February 23, 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 030-34325/11-07(DNMS) — MICHAEL E. DEBAKEY VA MEDICAL CENTER, HOUSTON, TEXAS

Dear Mr. Williams:

On January 25, 2011, the U. S. Nuclear Regulatory Commission (NRC) inspectors conducted a routine inspection at the Michael E. DeBakey VA Medical Center, located in Houston, Texas. The enclosed report presents the results of this inspection, which were discussed during an exit meeting at the conclusion of the inspection on January 25, 2011.

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 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.

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

Sincerely,

/RA/ by Kevin G Null Acting
For/

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

Docket No. 030-34325
License No. 03-23853-01VA
Permit No. 42-00084-06

Enclosure:
Inspection Report No. 030-34325/11-07(DNMS)

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OFFICIAL RECORD

INSPECTION RECORD

Region III
Inspection Report No. 030-34325/11-07(DNMS)
License No. 03-23853-01VA
Docket No. 030-34325
Permit No. 42-00084-06

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: Michael E. DeBakey VA Medical Center
2002 Holcombe Boulevard
Houston, Texas 77030-4298

Licensee Contact: Stan Bravenec, ARSO Telephone No. (713) 794-7188

Priority: 2 Program Code: 2110/3610/3510

Date of Last Inspection: April 29, 2008
Date of This Inspection: January 25, 2011

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

Next Inspection Date: TBD

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 Jason M. Razo

/RA by Kevin G Null Acting for/ Date: ***02/23/2011***
(Signature)

Approved Patricia J. Pelke, Chief, MLB

/RA by Kevin G. Null Acting for/ Date: ***02/23/2011***
(Signature)

Enclosure

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

1. AMENDMENTS AND PROGRAM CHANGES:

   N/A - Michael E. DeBakey VA Medical Center, Houston, Texas, is a permittee of the Department of Veterans Affairs (DVA) Master Materials License (MML).

2. INSPECTION AND ENFORCEMENT HISTORY:

   No violations identified during the last U.S. Nuclear Regulatory Commission (NRC) Inspection Report No. 030-34325/08-17

3. INCIDENT/EVENT HISTORY:

   No events reported since last NRC inspection.

PART II - INSPECTION DOCUMENTATION

1. ORGANIZATION AND SCOPE OF PROGRAM:

   The DeBakey VA Medical Center is a large medical broadscope permittee. Within the Veterans Integrated Service Network, the Houston VA services the greater Houston area within the South Central VA Healthcare Network. The permit issued by the DVA MML includes Title 10 of the Code of Federal Regulations (CFR) 35.100-300 use, as well as research and development using traditional radioisotopes and a self-shielded irradiator. There is no 35.400, 600, or 1000 used at this location.

   The Assistant Radiation Safety Officer (ARSO) has primary responsibilities for the day-to-day operation of the radiation safety program. He reports to the RSO, who also serves as the medical center safety manager.

   The new nuclear medicine suite is located on the second floor of the medical center. It is staffed by a new chief nuclear medicine technologist and seven other technologists. They work in two shifts with the first shift beginning operations at 0730. There is a PET suite on the first floor that is used on Monday/Wednesday/Friday; it has its own dedicated hotlab and performs 10-15 flourine-18 FDG scans per week. In nuclear medicine, the technologists perform approximately 20 scans per day using radioisotopes such as technetium-99m (Tc-99m), iodine-123 (I-123), iodine-131 (I-131). Unit doses and an occasional bulk Tc-99m are received from the radiopharmacy daily. They do not use a Molybdenum-99 generator.

   The Research Service Line is located at buildings/labs about a quarter mile walk from main medical center. The researchers use hydrogen-3 (H-3), carbon-14 (C-14), iodine-125 (I-125), phosphorus-32 (P-32), sulfur-35 (S-35), and a cesium-137 (Cs-137) irradiator.

2. SCOPE OF INSPECTION:

Inspection Procedure Used: 87134, 87131, 87122

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

Nuclear Medicine

The inspector observed morning preparations in the nuclear medicine hotlab and discussed package opening procedures and watched the technologist check for contamination and verify radiation exposure rates from the four ammo boxes containing unit doses from the radiopharmacy. On day of inspection, the permittee received bulk Tc-99m, and unit doses of Tc-99m and I-123. The inspector observed daily constancy checks of the dose calibrator (CRC-25R) and discussed linearity and accuracy checks. The Nuclear Medicine Department had adequate and calibrated instrumentation to measure radiation exposure rates. The inspector observed administration of a dose to a patient; the technologist used a syringe shield and kept the dose in a pig until right before use. All required protective clothing; whole body and ring badges were worn.

