

INES Event Rating Form

Event Title:	Overexposure to Radiographer
Date of Event:	2011-09-12
Event Location / Facility Name:	Lavaca, Texas/Carribbean Inspection and NDT Services
Event Country:	United States
Type of Event:	Radiation Source

INES Rating:	3
Status of Rating:	Final
Date of Rating:	2015-08-26

Impact on People and Environment		
<i>Release beyond authorized limits?</i>	<input type="checkbox"/>	
<i>Overexposure of a member of the public?</i>	<input type="checkbox"/>	
<i>Overexposure of a worker?</i>	X	
Impact on the Radiological Barriers and Controls at Facilities		
<i>Contamination spread within the facility?</i>	<input type="checkbox"/>	
<i>Damage to radiological barriers (incl. fuel damage) within the facility?</i>	<input type="checkbox"/>	
Degradation of Defence In-Depth?	<input type="checkbox"/>	
Person injured physically or casualty?	X	
Is there a continuing problem?	<input type="checkbox"/>	

Event Description:

Note: When the ERF is published on IAEA NEWS, the first 300 characters of the event description will appear on the NEWS home page.

Preliminary information had indicated that a radiographer trainee received an extremity exposure to the fingers, as result of removing a radiography camera guide tube with the source still in it and touching the source. The trainee's fingers indicated observable deterministic effects, which included blistering of the thumb, index, and middle fingers. These types of effects correspond to an exposure range of 20 to 30 Sv (2000 to 3000 rem) to the extremities. The trainee received medical care at an area hospital. The trainee's whole body dosimeter was processed immediately and the dose result indicated 14 mSv (1.4 rem). On September 22, 2011, Texas performed an onsite investigation. Interviews with the radiographer trainer and trainee revealed conflicting information. The trainer stated that the trainee never removed the guide tube from the exposure device and that the trainee never had access to the device until the source was fully shielded and in the locked position. The trainer also stated that the trainee could not have been injured on September 12, 2011. The licensee conferred with the Radiation Emergency Assistance Center/Training Site (REAC/TS). Texas concluded that that the trainee had received the radiation overexposure. The trainer's training status was revoked in the State of Texas and other radiographers received additional training. On January 2, 2013, the exposed trainee contacted Texas again and stated that radiation symptoms to this individual's right hand were getting worse. The trainee was told to contact a physician at REAC/TS. The individual also contacted a physician in the Houston, Texas area and received additional care. On May 23, 2013, the radiography trainee's right index finger was amputated. The trainee also stated that he was experiencing trouble with his thumb and middle finger. NRC EN47283

Justification of INES Rating:

Note: When the ERF is published on IAEA NEWS, the justification of the INES rating will only appear to privileged users.

A Level 3 is warranted for the occurrence of a non-lethal deterministic effect. See Section 2.3.1 INES User's Manual 2008 Edition (IAEA-INES-2009) http://www-pub.iaea.org/MTCD/publications/PDF/INES-2009_web.pdf

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Annexes:

Annex Title	Category	Description (optional)
Click here to enter text.	Choose an item.	Click here to enter text.
Click here to enter text.	Choose an item.	Click here to enter text.