workers and the public under its license commitments and NRC regulations. The inspectors reviewed the licensee's contamination and exposure control program and did not identify any deficiencies in its implementation. The inspectors did not identify any deficiencies in the licensee's safety and security of licensed materials. No deficiencies in the licensee management oversight program were noted. (Section 1.2)

Report Details

Site Status

Fort Hunter Liggett is located approximately 3 miles from the Pacific Ocean in the central coastal region of California, 150 miles south of San Francisco and 250 miles north of Los Angeles. King City and Paso Robles are 23 miles northeast and 45 miles southeast, respectively. The installation encompasses 164,637 acres and is bound on the north by the Ventana Wilderness Area, on the east by the Salinas River Valley, on the south by the Monterey-San Luis Obispo County line, and on the west by approximately 55 miles of the Los Padres National Forest. Fort Hunter Liggett is the largest U.S. Army Reserve Command installation in the United States.

In August 2005, the U.S. Army discovered remnants of munitions containing Depleted Uranium (DU) at Schofield Army Barracks in Hawaii. These remnants were identified as the M101 spotting rounds for the Davy Crockett Weapons System. The M101 spotting round contains DU, which was a component of the 1960s-era Davy Crockett weapons system. Used for targeting accuracy, the M101 spotting rounds emitted white smoke upon impact. The rounds remained intact or mostly intact on or near the surface following impact and did not explode. Remnants of the tail assemblies may remain at each installation where the U.S. Army trained with the Davy Crockett weapons system from 1960 to 1968. These installations include Fort Moore, Fort Liberty, Fort Campbell, Fort Carson, Fort Eisenhower, Fort Cavazos, Fort Hunter Liggett, Fort Jackson, Fort Knox, Fort Johnson, Fort Riley, Fort Sill, Fort Wainwright, Joint Base Lewis-McChord, Joint Base McGuire-Dix-Lakehurst, Schofield Barracks Military Reservation, and Pohakuloa Training Area.

At the time if the inspection, The U.S. Army does not know if any cleanup or retrieval of these rounds or remnants has occurred at Ranges B11, B13, or C8 on Fort Hunter Liggett; therefore, it is assumed that most, if not all, of the 30 kilograms (kg) of DU from the rounds fired remains in the ranges. As such, these ranges have been permanently designated as radiation control areas (RCAs) with strict controls for personnel entry and monitoring upon exit. Because of the size of the installation, the Command has exercised the luxury of excluding personnel from these ranges unless there would be a unique and specific need for entry.

The site inspection was conducted using the applicable sections of Inspection Procedure (IP) 87126 Broad Scope Academic and Research & Development Program.

1 Broad Scope Academic and Research & Development Program (IP 87126)

1.1 Inspection Scope

The inspectors toured the perimeter of Ranges B11, B13, and C8 where the licensed material is located and observed the sampling of the two environmental sampling locations ERM-1 and ERM-2. The inspectors reviewed the licensee's radiation monitoring program associated with workers and the public. The inspectors reviewed the licensee's radiological survey and exposure control program. The inspectors reviewed the licensee's safety and security of licensed materials as required under the license. The inspectors reviewed the licensee's oversight including audits and training of staff.

1.2 Observations and Findings

a. Observation of Activities (Risk Module (RM)-1)

The inspectors toured the perimeters of Ranges B11, B13, and C8 where the licensed material is located. The inspectors did not enter the ranges as hazards, such as unexploded ordinance, were present. The ranges had adequate postings mounted high on poles such that they were clearly visible above the tall grass. The inspectors interviewed the Garrison Radiation Safety Officer (RSO) and reviewed the standard operating procedure "DU Awareness and License Requirement Training for Personnel Who Enter a Radiation controlled Area (RCA)," dated June 2, 2016, to verify procedures were in place to ensure unauthorized personnel do not have unauthorized access and if access is required, appropriate safety practices are provided to all personnel entering the area.

