

RI - DNMS Licensee Event Report Disposition

Licensee: Twin County Healthcare
 Event Description: Loss of 137 Cs Iodine Calibrator Source
 License No: 45 18398-01 Docket No: 03 015006 MLER-RI: 2005-050
 Event Date: 5-31-05 Report Date: 7-19-05 HQ Ops Event #: _____

REPORTING REQUIREMENT

<input type="checkbox"/>	10 CFR 20.1906 Package Contamination	<input type="checkbox"/>	10 CFR 30.50 Report
<input checked="" type="checkbox"/>	10 CFR 20.2201 Theft or Loss <i>-30 day report</i>	<input type="checkbox"/>	10 CFR 35.3045 Medical Event
<input type="checkbox"/>	10 CFR 20.2203 30 Day Report	<input type="checkbox"/>	License Condition
<input type="checkbox"/>	Other _____		

2. REGION I RESPONSE

<input type="checkbox"/>	Immediate Site Inspection	Inspector/Date	<input type="checkbox"/>
<input type="checkbox"/>	Special Inspection	Inspector/Date	<input type="checkbox"/>
<input type="checkbox"/>	Telephone Inquiry	Inspector/Date	<input type="checkbox"/>
<input type="checkbox"/>	Preliminary Notification/Report	<input checked="" type="checkbox"/>	Daily Report
<input checked="" type="checkbox"/>	Information Entered in RI Log	<input checked="" type="checkbox"/>	Review at Next Inspection <i>change next inspection date to 1st Qtr 06</i>
<input type="checkbox"/>	Report Referred To: _____		

REPORT EVALUATION

<input type="checkbox"/>	Description of Event	<input type="checkbox"/>	Corrective Actions
<input type="checkbox"/>	Levels of RAM Involved	<input type="checkbox"/>	Calculations Adequate
<input type="checkbox"/>	Cause of Event	<input type="checkbox"/>	Additional Information Requested from Licensee

MANAGEMENT DIRECTIVE 8.3 EVALUATION

<input type="checkbox"/>	Release w/Exposure > Limits	<input type="checkbox"/>	Deliberate Misuse w/Exposure > Limits
<input type="checkbox"/>	Repeated Inadequate Control	<input type="checkbox"/>	Pkging Failure > 10 rads/hr or Contamination > 1000x Limits
<input type="checkbox"/>	Exposure 5x Limits	<input type="checkbox"/>	Large# Indivs w/Exp > Limits or Medical Deterministic Effects
<input type="checkbox"/>	Potential Fatality	<input type="checkbox"/>	Unique Circumstances or Safeguards Concerns
<input type="checkbox"/>	If any of the above are involved:		
<input type="checkbox"/>	Considered Need for IIT	<input type="checkbox"/>	Considered Need for AIT

Decision/Made By/Date: _____

MANAGEMENT DIRECTIVE 8.10 EVALUATION (additional evaluation for medical events only)

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

SPECIAL INSTRUCTIONS OR COMMENTS

- next inspection moved up to 1st Qtr 06
Last source policy - <1000 x App quantity not programmed

Non-Public *494* Inspector Signature: [Signature] Date: 11/3/05
 Public-SISP REVIEW COMPLETE Branch Chief Initials: [Signature] Date: 11/3/05

Marcus G. Kuhn
President & Chief Executive Officer

RECEIVED
REG 0711

2005 JUL 21 PM 1:23



• **TWIN COUNTY** •
Regional Healthcare
Where People Care

July 19, 2005

Pamela J. Henderson
Division of Nuclear Materials Safety/Medical Branch
United States Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

**Re: Missing ¹³⁷Cs Dose Calibrator Reference Source
License #: 45-18398-01**

To Whom It May Concern:

The purpose of this letter is to inform the Commission, in writing, of our recent loss of a 62 uCi ¹³⁷Cs (current activity) dose calibrator reference source. Although this small activity source does not warrant notification under 10 CFR 20.2201 we feel compelled to inform the commission in the event that this source is found, it may be properly identified and returned to Twin County Regional Hospital. We have and will retain a copy of this letter in our Radiation Safety Committee meeting minutes.

1. **Source Lost:** ICN Laboratories E-vial Source #87325. 113 uCi on 31 May 1979. The source is light blue in color and the chemical make up of the source is believed to be Cesium Chloride suspended in epoxy resin encased in a plastic vial. The source was housed in a lead "pig" that is normally used for ¹³¹I storage. (~0.5cm Pb)
2. **Circumstances:** On May 13, 2005 our nuclear medicine technologists started their morning quality control tests and noticed the ¹³⁷Cs source was not in its usual location in the "hot lab". The technologists immediately informed the director of Radiology who in-turn contacted our consultant Health Physicists. Following a strict search of the Nuclear Medicine Department the director of radiology began to question the other Radiology staff regarding personnel in or around the scan room or hot lab the previous evening. Afterwards and in the weeks to follow the director and the nuclear technologists made a search of the remaining hospital grounds with special attention being paid to the laundry service and garbage disposal areas.

19 July 2005

USNRC License 45-18398-01

Missing Source Notification

200 Hospital Drive • Galax, Virginia 24333 • (276) 236-1650 • (276) 236-1715 fax • mkuhn@tcrh.org

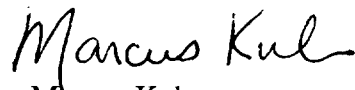
3. **Possible Exposures:** Assuming the source and the lead shield have separated, we can calculate the worst possible scenario for public/staff radiation exposure.

$$({}^{137}\text{Cs})\Gamma = \frac{3.32R \cdot \text{cm}^2}{\text{mCi} \cdot \text{hr}} \cdot 62\mu\text{Ci} \cdot \frac{1\text{mCi}}{1000\mu\text{Ci}} \cdot \frac{1000\text{mR}}{1\text{R}} = 205 \frac{\text{mR} \cdot \text{cm}^2}{\text{hr}} \cdot 24\text{hours} = 4.94\text{R}$$

4. We have informed the Virginia Bureau of Radiologic Health that this source is missing that they may be enabled to return it to us if found in a landfill in Southwestern Virginia.

If you should require more details or more information regarding this matter please do not hesitate to contact Mike Stoots, Radiology Director at (276) 236-8181.

Sincerely,



Marcus Kuhn,
Chief Executive Officer