

Date: August 16, 2005

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE PNO-I-05-023

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 I staff on this date.

**Facility**

TJUH, Inc.  
111 South 11<sup>th</sup> Street  
Philadelphia, Pennsylvania

**Licensee Emergency Classification**

☐ Notification of Unusual Event  
☐ Alert  
☐ Site Area Emergency  
☐ General Emergency  
☒ Not Applicable

Docket No.: 03002941

License No.: 37-00148-06

SUBJECT: IODINE-131 CONTAMINATION EVENT RESULTING IN A SKIN EXPOSURE LIKELY TO EXCEED 50 REM (0.5 Sv)

At 3:34 p.m. on August 12, 2005, the licensee's Assistant Radiation Safety Officer (ARSO) contacted the NRC Operations Center to report that iodine-131 contamination was found on the skin of a nuclear medicine technologist's finger and that the resulting skin exposure was likely to exceed the regulatory limit of 50 rem (0.5 Sv). The licensee preliminarily estimated a current accumulated dose of 800 rad (8.0 Gy) over a one square centimeter area to the technologist's finger. A direct bioassay identified an uptake of 101 nanocuries in the technologist's thyroid. The technologist was prescribed a thyroid blocking agent, and is not expected to exceed any organ dose limits.

The ARSO stated that the technologist administered 148 millicuries of iodine-131 to a patient on August 11, 2005, at approximately 11:00 a.m. Later that day, the technologist identified contamination on her right thumb. The licensee's ARSO initiated an investigation and estimated that 5 microcuries of iodine-131 was present on the technologist's skin at that time. The ARSO stated that decontamination techniques removed 3 microcuries of iodine-131 contamination. Surveys of the licensee's facilities and the technologist's clothes identified no further contamination. On August 15, 2005, the ARSO informed Region 1 that the licensee recalculated the dose over a 10 square centimeter area and determined the current accumulated dose to be 87 rad. The licensee is continuing decontamination efforts to reduce additional accumulation of dose. The licensee is continuing its investigation and refining its estimate of the skin exposure. In accordance with 10 CFR 20.2203(a)(1), the licensee will provide a written report to NRC within 30 days.

Region I initiated a special inspection on August 16, 2005, to review the circumstances surrounding the exposure.

The Commonwealth of Pennsylvania has been notified of this event. The Region I Office of Public Affairs is prepared to respond to media inquiries. This information is current as of 7:30 a.m., August 16, 2005.

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