Australian Government

Australian Radiation Protection and Nuclear Safety Agency

AUSTRALIAN RADIATION INCIDENT REGISTER (ARIR)

INTERIM SUMMARY OF INCIDENTS BY CATEGORY FOR PERIOD: 1 JANUARY TO 31 DECEMBER 2011

The total number of radiation incidents reported to the Register that occurred during the period from 1 January to 31 December 2011 was **118**. A summary of the incidents in each category is given below:

Diagnostic Radiology: 57 Incidents

19 incidents: Unnecessary/unplanned CT scan
9 incidents: Unnecessary repeat CT scan
8 incidents: General diagnostic X-ray performed on wrong region of patient
7 incidents: CT scan performed on wrong region of patient
6 incidents: Unnecessary/unplanned general diagnostic X-ray
2 incidents: Unnecessary repeat general diagnostic X-ray
2 incidents: Radioscopy procedure performed on patient by unlicensed personnel
1 incident: CT scan of patient later found to be pregnant
1 incident: Repeat CT scan required due to intermittent error with CT scanner
1 incident: Repeat general diagnostic X-ray required due to image intensifier failure
1 incident: Unnecessary/unplanned bone mineral densitometry

Nuclear Medicine: 33 Incidents

7 incidents: Incorrect diagnostic scanning agent/radiopharmaceutical injected
4 incidents: Incorrect scanning procedure performed
4 incidents: Wrong dose given
3 incidents: Ineffective scans due to inadequate reconstitution of radiopharmaceutical
3 incidents Patients rescanned due to equipment failure
2 incidents: Scanning agent/radiopharmaceutical administered but scan not performed
2 incidents: Incorrect scanning agent/radiopharmaceutical supplied
1 incident: Incorrect patient given the radiopharmaceutical due to mistaken identity
1 incident: Unnecessary repeat scan
1 incident: Scanning agent/radiopharmaceutical administered to a patient later found to be pregnant
1 incident: Incorrect therapeutic dose supplied but not given (near miss)
1 incident: Six patients received additional doses of between 5 mSv and 20 mSv due to molybdenum-99 breakthrough from a molybdenum-99/technetium-99m generator
1 incident: Defective batch of scanning agent resulted in 9 patients needing to be rescanned
1 incident: Cyclotron worker exposed to fluorine-18 when removing a valve which had failed
1 incident: Technologist sprayed with radiopharmaceutical when the syringe disconnected

Radiotherapy: 10 Incidents

4 incidents: Misalignment of treatment area

1 incident: Incorrect area treated

1 incident: Incorrect dose given to brachytherapy patient – larger than prescribed (due to a computer software error)

1 incident: Incorrect dose using superficial X-ray therapy – larger than prescribed

1 incident: Incorrect treatment prescription used (dose and field size)

1 incident: Repeat CT scan performed during radiotherapy planning

1 incident: Radiotherapy planning CT scan of patient later found to be pregnant

Borehole Logging: 4 Incidents

2 incidents: Radioactive sources retrieved after becoming stuck during well logging exploration

1 incident: Borehole logging tool stuck in well and needed to be abandoned

1 incident: Worker exposed when transferring the radioactive source to its transport container

Portable Density/Moisture Gauge (PDMG): 3 Incidents

All incidents involved a PDMG being run over by a vehicle

Industrial Radiography: 2 Incidents

1 incident: Worker entered exposure area during radiography work

1 incident: Radiographer exposed when straightening damaged source delivery tube

Sources Lost: 2 Incidents

1 incident: Exempt low activity radioactive source missing from a waste store

1 incident: Low activity nuclear medicine marker source missing

Cabinet X-ray: 1 Incident

Unauthorised access to baggage X-ray inspection machine – no exposure

High Recorded Dose: 1 Incident

High dose on personal radiation monitor, determined not received by worker

Laser: 1 Incident

An eye injury from a laser pointer

Radiation Gauge: 1 Incident

Radiation gauge retrieved from a radiation store which had been repositioned by flood waters

Radiofrequency: 1 Incident

RF exposure to worker who was in close proximity to a radar tower

Theft of Sources: 1 Incident

PDMG (in transport case) missing from a company vehicle

Transport: 1 Incident

During transportation of four caesium-137 sources, one source became detached and was later found undamaged in the packaging