

May 18, 2011

Mr. Gary Williams, Director
National Health Physics Program (115 HP/NLR)
Department of Veterans Affairs
Veterans Health Administration
2200 Fort Roots Drive
North Little Rock, AR 72114

SUBJECT: NRC INSPECTION REPORT 030-34325/11-31(DNMS) – VA MEDICAL
CENTER, PORTLAND, OREGON

Dear Mr. Williams:

On April 21, 2011, a U. S. Nuclear Regulatory Commission (NRC) inspector conducted a routine inspection at your VA Medical Center, (VAMC), located in Portland, Oregon. The inspection results were discussed with Mr. David Stockwell, Deputy Director and selected members of the medical center staff at the exit meeting on April 21, 2011. The enclosed report presents the results of this inspection.

This inspection was an examination of activities conducted under your license as they relate to radiation safety and to compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, independent measurements, and observation of activities in progress. Within the scope of this inspection, no violations of NRC requirements were identified.

In accordance with Title 10 of the Code of Federal Regulations (CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be 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 Web site at <http://www.nrc.gov/reading-rm/adams.html>.

G. Williams

-2-

Should you have any questions concerning this inspection, please contact Kevin Null of my staff at (630) 829-9854.

Sincerely,

/RA/

Patricia J. Pelke, Chief
Materials Licensing Branch
Division of Nuclear Materials Safety

Docket No. 030-34325
License No. 03-23853-01VA
Permit No. 36-01395-01

Enclosure:
Inspection Record No. 030-34325/11-31(DNMS)

G. Williams

-2-

Should you have any questions concerning this inspection, please contact Kevin Null of my staff at (630) 829-9854.

Sincerely,

/RA/

Patricia J. Pelke, Chief
Materials Licensing Branch
Division of Nuclear Materials Safety

Docket No. 030-34325
License No. 03-23853-01VA
Permit No. 36-01395-01

Enclosure:
Inspection Record No. 030-34325/11-31(DNMS)

DISTRIBUTION:

Cynthia Pederson
Anne Boland
Patrick Louden
Steven Orth
Carole Ariano
Paul Pelke
Patricia Buckley
Tammy Tomczak
Frank Tran

DOCUMENT NAME: G:\DNMS\III\Work in progress\IR-Portland Routine.docx

Publicly Available Non-Publicly Available Sensitive Non-Sensitive

To receive a copy of this document, indicate in the concurrence box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

OFFICE	RIV DNMS	E	RIII DNMS	E	RIII DNMS	E	
NAME	JMRazo:ps KGN for		KGNull KGN		PJPelke PJP		
DATE	05/18/11		05/18/11		05/18/11		

OFFICIAL RECORD COPY

Inspection Record

Region III
Inspection Report No. 030-34325/11-31(DNMS)
License No. 03-23853-01VA
Docket No. 030-34325

Licensee (Name and Address):
National Health Physics Program (115HP/NLR)
Department of Veterans Affairs
Veterans Health Administration
2200 Fort Roots Drive
North Little Rock, AR 72114

Location (Authorized Site) Being Inspected:
VA Medical Center
3710 SW U.S. Veterans Hospital Road
Portland, Oregon 97239

Permit No. 36-01395-01

Permittee Contact: Dr. William Tuttle, Ph.D., RSO Telephone No. (503) 220-8262
Priority: 2 Program Code: 2110/3610/3510

Date of Last Inspection: September 8, 2006 Date of This Inspection: April 21, 2011

Type of Inspection: () Initial () Announced (X) Unannounced
 (X) Routine () Special

Next Inspection Date: N/A (X) Normal () Reduced

Summary of Findings and Actions:

- (X) No violations cited, clear U.S. Nuclear Regulatory Commission (NRC) Form 591 or regional letter issued
- () Non-cited violations (NCVs)
- () Violation(s), Form 591 issued
- () Violation(s), regional letter issued
- () Follow-up on previous violations

Inspector: /RA/ Kevin G. Null for Date: 05/18/2011
 Jason M. Razo, Health Physicist, Region IV

Approved: /RA/ Date: 05/18/2011
 Patricia J. Pelke, Chief, Materials Licensing Branch
 Region III

Enclosure

PART I - LICENSE, INSPECTION, INCIDENT/EVENT, AND ENFORCEMENT HISTORY

1. AMENDMENTS AND PROGRAM CHANGES:

N/A - VA Medical Center, Portland, Oregon, is a permittee of the Department of Veterans Affairs (DVA) Master Materials License (MML).

