THIS EVENT IS NOT FOR PUBLIC DISCLOSURE PER AGREEMENT STATE REQUEST UNTIL 02/27/04

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-IV-04-008

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region IV staff on this date.

Facility
Altru Health System
Grand Forks, ND
License No.: 33-01599-03
North Dakota Agreement State Licensee

Licensee Emergency Classification
MOVE CURSOR TO SELECTION & TYPE X
___ Notification of Unusual Event
___ Alert
___ Site Area Emergency
___ General Emergency
_X_ Not Applicable

SUBJECT: MEDICAL EVENT - RADIATION DOSE TO AN UNINTENDED SITE

DESCRIPTION: On February 24, 2004, the North Dakota Department of Health (the State) notified NRC's Operations Center that a patient had received a dose of 0.022 gray (Gy) (2.2 rad) to an unintended site. The State had been notified of this event on January 28, 2004, by Altru Health Systems, an Agreement State licensee.

The prescribed dose was 50.4 Gy (5040 rad), using three separate treatments. The dose was to be administered using a Microselectron high dose rate remote afterloader unit manufactured by Nucletron (Serial Number 31021), using a 6 curie iridium 192 sealed source via a 1500 millimeters (mm) long catheter. During the first radiation treatment, the source traveled 995 mm instead of 1500 mm; consequently, the patient's ankle and calf received an unintended dose of 0.022 Gy (2.2 rad). The ankle and calf were approximately 30 cm from the stationary source. The source never entered the patient's body. The licensee indicated that the apparent cause of the error was a failure to notice that the wrong length of catheter was entered into the afterloader unit's treatment software.

The treatment planning software system uses a default value of 995 mm for the catheter length. When preparing the treatment plan for the first of the three planned radiation treatments, the medical physicist did not notice that the catheter length in the treatment plan was incorrect (995 mm instead of the actual 1500 mm catheter that would be used). When the radiation oncologist and the medical physicist performed a pretreatment review to ensure that the important parameters of the planned treatment were correct, they did not check the catheter length in the treatment plan to ensure that it was correct.

The radiation oncologist notified the patient the same day the error was discovered. The records of all patients previously treated by this same methodology were reviewed to determine if a similar error had occurred during any other high dose rate remote afterloader treatments, but no other errors of this type were found. To prevent future errors, the licensee developed a program of formal cross checking of the pretreatment printout that would include verifying that the catheter length specified in the treatment plan is correct. The State is still investigating the event.

Region IV received notification of this occurrence from NRC's Operation Center on February 25, 2004. Region IV has informed OEDO, NMSS, STP and the Region's SLO and PAO.

This information has been discussed with the State and is current as of 3:30 p.m. CST on February 26, 2004.

ADAMS ACCESSION NUMBER: ML040580083

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