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| Mandatory reporting of radiation incidents |
| Management Licence holder’s obligations |
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# Introduction

The Victorian *Radiation Act 2005* (the Act) has the objective of protecting the health and safety of persons and the environment from the harmful effects of radiation. The Department of Health (Department) administers this legislation.

The Act seeks to fulfil this objective by establishing a licensing framework to regulate the conduct of radiation practices and the use of radiation sources.

Any person who conducts a radiation practice must hold a management licence (unless exempted from that requirement). The management licence holder must not knowingly, recklessly or negligently fail to comply with every condition of their licence.

Failure to comply with a condition of licence is an indictable offence.

# Scope

This document sets out the mandatory radiation incident reporting requirements to which holders of management licences issued by the Department are subjected.

All management licences include a condition which requires a management licence holder to meet the requirements of this document .

# Why does the Department want to be notified about radiation safety incidents?

The notification to the Department’s Radiation Team of radiation safety incidents serves several purposes:

1. It alerts the Department of any ongoing risk to human health or the environment. For example, a notification of a transport incident where there has been a spill of radioactive material on a road requires an immediate response from the Department to assess the risks and where required to coordinate a clean-up. Similarly, the report that radioactive material has been lost or stolen will trigger immediate Departmental action which includes alerting other agencies regarding the loss or theft;
2. the lessons learned from the investigation of the incident can then be used to help prevent similar incidents at that workplace as well as other workplaces;
3. this knowledge allows us to share the learning with other stakeholders who may conduct similar practices with the hope of reducing the likelihood of a similar incident occurring at another site;
4. it allows the Department to meet national obligations of reporting radiation safety incidents to the Australian Radiation Protection and Nuclear Safety Agency . For information about that register, please refer to [www.arpansa.gov.au/radiationprotection/arir](http://www.arpansa.gov.au/radiationprotection/arir)

# What type of incidents must be reported to the Department’s Radiation Team?

Table 1 outlines the requirements for management licence holders to report certain types of incidents to the Department. It also describes when the incident must be reported and the manner in which it must be reported to the Department

Where incidents are required to be reported in writing to the Department, the licence holder must ensure that an incident report is submitted using the notification form available online at www.health.vic.gov.au/radiation and sent by email to [Radiation.Safety@health.vic.gov.au](mailto:Radiation.Safety@health.vic.gov.au)

A public hospital that holds management licences are subject to the requirement to notify the Department in the manner described in this document, despite also having to submit incidents reports via the Victorian Health Information Management System (VHIMS). Please note that this requirement will be reviewed when the VHIMS system is fully implemented. For further information about VHIMS, please refer to [www.health.vic.gov.au/clinrisk/vhims](http://www.health.vic.gov.au/clinrisk/vhims)

Where incidents are required to be reported immediately upon the licence holder becoming aware of the issue, the report must be made by telephone to the Department’s Radiation Team:

1. during business hours by calling 1300 767 469; or
2. outside business hours by calling 1300 790 733.

# Investigation of incidents.

Radiation safety incidents may signal a breakdown of radiation safety systems and so require thorough investigation and response. The investigation of an incident should include a systematic and comprehensive analysis of the facts to identify contributing factors and enable strategies to be developed and implemented to minimise the occurrence of similar events in the future.

There are a number of methodologies that can be used for investigating radiation safety incidents. Root Cause Analysis (RCA) is one such investigation methodology.

The Department’s investigation of incidents reported in accordance with this document will involve, as a minimum, an assessment of the incident report against the following criteria:

1. accuracy;
2. completeness;
3. adequacy of the procedures that were in place at the time of the incident;
4. proposed or actual changes to procedures as a result of the investigation.

The investigation may also involve the Department conducting a field inspection of the site where the incident occurred.

In addition, the Department may also refer incident reports to the Radiation Advisory Committee appointed by the Minister for Health under Part 10 of the *Radiation Act 2005*.

