PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE PNO-II-96-080

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 Region II staff in Atlanta, Georgia on this date.

Facility
Professional Service
Industries, Inc.
Bristol, Virginia 24201
Dockets: 03031560 License No: 45-25088-01

Licensee Emergency Classification
Notification of Unusual Event
Alert
Site Area Emergency
General Emergency
X Not Applicable

Subject: REPORTED RADIATION OVEREXPOSURE TO TECHNICIAN'S HAND

On November 8, 1996, the license reported a potential extremity overexposure, to the hand of a technician. The technician operated a Campbell Pacific Nuclear MC-1 gauge at temporary job sites under a license issued to the Bristol, Virginia facility. The gauge contains up to 10 millicuries of cesium-137 in a source at the end of a source rod and up to 50 millicuries of americium-241 within the gauge housing. The cesium source is stored within the gauge housing and pushed out of the housing into the ground during use. The dose rate on the surface of the cesium source is estimated by the gauge manufacturer to be 528 rads per hour.

On November 6, 1996, the licensee informed Region II that the technician had reported a concern that reddening and blisters on the hand may have resulted from radiation exposure.

On November 7 and 8, the licensee and an NRC inspector on site performed a reenactment of the use of the gauge and interviewed the technician. The technician reported routinely touching the cesium source during gauge use. This was due to difficulties in pushing the source out of the gauge housing. Based on this reenactment and discussions with the technician, the licensee determined that the technician may have received an extremity overexposure in excess of 50 rems. Based on initial estimates of the time the technician may have held the source, the NRC concurs that the cumulative dose to the hand exceeded the NRC annual limit for extremity dose of 50 rems.

The individual has been examined by a physician. The NRC, Region II, will issue a Confirmatory Action Letter today to document the licensee's proposed actions. The actions include determining the dose to the technician's hand, determining the causes of the gauge malfunction and exposure, and training licensee personnel on lessons learned. The NRC will form an Augmented Inspection Team (AIT) to review the circumstances surrounding the event and independently determine the dose to the technician.

The Commonwealth of Virginia has been informed.

This information is current as of 2:00 pm on November 8.

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