Queensland

Radiation Safety Act 1999

Radiation Safety Regulation 2010

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Queensland

Radiation Safety Regulation 2010

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Radiation Safety Regulation 2010

Part 1 Preliminary

1 Short title

This regulation may be cited as the *Radiation Safety Regulation 2010*.

2 Commencement

Sections 7(2) and (3), 13(1)(j), 28, 33 and 65(1)(b) and (3) commence on 1 June 2011.

3 Dictionary

The dictionary in schedule 9 defines particular words used in this regulation.

Part 2 Radiation sources and sealed source apparatus

Division 1 Radioactive substances

4 Concentration or activity of a radionuclide—Act, sch 2, definition *radioactive substance*

For the Act, schedule 2, definition *radioactive substance*, paragraph (a), radioactive material containing a radionuclide stated in schedule 1, column 1 is a radioactive substance if—

(a) the concentration of the radionuclide is equal to, or more than, the concentration stated in schedule 1, column 2 shown opposite the radionuclide; and

(b) the activity of the radionuclide is equal to, or more than, the activity stated in schedule 1, column 3 shown opposite the radionuclide.

5 Concentration of a radionuclide in a mineral substance—Act, sch 2, definition *radioactive substance*

(1) This section applies to the following substances (the ***mineral substances***)—

(a) a mineral situated outside the boundaries of land the subject of a mining lease, mineral development licence or exploration permit within the meaning of the *Mineral Resources Act 1989*;

(b) a substance into which a mineral has been changed as a result of the processing of the mineral.

Examples of the processing of a mineral—

the refining, smelting or calcining of a mineral

(2) Despite section 4, for the Act, schedule 2, definition *radioactive substance*, paragraph (a), a mineral substance containing a radionuclide stated in schedule 1, column 1 is a radioactive substance if the concentration of the radionuclide is equal to, or more than, the amount worked out by multiplying the concentration stated in schedule 1, column 2 shown opposite the radionuclide by 10.

Division 2 Radiation apparatus

6 Apparatus emitting ionising radiation—Act, sch 2, definition *radiation apparatus*

(1) For the Act, schedule 2, definition *radiation apparatus*, paragraphs (a) and (b), the amount is 1 microgray per hour, measured at a distance of 10cm from any accessible surface of the apparatus.

(2) In this section—

accessible surface, of an apparatus, means a surface of the apparatus that may easily be touched.

7 Apparatus emitting non-ionising radiation—Act, sch 2, definition *radiation apparatus*

(1) For the Act, schedule 2, definition *radiation apparatus*, paragraphs (c) and (d)—

(a) a laser that could reasonably be used to carry out a diagnostic, therapeutic or cosmetic procedure involving the irradiation of a person is a radiation apparatus; and

(b) the amount for the laser is the accessible emission limit, for a class 3B laser for the period, stated in, and measured in accordance with, the laser standard.

(2) For the Act, schedule 2, definition *radiation apparatus*, paragraphs (c) and (d)—

(a) a relevant solarium is a radiation apparatus; and

(b) the amount for the solarium is an erythemally effective dose of 100 joules per square metre per hour.

(3) In this section—

CIE standard means the document called 'Erythema reference action spectrum and standard erythema dose. CIE S 007/E-1998. Vienna: Commission Internationale de l'Eclairage 1998'.

erythemally effective dose means the dose obtained by weighting the spectral distribution of electromagnetic radiation incident on the measured area with the erythemal effectiveness stated in the CIE standard across the electromagnetic radiation wavelength range of 280nm to 400nm and then integrating to obtain the total dose in joules per square metre in accordance with the CIE standard.

Division 3 Security enhanced source

8 What is a security enhanced source

(1) This section prescribes what is a security enhanced source for the Act, schedule 2, definition *security enhanced source*.

(2) A sealed radioactive substance or aggregation of sealed radioactive substances is a security enhanced source if it is classified as security category 1, 2 or 3 under schedule 2, part 1 according to its activity ratio.

(3) For subsection (2), the activity ratio of a sealed radioactive substance is worked out by the formula—

$$\textbf{activity ratio} = \frac{\mathbf{A}}{\mathbf{RAV}}$$

where—

A means the activity of the radionuclide in the sealed radioactive substance, stated in gigabecquerels.

RAV means the activity value stated in schedule 2, part 2 for the radionuclide in the sealed radioactive substance.

(4) For subsection (2), the activity ratio of an aggregation of 2 or more sealed radioactive substances is the sum of the activity ratios of the sealed radioactive substances in the aggregation worked out under subsection (3).

Division 4 Certificates of compliance

9 Periods within which certificates of compliance must be obtained—Act, s 18(2)

(1) For the Act, section 18(2), the period is—

(a) for an ionising radiation source, or a sealed radioactive substance incorporated in a sealed source apparatus, used to carry out a diagnostic or therapeutic procedure involving the irradiation of a person, other than an

ionising radiation apparatus used to carry out intra-oral dental diagnostic radiography or plain film diagnostic radiography—1 year; or

(b) for an ionising radiation apparatus used to carry out intra-oral dental diagnostic radiography or plain film diagnostic radiography involving the irradiation of a person—3 years; or

(c) for an ionising radiation source, or a sealed radioactive substance incorporated in a sealed source apparatus, used to carry out a radiation practice for a research project—1 year; or

(d) for an ionising radiation source, or a sealed radioactive substance incorporated in a sealed source apparatus, used during a person's study or training at an educational institution—1 year; or

(e) for an ionising radiation source, or a sealed radioactive substance incorporated in a sealed source apparatus, used to carry out a radiation practice, other than a radiation practice stated in paragraph (a), (b), (c) or (d)—3 years; or

(f) for a laser apparatus used to carry out a diagnostic, therapeutic or cosmetic procedure involving the irradiation of a person—1 year.

(2) For the Act, section 18(4) and (5), the period is 5 years.

Part 3 Act instruments

10 Documents relating to proof of identity—Act, s 51

(1) This section prescribes, for the Act, section 51(1)(c)(ii) and (iii), the documents to prove an applicant's or nominated person's identity.

(2) A relevant application must be accompanied by—

(a) a copy of 1 document mentioned in schedule 4, part 1; and

(b) a copy of 1 document mentioned in schedule 4, part 2.

(3) At least 1 of the documents must contain a photograph of the applicant or nominated person.

(4) In this section—

copy, of a document, means a reproduction of the document in the form required or permitted by the approved form for the relevant application.

relevant application means any of the following—

(a) an application for a possession licence;

(b) an application for a use licence;

(c) an application for a transport licence.