2. INSPECTION AND ENFORCEMENT HISTORY:

During the previous National Health Physics Program (NHPP) inspection on August 11, 2009, no violations were identified.

The last NRC inspection was conducted September 8, 2006. No violations of the U.S. Nuclear Regulatory Commission's (NRCs) requirements were identified at the Portland location.

3. INCIDENT/EVENT HISTORY:

No licensee events for this permittee were reported since the last NRC inspection on September 8, 2006. No open Nuclear Materials Event Database (NMED) items were pending for this permittee.

PART II - INSPECTION DOCUMENTATION

1. ORGANIZATION AND SCOPE OF PROGRAM:

John Patrick, Medical Center Director
David Stockwell, Deputy Director
Mark Morgan, Assistant Director
William Tuttle, Ph.D., RSO

The VA Medical Center (permittee) was authorized by the VA Master Material License No. 03-23853-01VA (licensee) to possess a broad scope medical permit (Permit No. 36-01395-01). The permittee is authorized to use material for medical diagnosis, therapy, and research in humans, and for research and development as defined in 10 CFR 30.4. Mr. Craig Adams, a Program Manager with the NHPP, accompanied the NRC inspector during this inspection.

The RSO's chain of command included the → Safety Officer → Chief of Facilities → Associate Director → Director. The radiation safety budget is a subset of the hospital safety budget.

The nuclear medicine department included three full-time nuclear medicine technologists (NMTs). The nuclear medicine department had three imaging cameras, hot lab, injection room, treadmill room, waiting area, office space, and a reading room for the staff. The permittee did not use PET radiopharmaceuticals. The Cardinal Health radiopharmacy delivered unit doses directly to an anteroom near the hot lab. The NMTs were on a rotating on-call schedule for nights and weekends, but non-daytime or

weekend administrations were rare. The permittee's busiest day might typically include up to four cardiac scans, three bone scans, and three other assorted scans.

The permittee had ten authorized users with active research laboratories. Radioisotopes used in the research laboratories included hydrogen-3, iodine-125, sulphur-35, phosphorus-32, and carbon-14. The activities ranged from microcuries up to one millicurie per order. All research was conducted in an isolated section of the hospital complex that required authorization to enter. In addition to the unsealed radioisotopes, a self-shielded cesium-137 irradiator and a cesium-137 instrument calibrator sealed source were stored and used in the research area. The RSO also managed the long-lived radioactive waste storage program. Long-lived radioactive waste is stored in a sea-land container which is located outside and within the hospital complex. The RSO plans to retire soon, and hospital management was in the process of selecting a replacement.

2. SCOPE OF INSPECTION:

Inspection Procedures Used: 87126, 87131, and 87134

Focus Areas Evaluated: Manual Chapter 2800, Section 05.01.b.1.(a) through (h)

Nuclear Medicine Program

The inspector met an NMT at 0700 when the nuclear medicine department opened. The NMT provided a tour of the nuclear medicine department including the hot lab, injection areas, and imaging rooms. Only NMTs, authorized users (AUs), and the RSO have access to the secured hot lab. Postings and notices were in visible locations. Cardinal Health delivered the ammo boxes with unit doses around 0715 each morning. Either a NMT or AU signed for the delivery each day. The inspector observed daily checks of the dose calibrator and reviewed records of daily, quarterly, and annual checks of the calibrator for the last two years. Sources used for the dose calibrator quality control tests were locked in a cabinet in the hot lab. The inspector reviewed selected radioactive waste storage records, daily survey results, and weekly contamination wipe results that were saved on the permittee's Biodose program.

