RI - DNMS Licensee Event Report Disposition

Licensee: Univ of VA

Event Description: possible exposure to member of PUBLIC

License No: 45-00034-26 Docket No: 030-03296 MLER-RI: 2006-019

Event Date: 4-18-06 Report Date: 4-30-06 HQ Ops Event #:

1. REPORTING REQUIREMENT

- [ ] 10 CFR 20.1906 Package Contamination
- [ ] 10 CFR 20.2201 Theft or Loss
- [X] 10 CFR 20.2203 30 Day Report
- [ ] Other
- [ ] 10 CFR 30.50 Report
- [ ] 10 CFR 35.3045 Medical Event
- [ ] License Condition

2. REGION I RESPONSE

- [ ] Immediate Site Inspection — Inspector/Date
- [ ] Special Inspection — Inspector/Date
- [ ] Telephone Inquiry — Inspector/Date
- [ ] Preliminary Notification/Report
- [X] Information Entered in RI Log
- [ ] Report Referred To:
- [ ] Daily Report
- [X] Review at Next Inspection

3. REPORT EVALUATION

- [✓] Description of Event
- [✓] Levels of RAM Involved
- [✓] Cause of Event
- [✓] Corrective Actions
- [✓] Calculations Adequate
- [N/A] Additional Information Requested from Licensee

4. N/A MANAGEMENT DIRECTIVE 8.3 EVALUATION

- [ ] Release w/Exposure > Limits
- [ ] Repeated Inadequate Control
- [ ] Exposure 5x Limits
- [ ] Potential Fatality
- [ ] Deliberate Misuse w/Exposure > Limits
- [ ] Pkging Failure>10 rads/hr or Contamination>1000x Limits
- [ ] Large# Indivs w/Exp>Limits or Medical Deterministic Effects
- [ ] Unique Circumstances or Safeguards Concerns

If any of the above are involved:

- [ ] Considered Need for IIT
- [ ] Considered Need for AIT

Decision/Made By/Date:

5. N/A MANAGEMENT DIRECTIVE 8.10 EVALUATION (additional evaluation for medical events only)

- [ ] Timeliness - Inspection Meets Requirements (5 days for overdose / 10 days for underdose)
- [ ] Medical Consultant Used-Name of Consultant/Date of Report:
- [ ] Medical Consultant Determined Event Directly Contributed to Fatality
- [ ] Device Failure with Possible Adverse Generic Implications
- [ ] HQ or Contractor Support Required to Evaluate Consequences

6. SPECIAL INSTRUCTIONS OR COMMENTS

Review at next routine inspection

- [ ] Non-Public
- [X] Public-SISP REVIEW COMPLETE

Inspector Signauture: [signature] Date: 6-14-06

Branch Chief Initials: Ag for PJH Date: 6-22-06

Location of File: G:\Reference\Blank Forms\LER FORM.wpd

Rev. 02/25/05

UNIVERSITY of VIRGINIA
ENVIRONMENTAL HEALTH and SAFETY
Special Materials Handling Facility

April 30, 2006

Penny Lanzisera
U.S. Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, PA 19406

Dear Ms. Lanzisera:

In follow-up to my verbal report of a possible exposure to a member of the general public, I am providing you with a written report of the event in accordance with 10 CFR 20.2203. If you have any questions, please call me or Debby Steva at 434-982-4911.

Sincerely,

Ralph Allen

Ralph Allen, RSO
University of Virginia
Office of Environmental Health & Safety

Cc: U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

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Incident Report

Date: April 26, 2006

From: Deborah Steva, Assistant RSO

To: Ralph Allen, RSO

Summary:

On April 18, 2006, a Brachytherapy patient required emergency care by a code team and was subsequently transported to the MICU. The code required personnel who are not considered radiation workers to potentially receive a dose in excess of the limit for members of the general public (100 mrem). As required by 10 CFR 20.2203(a)(2)(iv), we are required to provide a written report of the event to the NRC within 30 days of such an occurrence. The estimated dose for the maximally exposed code team member (member of the public) was 100 - 200 mrem.

Event Description:

At 3:59 pm on April 17, 2006, a Gyn Insertion of 68 mg Ra eq of Cs-137 was performed. At approximately 2:15 am on Tuesday, April 18, a code 12 was called for the brachytherapy patient located in Room 3105 Hospital East. A nurse who was providing routine care for the patient, along with the code team, provided emergency medical care to the patent until approximately 2:55 am. The patient was then transported to the MICU and placed in Room 3187 on 3 West. The attending radiation therapy physician was called and at 3:18 am the sources were removed from the patient and transported to the source storage room. The medical physicist was called in as well and performed a source inventory to ensure that all sources had been removed and were accounted for.

Through interviews with personnel attending the patient, it is estimated that the distance from sources to personnel ranged from approximately 6 inches to 1 meter. Dose rates measured at the bedside by the medical physicist at time of insertion were: 35 mR/hr at the bedside near the chest area of the patient and 20 mR/hr at 1 meter from the patient. It is estimated that the exposure rate at 6 inches from the patient, at a location nearest the sources, was approximately 800 mR/hr. The code team resident was located at the foot of the bed throughout the code and another individual placed a femoral line. These individuals were most likely the maximally exposed individuals. It was estimated that the maximum exposure time for any of the code team members, at close distances, would have been 30 minutes. Placement of the femoral line took approximately 10 minutes. The nurse who was on duty for routine care of the brachytherapy patient was wearing her dosimeter during the entire event. Her dosimeter was collected and sent to Landauer for an emergency read. The dose reported for her dosimeter was 40 mrem. All individuals involved in the emergency treatment were cognizant of the fact that the patient was a brachytherapy patient and was a source of radiation exposure. Code team members are not typically designated as radiation workers. It would not be possible to include all individuals, who may be asked to respond to a code, in our radiation protection program. It is felt that no further action is needed at this time.