11 Notification of change of circumstances—Act, s 92(2)

For the Act, section 92(2), the changes in the holder's circumstances are the following—

(a) for a holder of a licence, a change in any of the following—

(i) the licence holder's name;

(ii) if the licence is a use licence and the licence holder is a health practitioner or a veterinary surgeon—

(A) the licence holder's accreditation, enrolment or registration as a health practitioner or a veterinary surgeon; or

(B) a condition attaching to the accreditation, enrolment or registration;

(b) for a holder of an accreditation certificate, a change in either of the following—

(i) the certificate holder's name;

(ii) the certificate holder's contact details;

Examples of contact details—

address, telephone number, facsimile number, email address

(c) for the holder of a continuing approval to acquire, a change in the approval holder's name;

(d) for the holder of a radiation safety officer certificate, a change in the certificate holder's name.

12 Prescribed sealed radioactive substance—Act, s 52(1)

(1) For the Act, section 52(1)(b), an iodine-125 seed with an activity of no more than 40MBq is a prescribed sealed radioactive substance for brachytherapy.

(2) In this section—

iodine-125 seed means iodine-125 as a sealed radioactive substance.

13 Certain possession, use or transport licences—Act, s 75(3) and (4)

(1) For the Act, section 75(3)—

(a) a possession licence to possess or a use licence to use an ionising radiation source for intra-oral dental diagnostic radiography, involving the irradiation of a person, is subject to the condition that the holder of the licence comply with the 'Code of Practice for Radiation Protection in Dentistry (2005)' published by ARPANSA; and

(b) a possession licence to possess or a use licence to use an ionising radiation source for conducting health-related research on persons is subject to the condition that the holder of the licence comply with the 'Code of Practice for the Exposure of Humans to Ionizing Radiation for Research Purposes (2005)' published by ARPANSA; and

(c) a possession licence to possess or a use licence to use a sealed source apparatus for density-gauging or moisture-gauging for geo-technical purposes is subject to the condition that the holder of the licence comply with the 'Code of Practice for Portable Density/Moisture Gauges Containing Radioactive Sources (2004)' published by ARPANSA; and

(d) a possession licence to possess or a use licence to use a radioactive substance to carry out a diagnostic or therapeutic procedure involving irradiation of a person is subject to the condition that the holder of the licence comply with the document called 'Recommendations for the Discharge of Patients Undergoing Treatment with Radioactive Substances (2002)' published by ARPANSA; and

(e) a possession licence to possess or a use licence to use an ionising radiation source to carry out a diagnostic or therapeutic procedure involving the irradiation of a person is subject to the condition that the holder of the licence comply with the 'Code of Practice for Radiation Protection in the Medical Applications of Ionizing Radiation (2008)' published by ARPANSA; and

(f) a possession licence to possess or a use licence to use an ionising radiation source for industrial gauging is subject to the condition that the holder of the licence comply with the 'Code of Practice for Safe Use of Fixed Radiation Gauges (2007)' published by ARPANSA; and

(g) a possession licence to possess or a use licence to use a radiation source that is a security enhanced source is subject to the condition that the holder of the licence comply with the 'Code of Practice for the Security of Radioactive Sources (2007)' published by ARPANSA; and

(h) a possession licence to possess or a use licence to use an ionising radiation source to carry out a diagnostic or therapeutic procedure involving irradiation of an animal is subject to the condition that the holder of the licence

comply with the 'Code of Practice for Radiation Protection in Veterinary Medicine (2009)' published by ARPANSA; and

(i) a possession licence to possess or a use licence to use an ionising radiation source to carry out a diagnostic procedure involving the irradiation of a person by a chiropractor is subject to the condition that the holder of the licence comply with the 'Code of Practice for Radiation Protection in the Application of Ionizing Radiation by Chiropractors (2009)' published by ARPANSA.

Editor's notes—

1 Copies of the codes or documents mentioned in paragraphs (a) to (i) are available on ARPANSA's website.

2 Copies of the codes or documents mentioned in paragraphs (a) to (i) may be bought from ARPANSA at 619 Lower Plenty Road, Yallambie, Victoria 3085.

(2) For the Act, section 75(4)—

(a) a transport licence is subject to the condition that the holder of the licence comply with the transport code of practice; and

(b) a transport licence to transport a radiation source that is a security enhanced source is subject to the condition that the holder of the licence comply with the 'Code of Practice for the Security of Radioactive Sources (2007)' published by ARPANSA.

Editor's notes—

1 Copies of the codes mentioned in paragraphs (a) and (b) are available on ARPANSA's website.

2 Copies of the codes mentioned in paragraphs (a) and (b) may be bought from ARPANSA at 619 Lower Plenty Road, Yallambie, Victoria 3085.

14 Relevant offences

For the Act, schedule 2, definition *relevant offence*, each of the following offences is prescribed—

(a) an offence mentioned in the *Criminal Code Act 1995* (Cwlth), chapter 5;

(b) an offence mentioned in the *Crimes Act 1914* (Cwlth), part II;

(c) an offence under a State law corresponding to an offence mentioned in the *Crimes Act 1914* (Cwlth), part II;

(d) an offence under the *Weapons of Mass Destruction (Prevention of Proliferation) Act 1995* (Cwlth), section 9;

(e) an offence under the *Customs Act 1901* (Cwlth) relating to the importation or exportation of radioactive material;

(f) an identity-related offence including an offence related to—

(i) assuming another person's identity; or

(ii) counterfeiting documents related to a person's identity; or

(iii) falsifying documents related to a person's identity;

(g) an offence related to the hijacking or destruction of an aircraft or sea vessel;

(h) an offence involving weapons or explosives including an offence related to possession, supply, production, importation, exportation or unlicensed use;

(i) an offence involving prohibited drugs including an offence related to—

(i) possession, if the maximum penalty prescribed is more than 2 years imprisonment; or

(ii) possession of equipment for the manufacture of a prohibited drug; or

(iii) supply, production, importation or exportation;

(j) an offence involving the production, importation or exportation of firearms.

Part 4 Disposal

Division 1 Disposal of radioactive material

15 Disposal of radioactive material into the air or water, other than into the sewerage system—Act, s 26(1)(a)

(1) For the Act, section 26(1)(a)—

(a) for radioactive material, containing only 1 of the radionuclides stated in schedule 3, column 1, being disposed of into the air—the maximum concentration is the concentration stated in schedule 3, column 2 shown opposite the radionuclide; or

(b) for radioactive material, containing only 1 of the radionuclides stated in schedule 3, column 1, being disposed of into water—the maximum concentration is the concentration stated in schedule 3, column 3 shown opposite the radionuclide; or

(c) for radioactive material, containing more than 1 of the radionuclides stated in schedule 3, column 1, being disposed of into the air or water—the material's disposal factor must be not more than 1.

(2) Subsection (1) does not apply to the disposal of radioactive material into the sewerage system.

