UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

DEC 3 1992

Docket No. 030-03255
License No. 42-00084-06

Department of Veterans Affairs
Veterans Administration Medical Center
ATTN: Robert F. Stott, Director
2002 Holcombe Boulevard
Houston, Texas 77030

Gentlemen:

SUBJECT: NRC INSPECTION REPORT NO. 030-03255/92-01 (NOTICE OF VIOLATION)

This refers to the routine, unannounced inspection conducted by Mses. M. Linda McLean and Vivian H. Campbell of this office on November 2-5, 1992. The inspection included a review of activities authorized by Byproduct Material License No. 42-00084-06 at Veterans Administration Medical Center (VAMC), Houston, Texas. At the conclusion of the inspection, the findings were discussed with members of your staff.

The inspection was an examination of the activities conducted under the license as they relate to radiation safety and to compliance with the Commission's rules and regulations and the conditions of the license. The inspection consisted of selective examinations of procedures and representative records, interviews of personnel, independent measurements, and observation of activities in progress.

The inspectors recognized several program improvements initiated since the last NRC inspection. In particular, the audits conducted by the radiation safety department staff were notable. The audits appeared to be beneficial in that they had assisted the Radiation Safety Officer (RSO) in identifying violations of safety requirements. In so doing, prompt corrective actions were taken. In some cases disciplinary sanctions were employed to assure adherence to safety procedures. These actions demonstrated that the RSO has been delegated sufficient authority within the organization to enforce compliance with program requirements. In addition, the reorganization in the reporting structure for the RSO was another program improvement. The new reporting structure provided the RSO with a means for direct communication with hospital senior management, giving him the support and authority necessary to implement and oversee the radiation safety program.

However, based on the results of this inspection, certain of your activities appeared to be in violation of NRC requirements, as specified in the enclosed Notice of Violation (Notice). This violation relates to an observed failure of certain of your staff members to wear dosimetry monitoring badges.

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In addition to the apparent violation, five programmatic concerns of the broad scope radiation safety program were identified during the inspection and are discussed below. Although these concerns do not relate to requirements under your NRC license, review of these by your Radiation Safety Committee and the RSO may be beneficial to your radiation safety program.

- **Occupational exposures of non-employee workers** - Through radiation safety audits, individuals participating in licensed activities and classified by VAMC as "without compensation" (WOC) have been identified by the licensee working in areas where radioactive materials were used without benefit of external monitoring equipment. Although these individuals are required by license to wear such monitoring equipment, the exposures were not likely to exceed 10 CFR 20.202 limits. In any case, the licensee had previously identified this problem, and corrective actions had been immediately initiated. Therefore, this was not cited as a violation in accordance with 10 CFR Part 2, Appendix C, Section VII.B. However, the inspectors were concerned that the corrective actions instituted were not thorough enough to ensure recurrence in every case. The licensee should once again review this issue to ensure that corrective actions undertaken are comprehensive.

  Additionally, the inspectors discovered that the two WOCs had worn their whole body badges outside of VAMC, and, in fact, had worn them at other medical facilities. While these individuals had fortuitously not participated in licensed activities at these other facilities, the licensee should maintain awareness of their responsibility for evaluating radiation exposures for work performed only at VAMC. Dosimeters should not be worn at other licensed facilities.

- **Personnel contamination surveys** - A radiation contamination survey conducted by the inspector while in the nuclear medicine department disclosed detectable contamination on a nuclear medicine technologist's hand. The licensee's practice is to require monitoring for contamination only upon exiting the area. Although this incident did not result in a significant incident, it is nonetheless a concern because of the potential radiation hazard associated with external radiation contamination to personnel by their not following good radiation safety practices.

- **Operability checks of safety equipment** - Negative pressure in the nuclear medicine xenon imaging room was maintained as required by 10 CFR 35.205 by a dedicated exhaust system. The status of the exhaust system was monitored by a audible-visual alarm located over the door of the room. However, the operability of the alarm has not been verified since installation in 1991.

- **Maintenance of auxiliary equipment** - Nuclear medicine service uses a xenon collection system equipped with a xenon alarm that had been checked monthly. The monthly checks have indicated that the alarm would

sound if the charcoal trap reached saturation. The manufacturer of the collection system also recommends that certain maintenance procedures be performed that will lengthen the useful life of the charcoal trap. One procedure is to use moisture absorbent, color-indicating granules to protect the charcoal trap from moisture collection. After physically examining the system, the inspectors noted that maintenance of the absorbent canisters had not been performed as recommended. The licensee was unable to determine whether the absorbent canisters had been replaced on a regular maintenance schedule.

- **Radioactive material disposal records** - The licensee had initiated a disposal log for radioactive material released to the sanitary sewer system. The logs have been posted at all approved disposal sinks, and generally appeared to be utilized appropriately. The inspectors compared the total volume disposed of by this method with the radioactive material inventory records maintained in the research laboratories. Based on these inventory records, the disposal to the sanitary sewer system would not result in releases in excess of the standards defined in 10 CFR 20. However, as evidenced in one of the research laboratories, the actual quantity of radioactive liquid waste disposed of was difficult to determine from record review.

Also reviewed were the actions you had taken with respect to the violations observed during our previous inspection conducted on June 10-12, June 18-20, and June 28, 1991. The inspection verified that the corrective actions for these violations had been implemented as stated in your reply dated December 11, 1991, and that these actions were effective.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96.511.

Should you have any questions concerning this letter, please contact the inspectors identified above at (817) 860-8100.

Sincerely,

L. J. Callan, Director
Division of Radiation Safety
and Safeguards

Enclosure:
Appendix - Notice of Violation

cc:
State of Texas Radiation Control Program Director

Milton Gross, M.D., Director
Nuclear Medicine Service (111E)
Department of Veterans Affairs
810 Vermont Avenue, NW
Washington, D.C. 20420

bcc:
DMB - Original (IE-07)
JLMilhoan
LJCallan
JPJaudon
MRodriguez, OC/LFDCB (4503)
*WLFisher
*CLCain
*MLMcLean
*VHCampbell
LLKasner
*NMIS
*MIS System
*RIV Files (2)
*REHall, URFO

*W/IFS Form

*RIV:NMIS	*NMLS	*C:NMIS	D:DRSS	
MLMcLean	VHCampbell	CLCain	LJCallan	
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*Previously concurred