November 30, 1990

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-IV-90-42A

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: Tumbleweed X-Ray Company
Greenwood, Arkansas
License: 03-23185-01
Docket: 030-28741

Licensee Emergency Classification:
____ Notification of Unusual Event
____ Alert
____ Site Area Emergency
____ General Emergency
__X__ Not Applicable

SUBJECT: REPORT OF OVEREXPOSURE TO RADIOGRAPHER (UPDATE)

On November 26, 1990, NRC Region IV was notified by the licensee that an assistant radiographer was experiencing reddening in his right hand. The report indicated that the injury is likely to have resulted from radiography activities conducted with a 50-curie iridium-192 source in Oklahoma on November 12, 1990, during which the assistant's pocket dosimeter registered off scale.

The results of the assistant's whole body TLD badge were reported to Region IV on November 28 as 365 millirem (whole body) and 395 millirem (skin). NRC is investigating why this reading is so low in comparison with an estimated dose to the hand in excess of 7000 rads.

The assistant was admitted as an inpatient and was examined by a physician at the burn center at Baptist Medical Center, Oklahoma City, on November 29, 1990. A Region IV inspector was present at the center during the examination Thursday evening (November 29) and reported that the assistant's fingers are blistered and painful and the physician suspects that amputation of several fingers may be necessary. The physician has been placed in contact with Oak Ridge Associated University's (ORAU) REACT[s] personnel who can provide guidance regarding patient treatment and can assist with dose estimation. Cytogenetic studies have been arranged through ORAU.

Information gathered by the Region IV inspector would suggest that the hand exposure occurred when the assistant upright[e]d a stand holding the guide tube which fell after the source was cranked out of the exposure device. Although the assistant stated that he cranked the source back into the device before repositioning the stand, it now appears likely that the source moved out of the device when the crank handle was laid aside. Since the guide tube used was only three feet in length, the source is presumed to have been at or near the point where the guide tube was handled by the assistant.

The Region IV inspector will continue his investigation of the incident today.

The licensee's owner made a verbal commitment to a Region IV staff member on November 29, 1990, that neither the radiographer nor the assistant will be permitted to engage in licensed activities until so authorized by NRC. Region IV has drafted a Confirmatory Order to the licensee confirming this commitment.

This information is complete as of 8:00 a.m. CST, November 30, 1990.

CONTACT: Charles L. Cain (FTS 728-8186)

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