

<b>APPENDIX A            NUCLEAR MEDICINE INSPECTION RECORD            (TEMPORARY INSTRUCTION 2800 / 029)</b>									
<b>REGION IV</b>									
Insp. Record No.	<b>00-01</b>	License #	<b>15-08114-01</b>			Docket #	<b>030-01744</b>		
Licensee Name	<b>Department of VA Dwight D. Eisenhower DVA Medical Center</b>								
Street Address	<b>South 4<sup>th</sup> Street Nuclear Medicine Service (115)</b>								
City, State, Zip	<b>Leavenworth, Kansas 66048</b>								
Location (Authorized Site) Being Inspected	<b>Dwight D. Eisenhower DVA Medical Center South 4<sup>th</sup> Street Nuclear Medicine Service (115) Leavenworth, Kansas 66048</b>								
Licensee Contact Name		<b>Muralihara G. Rao, MD, RSO</b>				Phone #	<b>FTS 700-758- 2000 X2124</b>		
Priority	<b>3</b>	Program Code	<b>02120</b>	NMED or Event No(s)	<b>NONE</b>				
Description		<b>N/A</b>							
Date of Last Inspection:		<b>2/1/97</b>			Date of This Inspection		<b>8/2-3/00</b>		
Type of Insp.	Announced		Routine	<b>X</b>	Initial				
	Unannounced	<b>X</b>	Special						
Next Insp. Date	<b>8/2005</b>	Normal		Reduced		Extended	<b>X</b>		
Justification for change in normal inspection frequency:		<b>An extension is proposed based on good licensee performance.</b>							
<b>Summary of Findings and Actions</b>									
No violations, Clear 591 or letter issued				<b>X</b>	Non-cited violations				
Violation(s), 591 issued			Violation(s), letter issued						
Follow up on previous violations:				<b>The previous inspection identified 3 violations involving; 1) an incomplete QMP; 2) no decommissioning file being established; 3) and an unsigned written directive. The violations were closed during this inspection.</b>					

Inspector - Printed Name	<b>C. L. Cain, Chief, NMLB</b>		
- Signature	/RA/	Date	8/17/00
Inspector - Printed Name	<b>Sabra Pope, Health Physicist</b>		
- Signature	/RA/	Date	8/17/00
Approved - Printed Name	<b>Mark Shaffer, Chief, NMIB</b>		
- Signature	/RA/	Date	8/19/00

<b>PART I-LICENSE, INSPECTION, INCIDENT/EVENT, AND ENFORCEMENT HISTORY</b>	
<b>1.</b>	<b>INSPECTION AND ENFORCEMENT HISTORY</b>
Unresolved issues; previous and repeat violations including NCV's; Confirmatory Action Letters; and orders.	
<b>NONE.</b>	
<b>2.</b>	<b>INCIDENT/EVENT HISTORY</b>
List any incidents, recordable events, or misadministrations reported to NRC since the last inspection. Citing "None" indicates that the NRC nuclear material events database, regional event logs, event files, and the licensing file have no evidence of any incidents or events since the last inspection.	
<b>NMED was checked by the inspector on 7/25/00 and no events were listed.</b>	
<b>PART II - INSPECTION DOCUMENTATION</b>	
<p>The inspection documentation part is to be used by the inspector to assist with the performance of the inspection. Note that <u>all focus elements are to be addressed during each inspection.</u></p> <p>All areas covered during the inspection should be documented in sufficient detail to describe what activities and procedures were observed and/or demonstrated. In addition, the types of records that were reviewed and the time periods covered by those records should be noted. If the licensee demonstrated any practices at your request, describe those demonstrations. The observations and demonstrations you describe in this report, along with measurements and some records review, should substantiate your inspection findings. Attach copies of all licensee documents and records needed to support violations.</p>	

1.	<b>ORGANIZATION AND SCOPE OF PROGRAM</b>
<p>Management organization; authorities and responsibilities; authorized locations of use; type, quantity, and frequency of byproduct material use; staff size; mobile nuclear medicine service; limited distribution of pharmaceuticals; and research involving human subjects.</p>	
<p><b>Dr. Paul Poulouse, Chief of Staff; Dr. M.G. Rao, Services Line Director of Surgery and Diagnostic, RSO; Dr. J. Amini, Radiology Chief; Connie Flaherty, Chief of Labs and Radiology. Two Nuclear Medicine (NM) Technicians work with Dr. Rao, RSO.</b></p> <p><b>The isotopes used are Cr-51, Tc-99, I-131 and Sr-89. The nuclear medicine department has ~4 patients daily, seeing annually ~1200 patients. Tc-99 and Tc-99 HDP were used for patient scans and cardiology studies in the amount of ~4Ci usage annually. Cr-51 was used ~4 times a year for uptake studies in the amount of ~1mCi annually. I-131 was used for thyroid therapies in the annual usage amount of ~50mCi. Sr-89 was used diagnostically in the amounts of ~4mCi annually.</b></p> <p><b>No human research protocols have been performed since the last inspection. The QMP was reviewed and the inspector concluded that all 10 CFR 35.32 requirements were met.</b></p>	
2.	<b>PERSONNEL CONTACTED</b>
<p>Identify licensee personnel contacted during the inspection (including those individuals contacted by telephone).</p>	
<p><b>Dr. Rao, MD, RSO Lou McLeod, Staff Nuclear Medicine Technologist Mike Usher, Staff Nuclear Medicine Technologist</b></p>	
3.	<b>INDEPENDENT AND CONFIRMATORY MEASUREMENTS</b>
<p>Areas surveyed; comparison of data with the licensee's results and regulations; and instrument type and calibration date.</p>	
<p><b>The inspector performed confirmatory measurements using a Victoreen, Model #190, Serial Number 2077, Probe SN #1304, Pancake, and End Window GM SN #164, calibrated 8/10/99, with background readings being observed at the walls of the hot lab, patient scanning rooms and radioactive waste rooms. Lead has been lined in the door of waste room C321C and the hot lab wall facing the patient scan room for shielding. The public dose limit of 2 millirem per hour was not exceeded.</b></p>	
4.	<b>OTHER</b>
<p>e.g. Posting and labeling</p>	

