



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

September 15, 2005

Docket No. 03002470  
EA No. 05-158

License No. 29-03297-02

Lydia Tarta  
Director of Oncology  
Mountainside Hospital  
Bay and Highland Avenues  
Montclair, NJ 07042

SUBJECT: INSPECTION REPORT NO. 03002470/2005001

Dear Ms. Tarta:

This refers to the NRC inspection conducted by telephone on July 25-26, 2005 to review the circumstances associated with your July 1, 2005 report to the NRC Operations Center that a nuclear imaging camera (Siemens Model ECAM) containing 28 sealed sources of gadolinium-153 was removed from your facility on June 30, 2005. At the time of your report, the camera was in transit to the MedX facility in Arlington Heights, Illinois. The enclosed inspection report documents the findings of the inspection, which were discussed with you and Robert Sasso of your staff during an exit meeting on July 26, 2005, at the conclusion of the inspection.

You will be advised by separate correspondence of the results of our enforcement decision.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

***Original signed by Pamela J. Henderson***

Pamela J. Henderson, Chief  
Medical Branch  
Division of Nuclear Materials Safety

Enclosure:  
Inspection Report 03002470/2005001

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State of New Jersey

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U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

INSPECTION REPORT

Inspection No. 03002470/2005001  
NMED No. 050431  
Docket No. 03002470  
License No. 29-03297-02  
Licensee: Mountainside Hospital  
Location: Bay and Highland Avenues  
Montclair, New Jersey 07042  
Inspection Dates: July 25-26, 2005 (by telephone)  
Dates Followup  
Information Received: July 28 and August 2, 2005 (by telephone)

Inspector: ***Original signed by Sgabriel*** ***8/11/05***  
\_\_\_\_\_  
Sandra Gabriel  
Senior Health Physicist  
date

Approved By: ***Original signed by Phenderson*** ***8/11/05***  
\_\_\_\_\_  
Pamela J. Henderson, Chief  
Medical Branch  
Division of Nuclear Materials Safety  
date

## **EXECUTIVE SUMMARY**

Mountainside Hospital  
NRC Inspection Report No. 03002470/2005001

This inspection was conducted in response to the licensee's July 1, 2005 report to the NRC Operations Center that a nuclear medicine imaging camera containing 28 sealed sources of gadolinium-153 was removed from the licensee's facility on the previous day (June 30, 2005). The camera containing the sources was returned to the licensee's facility on July 2, 2005. The licensee submitted a written report dated July 13, 2005, describing the sequence of events and corrective actions.

Within the scope of this inspection, two apparent violations were identified:

- failure to control licensed material as required by 10 CFR 20.1801/1802.
- failure to provide packaging for transportation in accordance with the requirements of 49 CFR 173.421(a) and 49 CFR 173.410.

## REPORT DETAILS

### **I. Organization and Scope of the Program**

a. Inspection Scope

The inspection was limited to a review of events surrounding the licensee's July 1, 2005 report to the NRC Operations Center that a nuclear medicine imaging camera containing 28 sealed sources of gadolinium-153 was removed from the licensee's facility on the previous day (June 30, 2005).

b. Observations and Findings

The licensee operates a community hospital providing both nuclear medicine and radiation oncology services. The license authorizes diagnostic use of sealed sources permitted by 10 CFR 35.500 in compatible devices registered pursuant to 10 CFR 30.32(g), including gadolinium-153 transmission line sources for use in a nuclear medicine imaging camera.

c. Conclusions

No violations or safety concerns were identified in this area.

### **II. Material Receipt, Use, Transfer, and Control**

a. Inspection Scope

The inspector followed up on the licensee's July 1, 2005 report that a nuclear medicine imaging system containing 28 sealed sources of gadolinium-153 had been removed from their facility. The inspector reviewed the licensee's event report to the NRC Operations Center and the licensee's written report dated July 13, 2005. The inspector also interviewed the Radiation Safety Officer (RSO) and the licensee's management representative.

b. Observations and Findings

The inspector developed the following chronology of events:

1. Licensee made arrangements to replace their Siemens ECAM nuclear medicine imaging system ("camera"). The Siemens camera was purchased by Philips, who contracted with MedX to remove it. The licensee's physics consultant instructed the nuclear medicine chief technologist (NMCT) to have the gadolinium-153 transmission sources removed from the camera in advance of removal of the camera from the licensee's facility.
2. On June 30, 2005, the contractor packaged the Siemens camera in a crate for removal from the licensee's facility. The crate was placed in a truck to be

transported to the MedX facility in Arlington Heights, IL (Illinois radioactive materials license IL-01170-01).

3. At 2:20 p.m. on July 1, 2005, the licensee's physics consultant noted that the Siemens camera was no longer in the Nuclear Medicine department. The consultant contacted the RSO. Immediate investigation determined that the NMCT forgot to have the sources removed. The licensee contacted Philips and MedX and spoke with the driver, who was at the Pennsylvania/Ohio border. The licensee informed the driver that the shipment may contain radioactive material and that he should wait for the licensee to contact the NRC. The driver reported that the camera was locked and secured inside the truck. Licensee contacted the NRC Operations Center at 6:13 p.m. Subsequent discussion with NRC resulted in a decision to ask the driver to return the shipment to the licensee's facility in New Jersey.
4. At 2:00 p.m. on July 2, 2005, the driver arrived at the licensee's facility. The sources, in their protective fixtures, were removed from the truck and secured in the licensee's hot lab. Radiation surveys of the sources in their protective fixtures, the truck, and the remaining contents of the truck were at background levels. The NRC Operations Center was notified at 2:23 p.m.
5. The licensee provided to NRC a written update, dated July 13, 2005, to the July 1, 2005 telephone report to the NRC Operations Center. The updated report included a discussion of the licensee's actions to prevent recurrence.

The licensee's corrective actions to prevent recurrence included disciplinary action against the NMCT (3-day suspension), reeducation of Nuclear Medicine staff, and institution of a policy that no Nuclear Medicine imaging equipment or ancillary device containing radioactive material will be disposed without informing and obtaining the consent of the RSO or his designee.

c. Conclusions

The inspector concluded that the licensee did not verify that the gadolinium-153 sealed sources were removed from the camera before it was removed from the licensee's facility. Although the licensee's NMCT was instructed to arrange for removal of the sources, he forgot to do this. After recognizing that the sources were missing, the licensee took immediate action to locate them and reported the circumstances to the NRC as required. The sources were promptly returned to the licensee.

The failure to secure licensed material stored in controlled or unrestricted areas from unauthorized removal or access is an apparent violation of 10 CFR 20.1801. The failure to control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and is not in storage is an apparent violation of 10 CFR 20.1802.

Based on the background readings found in the licensee's radiation surveys at the time of return of the sources, the inspector concluded that this event resulted in minimal risk of radiation exposure to any member of the public.

The licensee's corrective actions for failure to control licensed material were timely and comprehensive.

### **III. Transportation**

a. Inspection Scope

The inspection was limited to a review of the inadvertent shipment of 28 sealed sources of gadolinium-153 that were housed within a nuclear medicine camera.

b. Observations and Findings

The licensee was unaware they were presenting radioactive materials for shipment. Consequently, they did not confirm compliance with the packaging requirements of 49 CFR 173.421(a) and 49 CFR 173.410.

c. Conclusions

The failure to provide packaging for transportation according to the requirements of 49 CFR 173.421(a) and 49 CFR 173.410 is an apparent violation of 10 CFR 71.5(a).

## LIST OF PERSONS CONTACTED

### Licensee

Robert Sasso, Radiation Safety Officer  
Lydia Tarta, Director of Oncology Service Line