

# Radiation Safety Amendment Regulation 2023

Explanatory notes for SL 2023 No. 159  
made under the

*Radiation Safety Act 1999*

## General Outline

### Short title

*Radiation Safety Amendment Regulation 2023*

### Authorising law

Sections 26, 210 and 215 of the *Radiation Safety Act 1999* and section 42A of the *Radiation Safety Act 1999* as amended by section 28 of the *Health and Other Legislation Amendment Act 2023* (Amendment Act).

### Policy objectives and the reasons for them

The purpose of the *Radiation Safety Amendment Regulation 2023* (Amendment Regulation) is to amend the *Radiation Safety Regulation 2021* to:

- omit an offence which has been moved into the Radiation Safety Act; and
- clarify requirements around disposal of a person's bodily waste where the person has been administered a radioactive substance as part of a diagnostic or therapeutic procedure.

#### ***Offence of causing ionising radiation exposure from particular radioactive material***

Schedule 2 of the *Radiation Safety Act* defines *radiation dose limit* for radioactive material as a limit on the amount of the radionuclide in the material that may be inhaled, ingested or introduced into the body of a person during a particular period.

Section 60 of the *Radiation Safety Regulation* currently provides that a person who possesses a mineral substance that is radioactive material, but that is not a radioactive substance, must ensure another person does not receive a total effective radiation dose from the mineral substance above 1 millisievert per year for public exposure of a person, or more than 20 millisieverts per year if the person is exposed in the course of their employment (that is, occupational exposure). The limit for occupational exposure is reduced to six millisieverts per year if the person is aged 16 or 17 years. The penalty for non-compliance is current 20 penalty units.

The Amendment Act moves this offence provision from the Radiation Safety Regulation into new section 42A of the Radiation Safety Act, and increases the penalty to 100 penalty units, to align with similar offences. The amendments to the Radiation Safety Act made by the Amendment Act will commence by proclamation on 15 November 2023, which coincides with the commencement of the Amendment Regulation.

The Amendment Regulation omits section 60 of the Radiation Safety Regulation and inserts new section 58A to prescribe the radiation dose limits that were previously prescribed in section 60. New section 58A does not include an offence, as the offence is now provided for in section 42A of the Radiation Safety Act.

### ***Disposal of waste***

Section 26 of the Radiation Safety Act provides that a person must not dispose of radioactive material unless the concentration or activity of a radionuclide in the material is not more than the maximum prescribed by regulation, and the person holds the appropriate approval and disposes of it according to that approval.

Section 210 of the Radiation Safety Act provides that a regulation may exempt a radiation source from the Act or a provision of the Act. This exemption must not be one that could reasonably be expected to pose any, or more than negligible, health risks to any person or adverse effects on the environment.

A *radiation source* is defined in schedule 2 of the Radiation Safety Act as a radioactive substance or a radiation apparatus. A *radioactive substance* is defined as radioactive material (whether sealed or not sealed) containing more than the concentration or activity of a radionuclide prescribed under a regulation, or otherwise prescribed under a regulation to be a radioactive substance. *Radioactive material* means material that spontaneously emits ionising radiation as a result of the radioactive decay of a radionuclide in it (but does not include a mineral within the meaning of the *Mineral Resources Act 1989* situated within the boundaries of land the subject of a mining lease, mineral development licence or exploration permit within the meaning of that Act).

However, the Radiation Safety Act does not allow radioactive material that is not a radioactive substance to be exempted. This means that radioactive materials, which are not radioactive substances because they do not meet the prescribed threshold to be classed as such, are not able to be exempted by regulation from the requirements of the Radiation Safety Act, or a provision of the Radiation Safety Act. This is despite radioactive material that is not a radioactive substance posing a lower radiation risk than radiation sources.

The Amendment Act addresses this inconsistency by extending the power for the Radiation Safety Regulation to exempt radioactive material that is not a radioactive substance from requirements of the Radiation Safety Act.

Section 94 of the Radiation Safety Regulation provides that, if a person has been administered a radioactive substance as part of a diagnostic or therapeutic procedure and, as a result of the procedure, the person's bodily waste is a radioactive substance, the bodily waste is exempt from the requirements of section 26 of the Radiation Safety Act relating to disposal. This current exemption does not apply if the concentration or activity of radionuclide in a person's bodily waste does not meet the threshold to make that waste a radioactive substance.

The objective of the Amendment Regulation is to ensure that the exemption in section 94 of the Radiation Safety Regulation applies if a person has been administered a radioactive substance as part of a diagnostic or therapeutic procedure and, as a result of the procedure, some or all of the radionuclide or its progeny is in the person's bodily waste, regardless of whether the concentration or activity of radionuclide in the person's bodily waste makes the waste a radioactive substance.