(3) In this section—

disposal factor, for radioactive material containing more than 1 of the radionuclides stated in schedule 3, column 1, means the total of the amounts worked out by applying the formula to each of the radionuclides—

$$\textbf{disposal factor} = \frac{\mathbf{C}}{\mathbf{MC}}$$

where—

C, for a radionuclide, means the radionuclide's concentration, measured in Bq per cubic metre.

MC, for a radionuclide, means—

(a) if the material is to be disposed of into the air—the concentration stated in schedule 3, column 2 shown opposite the radionuclide; or

(b) if the material is to be disposed of into water—the concentration stated in schedule 3, column 3 shown opposite the radionuclide.

16 Disposal of radioactive material into the sewerage system—Act, s 26(1)(a)

(1) For the Act, section 26(1)(a)—

(a) for radioactive material, containing only 1 of the radionuclides stated in schedule 3, column 1, being disposed of into the sewerage system—the maximum concentration is the concentration stated in schedule 3, column 4 shown opposite the radionuclide; or

(b) for radioactive material, containing more than 1 of the radionuclides stated in schedule 3, column 1, being disposed of into the sewerage system—the material's disposal factor must be not more than 1.

(2) For subsection (1), the point of disposal at which the concentration of a radionuclide in radioactive material is to be decided is a point at, or before, which the sewerage pipe leading from premises, at which the material is being disposed of, joins the main reticulation line of the sewerage system.

(3) In this section—

disposal factor, for radioactive material containing more than 1 of the radionuclides stated in schedule 3, column 1, means the total of the amounts worked out by applying the formula to each of the radionuclides—

$$\textbf{disposal factor} = \frac{\mathbf{C}}{\mathbf{MC}}$$

where—

C, for a radionuclide, means the radionuclide's concentration, measured in Bq per cubic metre.

MC, for a radionuclide, means the concentration stated in schedule 3, column 4 shown opposite the radionuclide.

17 Disposal of radioactive material, other than into the air, water or sewerage system—Act, s 26(1)(a)

(1) For the Act, section 26(1)(a)—

(a) for radioactive material, containing only 1 of the radionuclides stated in schedule 1, column 1, being disposed of other than into the air, water or sewerage system—the maximum concentration is one-half of the concentration stated in schedule 1, column 2 shown opposite the radionuclide; or

(b) for radioactive material, containing more than 1 of the radionuclides stated in schedule 1, column 1, being disposed of other than into the air, water or sewerage system—the material's disposal factor must be not more than 1.

(2) In this section—

disposal factor, for radioactive material containing more than 1 of the radionuclides stated in schedule 1, means the total of the amounts worked out by applying the formula to each of the radionuclides—

$$\textbf{disposal factor} = \frac{\mathbf{C}}{\mathbf{MC}}$$

where—

C, for a radionuclide, means the radionuclide's concentration, measured in Bq per gram.

MC, for a radionuclide, means one-half of the concentration stated in schedule 1, column 2 shown opposite the radionuclide.

Division 2 Requirements for disposal of certain apparatus or containers

18 Removal etc. of radiation warning signs

(1) This section applies to a person disposing of—

(a) a container that has been used for the transport or storage of radioactive material; or

(b) an apparatus that once contained a sealed radioactive substance; or

(c) a radiation apparatus.

(2) The person must, immediately before the disposal, remove or make illegible all radiation warning signs attached to the container or apparatus.

Maximum penalty—20 penalty units.

(3) In this section—

radiation warning signs, attached to a container or apparatus, means labels adhering to, or symbols embedded in, the container or apparatus indicating that the container or apparatus poses a radiation hazard.

Part 5 Radiation safety and protection plans

Division 1 Radiation safety and protection measures for all radiation practices

19 Methods and procedures—Act, s 28(6)

(1) For the Act, section 28(6), the following are radiation safety and protection measures for the carrying out of a radiation practice—

(a) safe handling procedures to be followed for the source;

(b) procedures and methods for ensuring the safe use of the source in the carrying out of the practice;

(c) if the practice involves the production of images—procedures and methods for ensuring the correct use of ancillary imaging equipment used in connection with the use of the source to carry out the practice;

(d) quality control procedures to be undertaken for—

(i) the source; and

(ii) if the source is a sealed radioactive substance incorporated in a sealed source apparatus—the apparatus; and

(iii) if the practice involves the production of images—any ancillary imaging equipment used in connection with the use of the source to carry out the practice;

(e) remediation procedures to be followed for an accident that could reasonably be expected to happen in relation to the carrying out of the practice.

(2) In this section—

remediation procedures, for an accident, means procedures designed to minimise a radiation hazard arising from the accident.

20 Control of access to, or use of, radiation sources—Act, s 28(6)

For the Act, section 28(6), a radiation safety and protection measure for the carrying out of a radiation practice is a statement about how access to, or use of, the source is to be controlled.

21 Supply of safety devices—Act, s 28(6)

(1) For the Act, section 28(6), the following are radiation safety and protection measures for the carrying out of a radiation practice—

(a) a requirement that the possession licensee in possession of the source, under the licence, for the practice supply safety devices for use by persons while involved in carrying out the practice;

(b) details of the devices to be supplied;

(c) details of how, and when, the devices are to be used;

(d) details of the intervals at which the devices are to be checked for wear and tear, and correct operation;

(e) details of the persons who will be engaged to check the devices, described by reference to the abilities of the persons to perform the task.

(2) In this section—

safety device means a device that, when used by a person while involved in carrying out a radiation practice, reduces the exposure of the person to radiation attributable to the carrying out of the practice, but does not include personal protective equipment.

22 Supply of personal protective equipment—Act, s 28(6)

For the Act, section 28(6), the following are radiation safety and protection measures for the carrying out of a radiation practice—

(a) a requirement that the possession licensee in possession of the source, under the licence, for the practice supply personal protective equipment for wearing by—

(i) persons while involved in carrying out the practice; or

(ii) anyone exposed to radiation in the carrying out of the practice;

(b) details of the type of equipment to be supplied to the persons, described by reference to the nature of their involvement in the carrying out of the practice;

(c) details of how, and when, the equipment is to be worn by the persons;

(d) details of the intervals at which the equipment is to be checked for wear and tear, and correct operation;

(e) details of the persons who will be engaged to check the equipment, described by reference to the abilities of the persons to perform the task;

(f) details of the persons who will be required to wear the equipment.

23 Record in a register—Act, s 28(6)

For the Act, section 28(6), a radiation safety and protection measure for the carrying out of a radiation practice is a requirement that the use licensee allowed to use the source, under the licence, for the practice record in a register, supplied and under the control of the possession licensee who possesses the source, the following—

(a) the names of persons who use the source to carry out the practice;

(b) if the source is an unsealed radioactive substance—details of any disposal of radioactive material that happens in the carrying out of the practice;

(c) details of—

(i) any quality control procedures undertaken for—

(A) the source; and

(B) if the source is a sealed radioactive substance incorporated in a sealed source apparatus—the apparatus; and

(C) if the practice involves the production of images—any ancillary imaging equipment used in connection with the use of the source to carry out the practice; and

(ii) the outcomes of the procedures.