The inspector observed the NMT implement the package opening and receipt procedure and verified the proper use of a calibrated radiation survey instrument. The inspector observed the preparation and administration of a 20 millicurie Tc-99m stress dose to a patient. The NMT wore all required dosimetry and practiced good As Low As Is Reasonably Achievable (ALARA) techniques while working with the radiopharmaceutical dose and with the patient.

The NMTs had a radioactive waste tracking system within Biodose and stored the waste in different locked cabinets within the hot lab. Short-lived radioactive waste was removed after it had decayed ten half-lives and radiation levels were at background. The NMTs performed general housekeeping and waste removal for the nuclear medicine department. Medical center custodians were not allowed in the hot lab.

The inspector reviewed written directives that were issued over the last two years with focus on the most recent administrations. The permittee performed 25 administrations

that required a written directive in the last year. The majority of the directives were for whole body scans using 2 millicuries of iodine-131. The written directives met all the criteria in 10 CFR 35.40 and contained sections used to verify that women of childbearing age were not pregnant. The inspector reviewed the last two inpatient administrations which involved the use of sodium iodide-131 capsules for thyroid ablations. The RSO provided additional radiation safety specific training for nursing staff who were responsible for caring for in-patients who receive radiopharmaceutical therapy that required hospitalization.

Radiation Safety Office

The RSO is a full-time position within the Facilities Management Department at the medical center, and is dedicated to managing radiation safety activities. The records that were maintained in the office that were reviewed by the inspector included recent annual audits, Radiation Safety Committee meeting minutes, dosimetry, radioactive material inventory, and training. In 2010, for the NMTs, the maximum deep dose equivalent was 308 millirem and the maximum shallow dose equivalent was 324 millirem. The inspector walked-down the long-lived radioactive waste storage sea-land container that was located in the rear of the hospital complex. The container had mostly liquid waste from the research department, as well as iodine-131 contaminated items from previously treated patients. The RSO used the cesium-137 calibration source to calibrate handheld radiation survey instruments that were used in nuclear medicine and in the research areas.

Research Activities

The inspector and RSO toured multiple laboratories in the research area. The inspector asked laboratory technicians radiation safety questions related to inventory control, waste handling, and radiation survey meter use. The technicians demonstrated adequate knowledge of radiation safety principles and procedures. The RSO tracked radioactive material orders and packages that were distributed to the different laboratories. All packages were received through the RSO's office. In addition to unsealed radioactive material use, the inspector discussed experiments involving irradiation of cells using the self-shielded irradiator. Details of the safety and security of the irradiator can be found in Inspection Report 030-34325/11-32(DNMS).

The inspector interviewed permittee staff regarding initial and refresher training for radiation workers, including the NMTs. The inspector reviewed the radiation safety training slides and verified that the training adequately covered topics on declared pregnant women. In addition, the RSO was familiar with the "Scatterings" newsletter issued by the NHPP, and discussed selected topics with specific staff when necessary or pertinent. Researchers and NMTs indicated that they were comfortable in raising safety concerns to their supervisors, management, the RSO, the NRC, or the NHPP.

3. INDEPENDENT AND CONFIRMATORY MEASUREMENTS:

The NRC inspector conducted independent radiation surveys in the nuclear medicine department, in selected research laboratories, and in the long-term waste storage area. No unusual radiation levels were detected. The inspector also noted that where necessary, adequate shielding was in place to minimize exposures.

The inspector verified the radiation dose rates using a Thermo Electron Model RAD EYE G gamma radiation survey instrument, NRC serial number 086965, with a calibration due date of June 2, 2011.

4. VIOLATIONS, NCVs, AND OTHER SAFETY ISSUES:

No violations were identified by the NRC during the inspection.

5. PERSONNEL CONTACTED:

John Patrick, Medical Center Director
#* David Stockwell, Deputy Director
#* Mark Morgan, Assistant Director
#* Tom Anderson, Chief of Staff
#* Bill Stewart, Safety Manager
#* John Dodier, Chief of Facilities
#* William Tuttle, Ph.D., RSO
#* Kathy Chapman, Deputy Director of Patient Care Surgery
#* Craig Adams, Program Manager, NHPP

Use the following identification symbols:
Individuals present at entrance meeting
* Individuals present at exit meeting

-END-