The inspector observed posting and labeling for waste rooms which had CAUTION RADIOACTIVE MATERIAL signs. Nuclear medicine areas were posted correctly, with NRC Form 3's being posted in three locations, along with the location for employees to view parts 19, 20 and 21.

### PART III - FOCUS ELEMENTS

1.	Adequate Program Surveillance and Corrective Actions	Yes	X	No	
<p>Adequate program reviews, including corrective actions for licensee findings and NRC identified violations; resources [financial and personnel] dedicated to the program; recurring problems; radiation safety officer [RSO] present; RSO authority and effectiveness; radiation safety committee involvement [if required]; management support of program; radioactive materials surveys.</p> <p><b>The inspector reviewed the Radiation Safety Committee quarterly meeting minutes. The RSO stated that he has adequate support from management for the radiation safety program. Included in the RSC minutes were sections which discussed the quarterly program audits, QMP review and a quarterly review of all therapy procedures.</b></p> <p><b>Annual Program reviews are also performed by the consulting Health Physicist.</b></p>					
2.	Knowledgeable Staff and Management	Yes	X	No	
<p>Use of qualified and knowledgeable individuals; safe work practices; all levels of management possesses sufficient knowledge to provide effective oversight of the program.</p> <p><b>The Nuclear Medicine technicians have been with this facility and under Dr. Rao's supervision for over 15 years. Dr. Rao is a nuclear medicine physician.</b></p>					
3.	Occupational and Public Doses Within Regulatory Limits	Yes	X	No	
<p>Offsite contamination events; effective event response; trending as low as reasonably achievable; release pursuant to 10 CFR 35.75; substantial potential for overexposure; monitoring and dose assessment program; release for unrestricted use; notification.</p>					

Radiation Detection Company provided monthly film badges. Records for dosimetry were reviewed from 1998-2000 with the highest ring badge exposure being 110 millirem and the highest whole body dose being 65 millirem. The occupational exposure results were well below the annual TEDE limit in 10 CFR 20.1201 of 5000 millirems per year.

Records were reviewed for Public dose assessments that were performed for the nuclear medicine department during 1994, included; hot lab, waste room, hallway and scanning room. The dose assessments performed by the licensee, and confirmatory measurements obtained by the inspector, concluded that procedures were well below 100 millirem per year limit as discussed in 10 CFR 20.1301(a).

<b>4.</b>	<b>Adequate Security and Control of Licensed Material</b>	Yes	X	No	
Security and control measures commensurate with the hazard of the material involved; inventory; proper ordering, receipt, and transfer of RAM; RAM in unrestricted / uncontrolled area; proper shipping, loss of RAM; proper disposal; notification.					
<b>No RAM present when technicians are out of the room. The nuclear medicine technician stated that the hot lab is kept locked at all times. The procedure for receipt of Tc-99 generators was reviewed and adequate for security existed for "after hours" delivery of RAM.</b>					

<b>5.</b>	<b>Use of Licensed Material Only as Authorized</b>	Yes	X	No	
Authorized users, uses, types and quantities of materials, and locations; adequate supervision by authorized users.					
<b>This was reviewed by the inspector and found to be in compliance with the byproduct material license requirements.</b>					

<b>6.</b>	<b>Radiopharmaceutical Administrations Conforming to the Physician's Written Directives</b>	Yes	X	No	
Quality management program - written directives, implementation, reviews; Misadministrations - identification, notifications, reports, and records.					
<b>The QMP was reviewed by the inspector and found to be in accordance with the licensee's program and with 10 CFR 35.32 requirements. The written directives were reviewed and no violations in this program area were identified. Patients that receive I-131 therapy of &gt;30mCi's are being sent to the Kansas City Hospital VA as well as any I-131 procedures in which the patients are admitted for hospitalization.</b>					

**PART IV - POST - INSPECTION ACTIVITIES**

1.	<b>Debrief With Regional Staff</b>
Post-inspection communication with supervisor, regional licensing staff, Agreement State Officer, and / or State Liaison Officer.	
<b>Debrief with NRC management conducted on 8/7/00.</b>	

2.	<b>Other</b>
<b>NONE.</b>	