# Further information.

Website: <https://www.health.vic.gov.au/public-health/radiation>

Email: [Radiation.Safety@health.vic.gov.au](mailto:Radiation.Safety@health.vic.gov.au)

Telephone: 1300 767 469

# Table 1

| Who does the obligation apply to? | Type of incident | When must it be reported? | How must it be reported? |
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| A management licence holder who possesses a radiation source. | The management licence holder becomes aware that a radiation source that was in their possession is lost or has been stolen. Note that Section 20 of the Act requires that the management licence holder on becoming aware that a radiation source that was in their possession is lost or stolen must immediately notify the Department of the loss or theft. | On becoming aware of the loss or theft. | By telephone to the Department’s Radiation Team. |
| A management licence holder authorised to possess High Consequence Sealed Source | Any breach of security relating to the possession or transport of a High Consequence Sealed Source as defined by the *Radiation Act 2005*. | On becoming aware of the breach. | By telephone to the Department’s Radiation Team. |
| A management licence holder authorised to conduct a medical radiation practice. | A worker, patient or a member of the public has or may have received an unplanned or abnormal exposure to ionising radiation, other than a justified medical exposure, exceeding 1 mSv total effective dose. | Within 14 days of the management licence holder becoming aware of the incident. | Within 14 days, complete and lodge a written incident report |
| The activity of the material administered to a patient during the administration of radioactive material for human diagnostic purposes, exceeds the activity prescribed in the hospital/practice standard protocol for that test by 50% or more. |
| The activity administered to a patient during the administration of a radioactive material for human therapeutic purposes differs from that prescribed by 15% or more. |
| The dose delivered during administration of a human therapeutic dose of radiation to a patient from a radiation apparatus or a sealed radioactive source:  - differs from the total prescribed treatment dose by more than 10%; and  - the difference between the total prescribed dose and the delivered dose was not anticipated or accepted as part of the treatment plan. |
| Any human therapeutic treatment delivered to either the wrong patient or the wrong tissue, or using the wrong radiopharmaceutical. |
| Any human diagnostic procedure other than as prescribed that could lead to an effective dose exceeding 1 mSv (including wrong patient, or wrong body part examined). |
| Any human diagnostic procedure resulting in an observable acute radiation effect. |
| Any unplanned exposure to a child (under 18 years old). |
| Any unplanned exposure to a pregnant female. |
| A human diagnostic procedure that results in a skin dose that exceeds 6 Gy. |
| Any observable radiation injury. Note that effects such as erythema which are expected to occur following therapeutic procedures do not need to be reported. | On becoming aware of an observable radiation injury. | Initially by telephone to the Department’s Radiation Team. Then within 14 days, complete and lodge a written incident report. |
| A management licence holder authorised to possess an ionising radiation apparatus, sealed source, sealed source apparatus or radioactive material. | Where a radiation source is or has been out of control. This includes situations where, for example, the source is not safely secured or shielded, or contamination is not confined. | Within 14 days of the management licence holder becoming aware of the incident. | Within 14 days, complete and lodge a written incident report. |
| Where an ionising radiation apparatus, sealed source, or sealed source apparatus is or has been damaged or has malfunctioned, in a manner that could result in a person receiving a higher radiation dose than would be received under normal circumstances. |
| Where a surface, substance or material is or has been contaminated by radioactive material in excess of :  (a) 1 kBq within any square metre in the case of alpha-emitting radioactive material, or  (b) 1 MBq within any square metre in the case of beta-emitting or gamma-emitting radioactive material |
| Any observable radiation injury. | On becoming aware of an observable radiation injury. | Initially by telephone to the Department’s Radiation Team. Then within 14 days, complete and lodge a written incident report. |
| A worker or a member of the public has or may have received an unplanned or abnormal exposure to ionising radiation, other than a justified medical exposure, exceeding 1 mSv total effective dose. | Within 14 days of the management licence holder becoming aware of the incident. | Within 14 days, complete and lodge a written incident report. |
| A management licence holder authorised to:  (a) possess a sealed source, sealed source apparatus or radioactive material; or  (b) transport radioactive material. | A transport accident involving radioactive material where there has been damage or possible damage to containers which contain a sealed source, sealed source apparatus or radioactive material.  A transport accident involving radioactive material where there has been a spill or release of radioactive material into the environment. | A transport accident involving radioactive material where there has been a spill or release of radioactive material into the environment. | Initially by telephone to the Department’s Radiation Team. Then within 14 days, complete and lodge a written incident report. |

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| To receive this document in another format, phone 1300 767 469, using the National Relay Service 13 36 77 if required, or [email Radiation Team](mailto:Radiation.Safety@health.vic.gov.au) < Radiation.Safety@health.vic.gov.au>.  Authorised and published by the Victorian Government, 1 Treasury Place, Melbourne.  © State of Victoria, Australia, Department of Health, January 2022.  Available at [Radiation website](https://www.health.vic.gov.au/publications/mandatory-reporting-of-radiation-incidents) < https://www.health.vic.gov.au/publications/mandatory-reporting-of-radiation-incidents> |