The inspectors toured the two environmental sampling locations, ERM-1 and ERM-2, and observed water and sediment samples being taken. The licensee's contractor, Leidos Holdings Incorporated, performed the sampling in accordance with the "Site-Specific Environmental Radiation Monitoring Plan Fort Hunter-Liggett, California Annex 8," dated March 2020. The inspectors noted adequate sampling techniques and appropriate chain of custody controls were used by the contracted personnel in the performance of sampling operations.

b. Assessment of Dose to Workers and the Public (RM-2)

Due to the lack of anticipated radiation exposure, the licensee is not required to have a routine external or internal radiation worker exposure program. However, the license does possess radiation detection instrumentation if DU is found on site to monitor for potential contamination.

The licensee's environmental monitoring program consists of drinking water testing and collection of two sample locations designated ERM-1 and ERM-2 where water and sediment samples are taken and analyzed for total uranium. Water samples are taken if available as weather will dry up the stream during certain parts of the year. The inspectors reviewed the results of previous sample analysis and did not identify uranium concentrations above commitments made to the NRC.

c. Surveys for Contamination and Exposure Control (RM-3)

All DU possessed is located at Ranges B11, B13, and C8 within the RCA. The licensee has no record of removed DU from the RCA. The inspectors noted that the licensee did possess appropriate radiation detection instrumentation so if such material is found in the field, the licensee will be able to identify and control any radiological contamination. The inspectors determined that the radiation detection instruments possessed by the licensee were appropriately calibrated.

d. Safety and Security of Licensed Materials (RM-4)

The licensee is authorized to possess DU at this site, and it is expected that approximately 30 kg is collectively located at ranges B11, B13, and C8. The ranges are appropriately posted to notify individuals that they would be entering an RCA.

During interviews with the licensee staff, it was noted training and procedures do not allow access to the RCAs without approval from the Garrison RSO; the inspectors were informed by the Garrison RSO that no one had requested access to the radiologically controlled areas except for road grading crews which access the one road that has a license exemption from monitoring. The inspectors noted during their tour that the road was barricaded to prevent unauthorized or accidental use in addition to clear warning signs posted on either side of the entrance. No individuals were identified as gaining unauthorized access to those areas.

e. Management Oversight (RM-5)

The inspectors reviewed the licensee's annual audits and Garrison RSO training for the last three years to include the environmental monitoring program and no deficiencies were identified. The inspectors interviewed Garrison RSO and noted adequate knowledge to ensure the proper implementation of the program.

1.3 Conclusions

The inspectors determined the licensee was in compliance with the regulatory requirements associated with radiological controls of restricted areas and postings. No deficiencies in the sampling of environmental monitoring locations were noted. The inspectors determined that the licensee was in compliance with its dose assessment for workers and the public under its license commitments and NRC regulations. The inspectors reviewed the licensee's contamination and exposure control program and did not identify any deficiencies in its implementation. The inspectors did not identify any deficiencies in the licensee's safety and security of licensed materials. No deficiencies in the licensee management oversight program were noted.

2 Exit Meeting Summary

The inspectors presented the results of the inspection to the Radiation Safety Officer, Garrison Radiation Safety Officer, Plans Training, Mobilization & Security Director, and the Deputy Garrison Commander on June 25, 2024, and did not identify any violations. The licensee did not identify any information received by the inspectors as proprietary.

SUPPLEMENTAL INSPECTION INFORMATION

Partial List of Persons Contacted

Lieutenant Colonel Amorris O. Conley, Deputy Garrison Commander
Paul L. Lewis, Director, Plans Training, Mobilization & Security
Robert K. Atwell, Installation Safety Director, and Garrison Radiation Safety Officer
Dr. Robert N. Cherry CHP, License Radiation Safety Officer

INSPECTION PROCEDURES USED

IP 87126 Broad Scope Academic and Research & Development Programs

ITEMS OPENED, CLOSED, AND DISCUSSED

Open
None

Closed
None

Discussed
None

LIST OF ACRONYMS AND ABBREVIATIONS USED

ADAMS	Agencywide Documents Access and Management System
DU	Depleted Uranium
IMCOM	U.S. Army Installation Management Command
IP	Inspection Procedure
kg	kilogram
NRC	U.S. Nuclear Regulatory Commission
QAPP	Programmatic Quality Assurance Project Plan
RCA	Radion Control Area
RM	Risk Module
RSO	Radiation Safety Officer

Attachment