24 Supply of personal monitoring devices—Act, s 28(6)

(1) This section applies if, under a radiation safety and protection plan for a radiation practice, a personal monitoring device is required to be supplied to a person.

Note—

The Act, section 28(3) states the circumstances in which a radiation safety and protection plan for a radiation practice must provide for the supply of a personal monitoring device to a person.

(2) For the Act, section 28(6), the following are radiation safety and protection measures for the carrying out of the practice—

(a) details of the persons who are required to wear the device, described by reference to the nature of their involvement in the carrying out of the practice;

(b) details of how, when and where the device is to be worn;

(c) details of where the device is to be stored when not being worn;

(d) details of the intervals at which the device is to be assessed;

(e) details of the persons who are to perform the assessment, described by reference to the abilities of the persons to perform the task.

Division 2 Radiation safety and protection measures for certain radiation practices

25 Radiation practices involving the use of ionising radiation sources—Act, s 28(6)

(1) This section applies if a radiation practice involves the use of an ionising radiation source.

(2) For the Act, section 28(6), the following are radiation safety and protection measures for the carrying out of the practice—

(a) a requirement that the possession licensee in possession of the source, under the licence, for the practice supply personal alarm dosemeters for use by persons while involved in carrying out the practice;

(b) details of the persons who are required to use the dosemeters, described by reference to the nature of their involvement in the carrying out of the practice;

(c) details of how, and when, the dosemeters are to be used by the persons;

(d) details of the dosemeters, having the sensitivity, accuracy, range and energy response appropriate to the source, that will be used;

(e) details of the intervals, of not more than 1 year, at which the dosemeters are to be checked for sensitivity, accuracy, range and energy response;

(f) if a personal alarm dosemeter is repaired or suspected to have been damaged—a requirement that the dosemeter not be used unless it is first checked for sensitivity, accuracy, range and energy response;

(g) details of the persons who will be engaged to check the sensitivity, accuracy, range and energy response of the dosemeters, described by reference to the abilities of the persons to perform the task.

(3) In this section—

personal alarm dosemeter means a device that produces a visual or audible signal when—

(a) a radiation dose received by the device is more than a certain dose level; or

(b) a radiation dose received by the device in a particular period is more than a certain dose level.

26 Radiation practices involving the use or storage of unsealed radioactive substances—Act, s 28(6)

(1) This section applies to a radiation practice involving the use or storage of unsealed radioactive substances at premises.

(2) For the Act, section 28(6), the following are radiation safety and protection measures for the carrying out of the practice—

(a) details stating how the premises, and persons or things at the premises, are to be monitored to detect or minimise contamination of the premises, persons or things;

(b) details about how, and the period for which, contaminated cleanable things at the premises are to be stored at the premises before removal from the premises for cleaning;

(c) details about how waste radioactive material, produced in carrying out the practice, is to be dealt with before its disposal;

(d) details about how the amount of waste radioactive material produced in carrying out the practice is to be minimised.

(3) For subsection (2)(a), the measures must include details of the monitoring equipment, having the sensitivity, accuracy, range and energy response appropriate to the contamination to be monitored, that will be used.

(4) For subsection (2)(c), the measures must include the following—

(a) the method to be used to minimise the activity of the radionuclide in, and volume of, the material;

(b) if the material is to be stored—how the material is to be sorted for storage, having regard to—

(i) its half-life, volume, and physical and chemical properties; and

(ii) the concentration of the radionuclide in the material.

(5) In this section—

cleanable thing, at premises, means a thing that, to be cleaned, needs to be removed from the premises.

contamination, of a person, premises or thing, means the lodgement, attachment or incorporation of radioactive material on, to or in the person, premises or thing.

27 Certain radiation practices involving the use of ionising radiation sources—Act, s 28(6)

(1) This section applies to a radiation practice involving the use of an ionising radiation source to carry out a radiation practice, other than—

(a) the use of an ionising radiation apparatus for—

(i) a diagnostic procedure involving the irradiation of a person; or

(ii) chemical analysis; or

(b) the use of a sealed source apparatus for chemical analysis; or

(c) the use of a cabinet radiation apparatus or enclosed radiation apparatus for its intended use.

(2) For the Act, section 28(6), the following are radiation safety and protection measures for the carrying out of the practice—

(a) a requirement that the possession licensee in possession of the source, under the licence, for the practice supply radiation monitoring equipment for use by persons while involved in carrying out the practice;

(b) details of how the equipment is to be used;

(c) details of the equipment, having the sensitivity, accuracy, range and energy response appropriate to the radiation source, that will be used;

(d) details of how the licensee will ensure the sensitivity, accuracy, range and energy response of the equipment to be used are maintained;

(e) details of the intervals, of not more than 1 year, at which the equipment is to be checked for sensitivity, accuracy, range and energy response;

(f) if the equipment is repaired or suspected to have been damaged—a requirement that the equipment must not be used unless it is first checked for sensitivity, accuracy, range and energy response;

(g) details of the persons who will be engaged to check the sensitivity, accuracy, range and energy response of the equipment, described by reference to the abilities of the persons to perform the task.

(3) In this section—

radiation monitoring equipment means equipment that measures the amount of radiation emitted from radioactive substances or ionising radiation apparatus in a particular period.

29 Radiation practices involving the carrying out of a diagnostic, therapeutic or cosmetic procedure involving the irradiation of a person—Act, s 28(6)

(1) This section applies to a radiation practice involving the use of a radiation source to carry out a diagnostic, therapeutic or cosmetic procedure involving the irradiation of a person (the ***treated person***).

(2) For the Act, section 28(6), the following are radiation safety and protection measures for the carrying out of the practice—

(a) a requirement that the possession licensee in possession of the source, under the licence, for the practice supply personal protective equipment for wearing by the treated person while undergoing the procedure;

(b) a requirement that the use licensee who, under the licence, uses the source to carry out the procedure ensures that the treated person wears the equipment while undergoing the procedure;

(c) details of the equipment to be supplied;

(d) a requirement that the use licensee record in a register, supplied and under the control of the possession licensee, the following details about each exposure of the treated person to radiation while undergoing the procedure—

(i) the date of use of the source to carry out the procedure;

(ii) details of the procedure;

(iii) if, as part of the procedure, the treated person was injected with a radioactive substance or a radioactive substance was administered to or implanted in the person—details of the substance;

(e) if the carrying out of the procedure results in the production of radiographs or nuclear medicine images—

(i) a requirement that the images produced be permanently marked with relevant information; and

(ii) details of the way in which the marking is to be made.

