



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

January 8, 2008

Lt. Col. Scott Nichelson
Department of the Air Force
USAF Radioisotope Committee
HQ AFMOA/SG3PR
110 Luke Ave., Suite 405
Bolling AFB, DC 20032-7050

SUBJECT: NRC INSPECTION REPORT NO.: 30-28641/2007005 AND NOTICE OF VIOLATION

Dear Lt. Col. Nichelson:

This letter refers to a U.S. Nuclear Regulatory Commission (NRC) inspection conducted on August 20-21, 2007, at the 3rd Medical Support Squadron, Elmendorf Air Force Base (AFB) Hospital, Alaska. This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your NRC license. Within these areas, activities authorized under the U.S. Air Force permit number AK-01810-02/03AFP were reviewed, with a focus on selected procedures and representative records, security and control of license material, observations of activities and interviews of personnel. The preliminary inspection findings were discussed with Lt. Col. William Tyra, Commander, 3rd Medical Support Squadron, Elmendorf AFB, at the conclusion of the onsite portion of the inspection. The inspection results were discussed with you during a final telephonic exit briefing conducted on December 11, 2007.

Based on the results of this inspection, the NRC has determined that two Severity Level IV violations of NRC requirements occurred. These violations were evaluated in accordance with the NRC Enforcement Policy included on the NRC Web site at www.nrc.gov; select **Public Meeting and Involvement, Enforcement**, then **Enforcement Policy**. These violations are cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding them are described in detail in the subject inspection report. The violations are being cited in the enclosed Notice because the NRC identified them during the inspection, rather than being self-identified by the licensee.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. For your consideration and convenience, an excerpt from NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," is enclosed. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Sincerely,

/RA/

Jack E. Whitten, Chief
Nuclear Materials Safety Branch B

Docket No.: 030-28641
License No.: 42-23539-01AF

Enclosures:

- 1) Notice of Violation
- 2) Inspection Report No. 030-28641/2007005
w/Attachment

bcc w/Enclosure 1 (via ADAMS distrib):
 LDWert
 CLCain
 JEWhitten
 VHCampbell
 JEWhitten
 RSBrowder
 JFKatanic
 RKStruckmeyer, FSME/DMSSA/SAISB (rks@nrc.gov)
 RITS Coordinator
 NMSB-B
 ACES

SUNSI Review Completed: ADAMS: Yes Initials: RSB
 Publicly Available Non-Sensitive

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| RSBrowder | JFKatanic | JEWhitten | |
| /RA/ | /RA/ per email dtd | /RA/ | |
| 12 / 21 / 07 | 12 / 31 / 07 | 01 / 08 / 08 | |

OFFICIAL RECORD COPY

NOTICE OF VIOLATION

Department of the Air Force
USAF Radioisotope Committee

Docket No. 030-28641
License No. 42-23539-01AF

During an NRC inspection conducted on August 20-21, 2007, at the Elmendorf Air Force Base (AFB) Hospital, Alaska, USAF Permit No. AK-01810-02/03AFP, two violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below.

- A. 10 CFR 20.1501 requires in part, that each licensee make or cause to be made surveys that may be necessary for the licensee to comply with the regulations in 10 CFR Part 20 and that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels, concentrations or quantities of radioactive materials, and the potential radiological hazards that could be present. 10 CFR 20.1003 states in part, that survey means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation.

Contrary to the above, on August 20, 2007, the licensee did not make or cause to be made, adequate surveys to assure compliance with 10 CFR 20.1201(a)(2), which in part, limits occupational radiation dose to the skin of the whole body or to the skin of any extremity. Specifically, after handling unsealed byproduct material and prior to leaving a restricted area, the permittee was found to be using an instrument designed to monitor ambient radiation levels in lieu of personnel contamination levels, which is an inappropriate survey as required by 10 CFR 20.1501.

This is a Severity Level IV violation (Supplement IV)

- B. 10 CFR 20.2103(a) requires in part, that each licensee maintain records of the results of surveys and calibrations required by 10 CFR 20.1501. The licensee shall retain these records for three years after the record is made.

Contrary to the above, as of August 20, 2007, the permittee did not maintain records of the results of surveys performed as required by 10 CFR 20.1501. Specifically, during the time period of approximately August 1-17, 2007, the permittee performed surveys of equipment and structures that were released from a restricted area and did not maintain the records of the respective survey results, as required by 10 CFR 20.2103(a).

This is a Severity Level IV violation (Supplement IV)

Pursuant to the provisions of 10 CFR 2.201, the Department of the Air Force, Radioisotope Committee is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, TX 76011, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved.

Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001, with a copy to the Regional Administrator, Region IV.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at www.nrc.gov/reading-rm/pdr.html www.nrc.gov/reading-rm/adams.html to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated this 8th day of January 2008

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 030-28641
License No.: 42-23539-01AF
Report No.: 030-28641/2007005
Licensee: Department of the Air Force
USAF Radioisotope Committee
Permit Holder: 3rd Medical Support Group
Permit No.: AK-01810-02/3AFP
Location: Elmendorf AFB Hospital, Alaska
Dates: August 20-21, 2007
Inspector: Janine F. Katanic, Ph.D., Health Physicist
Region IV
Approved By: Jack E. Whitten, Chief
Nuclear Materials Safety Branch B
Attachment: Supplemental Inspection Information

EXECUTIVE SUMMARY

Department of the Air Force
NRC Inspection Report 030-28641/2007005

A routine unannounced inspection was conducted at Elmendorf Air Force Base (AFB) Hospital, Alaska, Permit Number AK-01810-02/03AFP, as authorized by the USAF Master Materials License No. 42-23539-01AF. The inspection was performed using Inspection Procedure IP 87131, "Nuclear Medicine Programs, Written Directive Required" and focused on security and control of radioactive materials, radiation instrumentation and surveys, and management oversight.