## **Achievement of policy objectives**

### ***Offence of causing ionising radiation exposure from particular radioactive material***

The Amendment Regulation omits section 60 of the Radiation Safety Regulation, as the offence and penalty are now set out in the Radiation Safety Act. The Amendment Regulation inserts new section 58A, which prescribes the dose limits previously contained in section 60. It is appropriate for the dose limits to remain in the Radiation Safety Regulation as they contain highly technical information that is more appropriately dealt with in subordinate legislation.

### ***Disposal of waste***

The Amendment Regulation amends section 94(1) of the Radiation Safety Regulation to clarify that section 94 applies if a person has been administered a radionuclide as part of a diagnostic or therapeutic procedure and, as a result of the procedure, some or all of the radionuclide or its progeny is in the person's bodily waste. Under section 94(2), the person's bodily waste is exempt from the disposal requirements in section 26 of the Radiation Safety Act only to the extent it is disposed of by the person.

This means that the exemption applies, regardless of whether the concentration or activity of radionuclide in a person's bodily waste makes the waste a radioactive substance.

## **Consistency with policy objectives of authorising law**

The Amendment Regulation is consistent with the policy objectives of the Radiation Safety Act.

## **Inconsistency with policy objectives of other legislation**

No inconsistencies with the policy objectives of other legislation have been identified.

## **Alternative ways of achieving policy objectives**

The Amendment Regulation is the only effective means of achieving the policy objectives.

## **Benefits and costs of implementation**

The amendments to the Radiation Safety Regulation do not impose significant costs on persons or organisations. The cost of implementing the amendments will be met within existing budget allocations.

## **Consistency with fundamental legislative principles**

The Amendment Regulation is consistent with the fundamental legislative principles in section 4 of the *Legislative Standards Act 1992*.

## **Consultation**

Consultation on the proposed amendments to the Radiation Safety Regulation occurred as part of the consultation on the Amendment Act. Stakeholders supported the amendments.

The Office of Best Practice Regulation was consulted when developing the Impact Analysis Statement for the amendments contained in the Amendment Regulation. Queensland Health has assessed the amendments in accordance with the *Queensland Government Better Regulation Policy* as being unlikely to result in significant adverse impacts. The Minister for Health, Mental Health and Ambulance Service and Minister for Women, and the Director-General of Queensland Health are satisfied that the regulatory review requirements have been met and have approved the Impact Analysis Statement for publication.

## Notes on provisions

### Short title

*Clause 1* states the short title is the *Radiation Safety Amendment Regulation 2023*.

### Commencement

*Clause 2* states that the regulation commences on 15 November 2023.

### Regulation amended

*Clause 3* provides that the regulation amends the *Radiation Safety Regulation 2021*.

### Insertion of new s 58A

*Clause 4* inserts new section 58A to prescribe the radiation dose limits previously prescribed in section 60 of the Radiation Safety Regulation. Section 58A prescribes the following radiation dose limits for ionising radiation for section 42A(2) of the *Radiation Safety Act 1999*:

- for the occupational exposure of an adult – a total effective dose of 20mSv in any 12-month period;
- for the occupational exposure of a person who is 16 of 17 years – a total effective dose of 6mSv in any 12-month period; or
- for the public exposure of a person – a total effective dose of 1mSv in any 12-month period.

### Omission of pt 8, div 1, sdiv 5 (Miscellaneous)

*Clause 5* omits part 8, division 1, subdivision 5 of the Radiation Safety Regulation, which comprised section 60 of the Radiation Safety Regulation. The *Health and Other Legislation Amendment Act 2023* moves the offence in section 60 into the Radiation Safety Act. *Clause 4* moves the radiation dose limits previously prescribed in section 60 to new section 58A of the Radiation Safety Regulation.

### Amendment of pt 14, div 2, hdg (Exemptions for particular radiation sources)

*Clause 6* amends the heading of part 14, division 2, from ‘limited exemption for radiation sources’ to ‘limited exemption for radioactive material and radiation apparatus’. This aligns the heading with the heading of section 210 of the Radiation Safety Act as amended by the Health and Other Legislation Amendment Act.

### Amendment of s 94 (Persons administered radioactive substance as part of diagnostic or therapeutic procedure—Act, s 210)

*Clause 7* omits and replaces section 94(1) of the Radiation Safety Regulation. New section 94(1) provides that section 94 applies if a person has been administered radionuclide as part of a diagnostic or therapeutic procedure and, as a result of the procedure, some or all of the radionuclide or its progeny is in the person’s bodily waste. Under section 94(2), the person’s bodily waste is exempt from the disposal requirements in section 26 of the Radiation Safety Act only to the extent that the bodily waste is disposed of by the person. This means that the

exemption applies regardless of whether the concentration or activity of radionuclide in a person's bodily waste makes it a radioactive substance.

© The State of Queensland 2023