The inspector discussed written directives with the ARSO and Chief of Nuclear Medicine, and reviewed the written directives and verified that all required information and signatures were present. The staff verified that women of childbearing age either have had a hysterectomy or receive a pregnancy test prior to administration of the dose. They use NUREG 1556, Volume 9, Appendix U release criteria to determine whether patients administered more than 33 millicuries (mCi) of I-131 capsules may be released according to 10 CFR 35.75. Typical threshold for requiring inpatient treatment is 178 mCi. The inspector reviewed ancillary training for nurses tasked with caring for inpatient I-131 treatments. The ARSO provided pocket ion chambers (PICs) in lieu of dosimeters for the nursing to staff to track any dose they may receive during the care of the inpatient.

The nuclear medicine department had adequate security controls to ensure that only authorized personnel had access to the nuclear medicine department, and to ensure that radioactive materials were controlled while in use and in storage.

Research

Radioisotope use by researchers is coordinated by the ARSO. All packages come to the radiation safety staff and are then distributed to the correct principal investigator's laboratory. Materials used include I-125 in RIA kits, last ordered in June 2010, and C-14 (1 mCi). Also, P-32 was ordered monthly in 2009 at 0.25 microcuries (µCi), but only once in 2010 at 500 µCi. Researchers were knowledgeable of radiation safety practices and kept accurate inventories. Radiation safety staff would take control of waste at appropriate intervals. Researchers used the liquid scintillation counter in the nuclear medicine department to quantify research results and contamination wipe samples. Security of the labs that store radioactive materials was adequate.

Program Surveillance

Audits were performed at least quarterly by the ARSO; findings or areas for improvement were discussed at the quarterly Radiation Safety Committee meetings. The audits included 100% review of all written directives, confirmatory contamination

and area surveys, and verification of training, among other topics. Selected RSC minutes and audits since the last inspection were reviewed. These surveillance mechanisms effectively identified, tracked, and corrected radiation safety findings.

NRC Form 3 and "Caution, Radioactive Material," signs were posted in the correct locations. ARSO coordinates radiation safety training for new employees and annual refresher as required. Training included discussions on the "Scatterings" newsletter published by the VA NHPP. Dosimetry is tracked by the ARSO and segregated by area. For the nuclear medicine staff, maximum dose through 10/31/2010 was 396 mrem DDE and 3530 SDE. For calendar year 2009, maximums were 532 DDE and 3170 SDE. The ARSO maintains control of waste pathways by training a custodian on the use of a radiation survey instrument. The inspector observed the custodian take a survey and verify that radiation waste had decayed to background levels prior to removal with the regular trash. The inspector toured the large, long-term storage area in the basement of the medical center. In addition, the ARSO maintains portal monitors at two waste chutes and a third exit corridor to minimize the chance that radioactive waste leaves the medical center. The ARSO maintains adequate records for decommissioning; the most recently decommissioned area of the medical center was the old nuclear medicine lab on the first floor.

3. INDEPENDENT AND CONFIRMATORY MEASUREMENTS:

Radiation exposure rate surveys were taken with a Thermo Electron Corporation Rad EYE G, NRC s/n 086965, with a calibrated due date of June 2, 2011. Surveys were performed within the nuclear medicine department, research labs, irradiator, and waste storage areas. Measurements indicated that radioactive materials use areas were properly posted and dose rates were within regulatory limits in restricted and unrestricted areas.

4. VIOLATIONS, NCVs, AND OTHER SAFETY ISSUES:

No violations or safety significant findings were identified during the observations, interviews, or records review.

5. PERSONNEL CONTACTED:

#Jeff Triebel, Radiation Safety Officer (RSO)
*Stan Bravenec, Assistant RSO
#*Paul Yurko, NHPP
#*Dr. Kalavar, Chief of Staff
*Mark Biscone, Research Service Line
#*Dr. Vij DTCL, Chair RSC
#*Dr. Tamara, Chief Nuclear Medicine
#*Lara Horvith, DTCL Business Manager
*Christie Gutierrez, DTCL Chief Nuclear Medicine
*Sean Ryan, Assistant Director
*Marcella Louis, Director Quality Management
Dr. Rossen Acting Assoc Chief of Staff of research

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