(3) In this section—

permanently marked, for an image, means the image is marked in a way that leaves a permanent record on the image.

relevant information, for a nuclear medicine image, means the following information—

(a) the name, or identifying mark, of the use licensee;

(b) the name, or identifying mark, of the possession licensee;

(c) the address, or identifying mark, of the premises at which the image was produced;

(d) the name, gender and date of birth of the treated person;

(e) the date the image was produced;

(f) details of the radiopharmaceuticals administered to, or injected into, the treated person for the production of the image;

(g) enough information to enable the correct interpretation of the image.

relevant information, for a radiograph with a surface area of 45cm^2 or more, means the following information—

(a) the name, or identifying mark, of the use licensee;

(b) the name, or identifying mark, of the possession licensee;

(c) the address, or identifying mark, of the premises at which the radiograph was produced;

(d) the name, gender and date of birth of the treated person;

(e) the date the radiograph was produced;

(f) enough information to enable the correct interpretation of the radiograph.

relevant information, for a radiograph with a surface area of less than 45cm^2, means a marking that identifies, or helps in the identification of, the treated person.

30 Radiation practices involving the carrying out of a diagnostic or therapeutic procedure involving the irradiation of a person—Act, s 28(6)

(1) This section applies to a radiation practice involving the use of a radioactive substance to carry out a diagnostic or therapeutic procedure involving the irradiation of a person.

(2) For the Act, section 28(6), a radiation safety and protection measure for the carrying out of the practice is a measure that provides guidance about the duration of the procedure.

31 Radiation practices resulting in the production of the radionuclide radon-222—Act, s 28(6)

(1) This section applies to a radiation practice that results in the production of the radionuclide radon-222.

(2) For the Act, section 28(6), a radiation safety and protection measure for the carrying out of the practice is a requirement that the premises in which the practice is carried out are ventilated in a way that prevents the concentration of the radionuclide being more than 200Bq per cubic metre.

Division 3 Other particulars to be stated in radiation safety and protection plans

32 Radiation safety officers—Act, s 28(2)(g)

(1) This section applies if a possession licensee, under the licence, possesses a radiation source for a radiation practice.

(2) For the Act, section 28(2)(g), the radiation safety and protection plan for the practice must state the maximum intervals at which a radiation safety officer appointed by the licensee for the practice is to monitor or assess the source, or premises at which the practice is being carried out, to identify whether the relevant radiation safety standard for the source or premises is being complied with.

Part 6 Security requirements for a security enhanced source

Division 1 Threat levels

34 Meaning of *threat level*

(1) A ***threat level*** is an indicator of the likelihood and consequences of a person acquiring a security enhanced source for a malicious purpose.

(2) For this part, the threat level at a particular time is the threat level decided by the National Threat Assessment Centre and communicated to the commissioner of police.

Note—

The threat level is ordinarily described as any of the following—

- extreme
- high
- medium
- low
- very low
- negligible.

(3) In this section—

National Threat Assessment Centre means the entity of that name administered within the Australian Security Intelligence Organisation.

Division 2 Security measures for a security enhanced source

35 Matters to be included in a security plan—Act, s 34A

The matters stated in this division are the security measures and particulars that must be stated in a security plan.

36 Storage and use of a security enhanced source

The security plan must include details for the secure storage and use of a security enhanced source, including—

(a) the location of the security enhanced source in the building or facility where it is—

(i) stored; or

(ii) used in the carrying out of a radiation practice; and

(b) a plan of the building or facility in which the security enhanced source is—

(i) stored; or

(ii) used in the carrying out of a radiation practice; and

(c) the administrative security actions proposed to be taken for each threat level to protect the area in which the source is located.

37 Control of access to, or use of, a security enhanced source

The security plan must include a statement providing details of how access to, or use of, a security enhanced source is to be controlled for each threat level, including—

(a) the supervision requirements for persons who may be allowed access to a security enhanced source; and

(b) the type of check each person will be required to undertake to gain access to the source; and

(c) the physical barriers to deter and delay unauthorised access to the source.

Examples of physical barriers—

tamper-proof locks, bolts, armoured cupboards

38 Security equipment

The security plan must include a statement providing details of security equipment used for each threat level to protect a security enhanced source, including—

(a) each type of security equipment to be installed including details of—

(i) how and when the equipment is to be used; and

(ii) the intervals at which the equipment is to be checked for wear and tear and correct operation; and

(iii) the outcome of an equipment check; and

(iv) the person who will be required to check the equipment, described by reference to the abilities of the person to perform the task; and

(b) procedures to be followed before, during and after a technical service of the security equipment.

39 Security persons and surveillance

The security plan must include a statement providing details of security persons and surveillance used for each threat level to guard a security enhanced source, including—

(a) the duties and responsibilities allocated to persons in charge of security; and

(b) how surveillance of a security enhanced source will be conducted.

40 Security-related information and other records

(1) The security plan must include a statement providing details for each threat level of how the possession licensee proposes to record and maintain—

(a) inventories and documents related to the management of security enhanced sources; and

(b) details about ensuring the security of security-related information, including—

(i) who is responsible for the information; and

(ii) what information must be kept secure; and

(iii) where the information is kept; and

(iv) who is allowed access to the information; and

(v) how the information is kept secure.

(2) In this section—

security-related information means information about the measures, systems, infrastructure and other things used for each threat level to secure a security enhanced source.

Example of security-related information—

information related to a specific security system, pin codes, passwords or where keys are stored

41 Security response arrangements

The security plan must include a statement providing details of—

(a) the contingency and security response arrangements including the process for notification of a security breach; and

(b) the actions to be taken in the event of a change in the threat level.

Division 3 Transport security measures for a security enhanced source

42 Matters to be included in a transport security plan—Act, s 34H

The matters stated in this division are the transport security measures and particulars that must be stated in a transport security plan.

43 Purpose and risk identification

The transport security plan must include a statement providing details of—

(a) the purpose or reason for which the source is being transported; and

(b) the administrative security actions proposed to be taken for each threat level to address security risks identified.

44 Transportation methods and procedures

The transport security plan must include a statement providing details for each threat level of—

(a) the vehicle in which the source will be transported and the arrangements for securing the transport during the journey or while stopped en route; and

(b) the arrangements for notifying, as considered appropriate, a local police service or the regulatory authority of each jurisdiction in which the source will be transported; and

(c) the name, business address and after-hours contact details for the consignor, consignee, carrier and, where used, guard or police service; and

(d) the means of communicating between the parties involved in the transport of the source; and

(e) the contingency or emergency procedures for vehicle accidents or breakdown; and

(f) the planned principal route and an alternative route.

45 Transport security equipment

The transport security plan must include a statement providing details of the type of security-related equipment to be used for each threat level, including—

(a) how and when the equipment is to be used; and

(b) the intervals at which the equipment is to be checked for wear and tear and correct operation; and

(c) the outcomes of the checking procedures; and

(d) the person who will be required to check the equipment, described by reference to the abilities of the person to perform the task.

