

Hospital	Event Number: 41860
Rep Org: MONTGOMERY REGIONAL HOSPITAL Licensee: MONTGOMERY REGIONAL HOSPITAL Region: 1 City: BLACKSBURG State: VA County: License #: 45-19057-01 Agreement: N Docket: NRC Notified By: JAMES NUNN HQ OPS Officer: JOHN KNOKE	Notification Date: 07/21/2005 Notification Time: 14:30 [ET] Event Date: 07/20/2005 Event Time: 11:00 [EDT] Last Update Date: 07/21/2005
Emergency Class: NON EMERGENCY 10 CFR Section: 35.3045(a)(1) - DOSE <> PRESCRIBED DOSAGE	Person (Organization): RICHARD CONTE (R1) TOM ESSIG (NMSS)

### Event Text

#### MEDICAL EVENT - DELIVERED DOSAGE EXCEEDED PRESCRIBED DOSAGE

"On Wednesday July 20, 2005 it was discovered, during a routine audit of the Nuclear Medicine records, that two patients were administered I-131 in amounts exceeding 30 microcuries without a written directive. Furthermore, the doses fell more than 20% outside the prescribed dose range as set by the Authorized User (AU) physician. Below I will discuss the particulars of each administration.

"1. Patient #1: 25 year old female was administered 31  $\mu$ Ci of I-131 Sodium Iodide (Nal) on 18 July 2005 without a written directive prepared or signed by the AU previous to administration. The purpose of the study was to ascertain the thyroid uptake fraction and image the thyroid tissue. The prescribed dose range, as set by the AU, was 8 to 18 microcuries. This dose was 72% higher than the maximum dose allowed by the AU for this diagnostic procedure. (The patient's actual 24-hour thyroid uptake fraction was 27.5%).

"2. Patient #2: 61 year old female was administered 42  $\mu$ Ci of I-131 Nal on 14 July, 2005 without a written directive prepared or signed by the AU previous to administration. The purpose of the study was to ascertain the thyroid uptake fraction and image the thyroid tissue. This dose was 133% higher than the maximum dose allowed by the AU for this diagnostic procedure. (The patient's actual 24-hour uptake fraction was 14%).

#### "Dose Estimates From These Procedures

"1. Patient #1: Using data found in NUREG CR-6435 "Radiation Dose Estimated from Radiopharmaceuticals" we estimate the following doses for the (a) Whole Body: 1.209 rem, and (b) Thyroid (target organ) 40.3 rad

"2. Patient #2: Using data from NUREG CR-6345 and from other sources we estimate the following dose for the (a) Whole Body: 1.638 rem, and (b) Thyroid: 17.6 rad."