



Australian Government

Australian Radiation Protection and Nuclear Safety Agency

REGULATORY GUIDE: Reporting an Accident

Regulation 46 of the [Australian Radiation Protection and Nuclear Safety Regulations 1999](#) (the regulations) is a licence condition that applies to every source and facility licence issued by the CEO of ARPANSA.

It requires the licence holder to take all reasonably practicable steps to prevent an accident involving controlled materials, controlled apparatus (both ionising and non-ionising) or controlled facilities. If an accident happens, the licence holder must take all reasonably practicable steps to control the accident and to minimise the consequences, including injury to any person and impact on the environment.

The licence holder must tell the CEO about the accident within 24 hours and provide a written report about the accident within 14 days.

This document provides guidance on what, when and how to report an accident.

What to report as an accident

An accident is any unintended or unexpected event when using controlled apparatus, controlled material or a controlled facility, that either leads to or has the potential to cause injury, damage or harm to any person or the environment.

For nuclear installations, any event that is rated at, or has the potential to be rated at, Level 2 or above on the [International Nuclear Event Scale](#)¹(INES) is regarded as an accident under regulation 46. The [INES User's Manual](#) provides guidance on rating events.

Appendix A provides examples of types of accidents that must be reported under regulation 46.

Note: If there is uncertainty about whether an event should be rated as an accident under regulation 46, it is recommended that it be reported within the 24 hour period. ARPANSA will then make a determination and advise the licence holder accordingly.

When to report an accident

An accident must be reported to the CEO of ARPANSA within 24 hours of it occurring or of the licence holder becoming aware of it. This initial notification must be followed up by a written report within 14 days.

How to report an accident

During normal business hours licence holders should phone their designated regulatory officer or the Director, Regulatory & Policy Branch on (02) 9541 8331.

¹ The International Nuclear Event Scale User's Manual, 2008 Edition

Outside normal business hours, licence holders should contact the ARPANSA 24 Hour Radiation Emergency Coordination Centre on (03) 9432 5384. Calls to this number will be responded to by the Duty Officer.

As soon as possible after the telephone notification an [Accident Notification Form](#) should be completed and faxed to (02) 9541 8348 or emailed to licenceadmin@arpansa.gov.au.

The licence holder must provide the CEO with a written report within 14 days of the initial accident notification. The report must contain an account of the accident and its consequences, including where possible:

1. A root cause analysis
2. An estimate of the dose received by any person
3. An assessment of any environmental impact
4. Any corrective action taken as a result of the accident
5. Actions taken to prevent the recurrence of similar events
6. The impact on safety
7. Identified security implications

Other abnormal events/incidents

Any other abnormal event or incident that has the potential to affect safety should be reported on a quarterly basis except as otherwise required by special licence conditions.

An event/incident in this category is any unintended or ill-advised event when using ionizing radiation apparatus, specified types of non-ionizing radiation apparatus or radioactive substances, which results in, or has the potential to result in, an exposure to radiation to any person or the environment, **outside the range of that normally expected for a particular practice**, including events resulting from operator error, equipment failure, or the failure of management systems that warranted investigation.

Note: This reporting requirement is in addition to the reporting mentioned above for those incidents which are considered to be accidents for the purposes of regulation 46.

Appendix A

Examples of types of incidents which would be rated as accidents and must be reported within 24 hours under regulation 46

1. An event that causes or may lead to radiation doses exceeding the statutory annual dose limits to workers or members of the public.
2. Any diagnostic or interventional medical procedure resulting in an observable acute radiation effect.
3. Lost or stolen controlled apparatus or controlled material Group 2 or above.
4. A package containing an unsealed source of more than 10,000 times the exemption level² is inappropriate, or is damaged during freight handling or transport in such a way that safety provisions are degraded.
5. Unintentional or unauthorised discharge of controlled material into the environment when the activity discharged exceeds 10,000 times the exemption level².
6. Damage to, or malfunctioning of, a controlled apparatus or device containing controlled material where it is likely that a person could have received a dose of 5 mSv for occupationally exposed persons and 1 mSv in all other cases.
7. Contamination with, or dispersal of, a controlled material where a surface, substance or material is contaminated by a controlled material from the spillage of more than 10,000 times the exemption level².
8. A radiation source is out of control. For example, controlled material is not safely secured or shielded, or contamination is not confined.
9. Exposure to ultraviolet radiation which results in noticeable eye or skin damage.
10. Hazardous levels of radiofrequency leakage in a readily accessible area from an industrial radiofrequency heater.

² Exemption levels for each radionuclide are specified in Schedule 2 Part 2 of the [ARPANS Regulations](#)