46 Transport security persons

The transport security plan must include a statement providing details of the security persons used for each threat level to guard a security enhanced source during transport, including—

(a) allocated duties and responsibilities for persons in relation to the security measures and particulars; and

(b) the type of security check each person will be required to undergo in order to undertake their transport-related activities with the source; and

(c) the security briefing for persons involved in the transport of the source including the nature of the threat, the threat level, contingency procedures and security response arrangements.

47 Control of access to a security enhanced source during transport

The transport security plan must include a statement providing details for each threat level of—

(a) how access to the source will be controlled; and

(b) the supervision requirements of persons who may be allowed access to a security enhanced source.

48 Security-related information about transport

(1) The transport security plan must include a statement providing details for each threat level of how security-related information will be secured, including—

(a) who is responsible for the information; and

(b) what information must be kept secure; and

(c) where the information is kept; and

(d) who is allowed access to the information; and

(e) how the information is kept secure.

(2) In this section—

security-related information means information about the measures, systems, infrastructure and other things used for each threat level to secure a security enhanced source during transport.

Example of security-related information—

information related to travel routes, pin codes, passwords or where keys are stored

49 Transport security response arrangements

The transport security plan must include a statement providing details of—

(a) the contingency and transport security response arrangements including the process for notification of a security breach; and

(b) the actions to be taken in the event of a change in the threat level.

Part 7 Radiation safety officers

50 Qualifications—Act, s 36(3)

For the Act, section 36(3), for each radiation practice stated in schedule 5, column 1, the qualification stated opposite the radiation practice in schedule 5, column 2 is prescribed.

51 Functions—Act, s 37(2)(b)(iii)

For the Act, section 37(2)(b)(iii), the other persons are—

(a) persons who observe the carrying out of the radiation practice, other than persons stated in the Act, section 37(2)(b)(i) and (ii); and

(b) if the radiation practice is a diagnostic or therapeutic procedure involving the irradiation of a person (the ***treated person***)—persons involved in carrying out the procedure, other than the treated person and persons stated in the Act, section 37(2)(b)(i) and (ii).

Part 8 Radiation monitoring

52 Information in personal monitoring records—Act, s 38(4)(b)

For the Act, section 38(4)(b), the other information is the following—

(a) the name, gender and date of birth of the monitored person;

(b) the name and postal address of the licensee;

(c) the date the monitored person started to be monitored for any radiation doses received in relation to the carrying out of the practice;

(d) the date the monitored person stopped being monitored for any radiation doses received in relation to the carrying out of the practice;

(e) details of the basis for the monitored person being required to be provided, or wear, a personal monitoring device;

(f) the type of radiation to which the monitored person has been exposed in relation to the carrying out of the practice;

(g) the period the assessment of a personal monitoring device worn by the monitored person, in relation to the carrying out of the practice, relates to;

(h) the estimated total effective dose, determined as a result of the assessment, for the monitored person for the period;

(i) details of the methodology used in the assessment.

Part 9 Radiation dose limits

Division 1 Ionising radiation

53 Radiation dose limits applying for occupational exposure of persons—Act, ss 37(2)(c)(i), 41(5), 42(2), 127(1)(b), 132(4)(b) and 133(2)(c)

(1) This section applies if a possession licensee, under the licence, possesses an ionising radiation source for a radiation practice.

(2) For the Act, sections 37(2)(c)(i), 41(5), 42(2), 127(1)(b), 132(4)(b) and 133(2)(c), the radiation dose limits applying to the occupational exposure of a person to ionising radiation while involved in carrying out the practice are as follows—

(a) the average of the annual total effective doses for the person, over a 5-year period, must not be more than 20mSv per year;

(b) the total effective dose for the person must not be more than 50mSv per year;

(c) the equivalent dose for each lens of the person's eyes must not be more than 150mSv per year;

(d) the equivalent dose for each of the person's hands and feet must not be more than 500mSv per year;

(e) the equivalent dose for a square centimetre of the person's skin must not be more than 500mSv per year.

(3) For the Act, sections 37(2)(c)(i), 41(5), 42(2), 127(1)(b), 132(4)(b) and 133(2)(c), the radiation dose limits applying to the occupational exposure of a person to ionising radiation emitted from the source, other than while involved in carrying out the practice, are as follows—

(a) the total effective dose for the person must not be more than 1mSv per year;

(b) the equivalent dose for each lens of the person's eyes must not be more than 15mSv per year;

(c) the equivalent dose for a square centimetre of the person's skin must not be more than 50mSv per year.

54 Radiation dose limits applying for public exposure of persons—Act, ss 37(2)(c)(i), 42(2), 127(1)(b), 132(4)(b) and 133(2)(c)

(1) This section applies if a possession licensee, under the licence, possesses an ionising radiation source for a radiation practice.

(2) For the Act, sections 37(2)(c)(i), 42(2), 127(1)(b), 132(4)(b) and 133(2)(c), the radiation dose limits applying to the public exposure of a person to ionising radiation while the practice is carried out are as follows—

(a) the total effective dose for the person must not be more than 1mSv per year;

(b) the equivalent dose for each lens of the person's eyes must not be more than 15mSv per year;

(c) the equivalent dose for a square centimetre of the person's skin must not be more than 50mSv per year.

(3) Subsection (2) does not apply if the person is exposed—

(a) if the practice is a diagnostic or therapeutic procedure involving the irradiation of another person—while involved in carrying out the procedure; or

(b) while involved in carrying out the practice, as a voluntary participant in health-related research.

55 Radiation dose limits applying for the carrying out of a diagnostic or therapeutic procedure involving the irradiation of a person—Act, ss 37(2)(c)(i), 41(5), 127(1)(b), 132(4)(b) and 133(2)(c)

(1) This section applies if—

(a) a use licensee, under the licence, uses an ionising radiation source to carry out a diagnostic or therapeutic procedure involving the irradiation of a person (the ***treated person***); and

(b) a person, other than the treated person, involved in carrying out the procedure is exposed to ionising radiation.

(2) For the Act, sections 37(2)(c)(i), 41(5), 127(1)(b), 132(4)(b) and 133(2)(c), the radiation dose limit applying to the exposure is a total effective dose of 5mSv per year.

(3) Subsection (2) does not apply if the exposure is an occupational exposure to the radiation.

56 Supply of personal monitoring devices—Act, s 28(3)

For the Act, section 28(3), the radiation dose limit for ionising radiation is a total effective dose of 1mSv per year.

57 Pregnant women—Act, ss 37(2)(c)(i), 41(5), 42(2), 127(1)(b), 132(4)(b) and 133(2)(c)

(1) This section applies if a possession licensee, under the licence, possesses an ionising radiation source for a radiation practice.