Report Details

Summary of Facility

Permit No. AK-01810-02/03AFP for Elmendorf AFB Hospital authorized 10 CFR 35.100, §35.200, and §35.300 modalities. The nuclear medicine department performed approximately five diagnostic procedures per day and the therapeutic dosages of sodium iodide I-131 were less than 29 millicuries. The nuclear medicine department staff consisted of one senior technologist and two staff level technologists. To support the nuclear medicine licensed activities, a third staff level technologist had recently been hired. The permit Radiation Safety Officer was also a nuclear medicine technologist and had recently been promoted to management responsibilities within the radiology department. The last NRC inspection was conducted in July 1996. There were no violations identified during the previous NRC inspection.

1. Nuclear Medicine Program (87131)

1.1 Inspection Scope

The radiation safety program, training of personnel, physical security of radioactive materials, and management oversight were reviewed to verify that licensed activities were being conducted in a manner protective of the health and safety of workers and the general public. Additionally, the permitted programs were inspected to verify compliance with the NRC regulations, conditions of the USAF permit, and provisions of the USAF License No. 42-23539-01AF. The NRC assessment was performed based on observation of ongoing activities, interviews with personnel, and review of associated records.

1.2 Observations and Findings

The nuclear medicine department did not possess a radiopharmaceutical generator. The department ordered and received only unit dosages of radioactive materials prepared by a nuclear pharmacy. The containers of unit dosages were inspected properly when received by the nuclear medicine staff and subsequently returned to the nuclear pharmacy. The inspector observed the staff performing personnel monitoring after handling unsealed byproduct material in the restricted area hot lab. The NRC regulations in 10 CFR 20.1501 requires, in part, that each permittee make or cause to be made surveys that may be necessary to comply with the regulations in 10 CFR Part 20. The regulations in 10 CFR 20.1201(a)(2) provides the limits for occupational radiation dose to the skin of the whole body or to the skin of any extremity. The inspector observed the permittee using a radiation area monitor as a means to detect potential radioactive contamination on the skin. The radiation area monitor was not designed by the manufacturer to evaluate the potential radiological hazards that could be present on the skin. The inappropriate contamination survey is a violation of NRC requirements in 10 CFR 20.1501, to perform the surveys as required by 10 CFR Part 20 to evaluate the magnitude and extent of concentrations or quantities of radioactive materials and the potential radiological hazards that could be present **Violation (VIO) 03028641/2007005-01**.

The inspector performed a tour of the nuclear medicine department and observed the recent renovations within the department. Approximately two weeks prior to the inspection, the permittee had combined the hot lab (1D179) with room 1D180 by removing a wall and door that separated the two rooms. The permittee indicated that the renovations were initiated to make the workspace more efficient and provide for enhanced physical security of radioactive materials. The inspector determined that the permittee had surveyed and released a ventilation

hood, which was a piece of equipment in the hot lab. Additionally, the permittee had surveyed and released the walls and a door, which were part of the restricted area. The NRC regulation in 10 CFR 20.2103(a) requires, in part, that the permit holder maintain records of the results of surveys and calibrations required by 10 CFR 20.1501 for three years after the record is made. The inspector determined that the permittee had not maintained the survey records performed on the equipment and structures, which is a violation of NRC requirements **Violation (VIO) 03028641/2007005-02**. The nuclear medicine staff subsequently took surveys of the ventilation hood, which was still on the premises and documented the results of the survey. However, the walls and door had already been removed from the premises. Therefore, the staff documented the survey based on their recollection and memory of the survey results.

The inspector reviewed the use of radioactive materials at the facility. Personnel radiation exposure monitoring results were reviewed and determined to be satisfactory for the nuclear medicine procedures performed by the permittee.

Training of personnel was reviewed and determined to be commensurate with the activities performed. The annual audit of the radiation protection program content and implementation was performed as required by 10 CFR 20.1101(c) and the results of the audit were reviewed by management.

1.3 Conclusions

Two violations were identified during the inspection. These violations related to the failure to perform adequate personnel contamination surveys as required by 10 CFR 20.1501 and the failure to maintain survey records for the release of equipment and structures from a restricted area as required by 10 CFR 20.2103(a).

2. **Exit Meeting Summary**

On August 21, 2007, the inspector presented the preliminary inspection results to Lt. Col. Tyra and other members of the 3rd Medical Support Squadron. A final exit briefing was held telephonically with the USAF RIC on December 11, 2007, to discuss the findings of this inspection.

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Lt. Col. William Tyra, Commander, 3rd Medical Support Squadron
MSgt Joel Swidersdi, Radiation Safety Officer

INSPECTION PROCEDURE USED

IP 87131, Nuclear Medicine Programs - Written Directive Required

ITEMS OPENED, CLOSED OR DISCUSSED

Opened

| | | |
|---------------------|------|--|
| 03028641/2007005-01 | SLIV | Failure to perform personnel contamination surveys |
| 03028641/2007005-02 | SLIV | Failure to maintain survey records |

Closed

None

Discussed

None

LIST OF ACRONYMS USED

| | |
|--------|-----------------------------|
| CFR | Code of Federal Regulations |
| Notice | Notice of Violation |
| RIC | Radioisotope Committee |
| VIO | Violation |