(2) For the Act, sections 37(2)(c)(i), 41(5), 42(2), 127(1)(b), 132(4)(b) and 133(2)(c), the radiation dose limit applying to the occupational exposure of a pregnant woman to ionising radiation while involved in carrying out the practice is a total effective dose of 1mSv per year.

(3) However, for the Act, section 127(1)(b), subsection (2) only applies if the inspector is aware, or ought reasonably be aware, the woman is pregnant.

(4) Also, subsection (2) does not apply if—

(a) for the Act, section 41(5)—the use licensee who, under the licence, uses the source to carry out the practice is not aware, or could not reasonably be aware, the woman is pregnant; or

(b) for the Act, section 42(2)—the person carrying out the practice is not aware, or could not reasonably be aware, the woman is pregnant.

58 Mineral substances that are not radioactive substances

(1) This section applies to a person who possesses a mineral substance that is a radioactive material that is not a radioactive substance.

(2) The person must ensure that another person does not receive a total effective dose from ionising radiation emitted from the substance that is—

(a) for public exposure of the other person—more than 1mSv per year; or

(b) for occupational exposure of the other person—more than 20mSv per year.

Maximum penalty—20 penalty units.

Division 2 Non-ionising radiation

59 Functions of radiation safety officers—Act, ss 37(2)(c)(ii)

For the Act, section 37(2)(c)(ii), the radiation dose limits for non-ionising radiation emitted by a laser apparatus used to carry out a diagnostic, therapeutic or cosmetic procedure involving the irradiation of a person are stated in tables 6 and 8 of the laser standard.

60 Carrying out diagnostic or therapeutic procedures involving the irradiation of a person—Act, s 41(5)

For the Act, section 41(5), the radiation dose limits for non-ionising radiation emitted by a laser apparatus used to carry out a diagnostic or therapeutic procedure involving the irradiation of a person are stated in tables 6 and 8 of the laser standard.

61 Carrying out cosmetic procedures involving the irradiation of a person—Act, s 42(2)

For the Act, section 42(2), the radiation dose limits for non-ionising radiation emitted by a laser apparatus used to carry out a cosmetic procedure involving the irradiation of a person are stated in tables 6 and 8 of the laser standard.

62 Seizing dangerous things—Act, ss 127(1)(b), 132(4)(b) and 133(2)(c)

For the Act, sections 127(1)(b), 132(4)(b) and 133(2)(c), the radiation dose limits for non-ionising radiation emitted by a laser apparatus used to carry out a diagnostic, therapeutic or cosmetic procedure involving the irradiation of a person are stated in tables 6 and 8 of the laser standard.

Part 10 Authorised persons

63 Authorised persons for diagnostic or therapeutic procedures—Act, s 41

For the Act, section 41(1)—

(a) for a diagnostic procedure stated in schedule 6, part 1, column 1, a person stated in schedule 6, part 1, column 2 opposite the procedure is an authorised person; and

(b) for a therapeutic procedure stated in schedule 6, part 2, column 1, a person stated in schedule 6, part 2, column 2 opposite the procedure is an authorised person.

64 Physician's assistants authorised under practice plans—Act, s 41

A physician's assistant is authorised to request a diagnostic procedure stated in schedule 6, part 1, column 1 if—

(a) the practice plan developed for the physician states that the physician's assistant may request the diagnostic procedure; and

(b) the physician's assistant requests the diagnostic procedure under the supervision of his or her supervising medical officer; and

(c) the supervising medical officer is authorised under section 63 to request the diagnostic procedure stated in schedule 6, part 1, column 1.

Part 11 Banned radiation sources and radiation practices

64A Banned radiation sources for possession—Act, s 47

For the Act, section 47—

(a) a relevant solarium is prescribed as a banned radiation source in relation to the possession of the relevant solarium; and

(b) a person must not apply for a possession licence for a relevant solarium; and

(c) the chief executive must not grant a possession licence for a relevant solarium.

Part 12 Exemptions

Division 1 Requirement for use licence

66 Prescribed radiation practices—Act, s 13(3), definition *prescribed radiation practice*

(1) For the Act, section 13(3), definition *prescribed radiation practice*, the following are prescribed radiation practices—

(a) industrial radiography involving the use of an ionising radiation source;

(b) borehole logging involving the use of a sealed source apparatus;

(c) density-gauging, or moisture-gauging, for geo-technical purposes, involving the use of a sealed source apparatus;

(d) the preparation of a radioactive substance or radiation apparatus, or assembly of a sealed source apparatus, for use in carrying out a diagnostic or therapeutic procedure involving the irradiation of a person;

(e) the commissioning, maintenance or repair of radiation sources or sealed source apparatus;

(f) the compliance testing of a radiation source by a qualified accredited person for a radiation source of that type, involving the use of the source or another radiation source;

(g) the compliance testing of premises by a qualified accredited person for premises of that type, involving the use of a radiation source;

(h) the undertaking of quality control procedures, in relation to—

(i) a radiation source, involving the use of another radiation source; or

(ii) a sealed source apparatus, involving the use of a radiation source.

(2) In this section—

compliance testing, of a radiation source or premises, means assessing whether the source or premises complies with the relevant radiation safety standard.

qualified accredited person, for a type of radiation source or premises, means an accredited person who, under the person's accreditation certificate, is allowed to issue a certificate of compliance for the type of radiation source or premises.

67 Training—Act, s 13(2)(b)(ii)

For the Act, section 13(2)(b)(ii), the following is training—

(a) training at an educational institution, other than training involving the actual irradiation by the trainee of a person as part of a diagnostic or therapeutic procedure;

(b) undertaking a course or subject stated in schedule 7.

Division 2 Radiation sources

68 Exemption from requirement for possession licence—Act, s 210

For the Act, section 210, a radioactive substance containing the radionuclide nickel-63 or hydrogen-3 is exempt from the Act, section 12 if—

(a) it is incorporated in a sealed source apparatus; and

(b) the apparatus is used for gas chromatography.

69 Exemption from requirement for use licence—Act, s 210

(1) For the Act, section 210, the following radiation sources are exempt from the Act, section 13—

(a) if a sealed source apparatus, incorporating a sealed radioactive substance, is used for chemical analysis or industrial gauging—the substance;

(b) a radiation apparatus used for industrial gauging;

(c) a cabinet radiation apparatus used for its intended use;

(d) an enclosed radiation apparatus used for its intended use;

(e) an ionising radiation source designed only for irradiating things, but not including use of the source by a person who is carrying out commissioning, maintenance or repair of the source;

(f) a sealed radioactive substance, having an activity of not more than 370MBq, used for—

(i) calibration checks of measuring instruments; or

(ii) quality control procedures undertaken for—

(A) another radiation source or a sealed source apparatus; or

(B) if another radiation source is used to carry out a radiation practice involving the

production of images—any ancillary imaging equipment used in connection with the use of the other source to carry out the practice;

(g) a sealed radioactive substance, having an activity of not more than 4MBq, used for transferring anatomical landmarks to images produced using a gamma camera;

(h) a radioactive substance, having an activity of not more than 500kBq, used for an in vitro test;

(i) a sealed radioactive substance used for static elimination;

(j) a fully enclosed analytical radiation apparatus used for its intended use;

(k) a laser apparatus designed only for puncturing a person's skin to obtain capillary blood samples but not including use of the apparatus by a person who is carrying out maintenance or repair of the apparatus.

(2) To remove any doubt, it is declared that subsection (1)(e) does not apply to an ionising radiation source designed for irradiating individuals.

(3) In this section—

fully enclosed analytical radiation apparatus means an ionising radiation apparatus, used for physical or chemical analysis, in which—

(a) the radiation source, the sample for analysis and equipment irradiated in the analytical process are enclosed in a chamber, or coupled chambers, designed to prevent any person being exposed to the primary x-ray beam of the source during normal operation of the apparatus; and

(b) the sample for analysis is transferred from a sample port to the chamber in which it is irradiated by a mechanism that prevents any person gaining access to the chamber during normal operation of the apparatus.

70 Exemption from requirement for transport licence—Act, s 210

(1) For the Act, section 210, a radioactive substance enclosed in an excepted package is exempt from the Act, sections 14 and 15 if the package is transported in accordance with the transport code of practice.

(2) Subsection (3) applies to a sealed radioactive substance incorporated in a sealed source apparatus, if the apparatus is used by a use licensee under a use licence to carry out 1 of the following radiation practices—

(a) borehole logging;

(b) density-gauging, or moisture-gauging, for geo-technical purposes;

(c) industrial radiography.

(3) For the Act, section 210, the substance is exempt from the Act, sections 14 and 15 if the apparatus is transported by the licensee in accordance with the transport code of practice.

(4) In this section—

excepted package has the meaning given in the transport code of practice.

71 Smoke detectors—Act, s 210

(1) For the Act, section 210—

(a) a radioactive substance incorporated in a domestic smoke detector is exempt from the Act, sections 12, 13 and 26; and

(b) a radioactive substance incorporated in an ionisation chamber smoke detector that is not a domestic smoke detector is exempt from the Act, sections 12 and 13 if the detector was—

(i) acquired before 1 January 2000; or

(ii) manufactured in accordance with AS 1603.2-1997 (Automatic fire detection and alarm systems, Part 2: Point type smoke detectors).

(2) To remove any doubt, it is declared that subsection (1) does not apply while the detector is being manufactured or repaired.

(3) In this section—

domestic smoke detector means an ionisation chamber smoke detector containing the radionuclide americium-241 having an activity of not more than 37kBq and manufactured in accordance with AS 3786-1993 (Smoke alarms), second edition.

72 Certain radioactive substances, incorporated in items to produce light—Act, s 210

(1) For the Act, section 210—

(a) a radioactive substance containing the radionuclide promethium-147 or hydrogen-3, incorporated in an item to produce light is exempt from the Act, sections 12, 13 and 26; and

(b) a radioactive substance containing the radionuclide radium-226, incorporated in an item to produce light is exempt from the Act, sections 12 and 13.

(2) Subsection (1) does not apply if the item is a gaseous tritium light device.

(3) Also, to remove doubt, it is declared that subsection (1) does not apply while the item is being manufactured or repaired.

73 Gaseous tritium light devices—Act, s 210

For the Act, section 210, a radioactive substance containing the radionuclide hydrogen-3 with an activity of less than 74GBq, incorporated in a gaseous tritium light device, is exempt from the Act, sections 12 and 13 if the device—

(a) is being used as a safety, or warning, sign; and

(b) complies with sections 2, 4 and 5 of the document called 'Appendix XXXIX—Recommendations for exemptions from licensing of gaseous tritium light devices' published by NHMRC.

74 Depleted uranium—Act, s 210

(1) For the Act, section 210, depleted uranium is exempt from the Act, sections 12, 14 and 15 if it is—

(a) being used as ballast in an aircraft or ship; and

(b) totally encased in a metallic sheath; and

(c) in solid massive form.

(2) In this section—

depleted uranium means uranium containing less than 0.72% of the radionuclide uranium-235.

75 Sealed radioactive substances used in teaching—Act, s 210

(1) This section applies to a sealed radioactive substance containing a radionuclide mentioned in column 1 of the following table if the activity of the radionuclide is not more than the activity mentioned in column 2 of the table shown opposite the radionuclide—

Table

Column 1 Radionuclide	Column 2 Activity (kBq)
cobalt-60	200
strontium-90	80
caesium-137	200
radium-226	20

Column 1 Radionuclide	Column 2 Activity (kBq)
americium-241	20

(2) For the Act, section 210, the substance is exempt from the Act, section 13 if it is being used for teaching the characteristics and properties of radiation or radiation sources.

76 Minerals—Act, s 210

(1) This section applies to a mineral that is a radioactive substance.

(2) For the Act, section 210, the mineral is exempt from the Act, section 12 if—

(a) it emits radiation at a level not more than 5 micrograys per hour, measured at a distance of 10cm from its surface; and

(b) it is being used—

(i) as a sample in teaching; or

(ii) for display as a geological specimen.

77 Abrasive blasting material containing radionuclides—Act, s 210

(1) This section applies to abrasive blasting material, containing radionuclides, if it is being used in abrasive blasting.

(2) Subsection (3) applies if—

(a) the material is a radioactive substance; and

(b) the material contains thorium or uranium radionuclides.

(3) For the Act, section 210, the material is exempt from the Act, section 12 if the amount worked out, using the formula, in relation to the material is not more than 1—

$$(\mathbf{0.1} \times \mathbf{U}) + (\mathbf{0.2} \times \mathbf{Th})$$

where—

Th means the total concentration, stated in Bq per gram, of any thorium radionuclides and their progeny contained in the material.

U means the total concentration, stated in Bq per gram, of any uranium radionuclides and their progeny contained in the material.

(4) Further, material that is, under subsection (3), exempt from the Act, section 12 is also exempt from the Act, section 26 if the gross alpha and gross beta concentrations in the leachate, determined as a result of carrying out the TCLP in relation to the material, are not each more than the amount worked out by multiplying the relevant concentration stated in the 'Australian Drinking Water Guidelines', jointly prepared by NHMRC and NRMMC, by 10.

(5) In this section—

abrasive blasting material means material that could reasonably be used for abrasive blasting.

78 Mineral substances—Act, s 210

(1) Subsection (2) applies to a mineral substance being disposed of, other than into the air, water or sewerage system.

(2) The substance is exempt from the Act, section 26 if—

(a) the gross alpha and gross beta concentrations in the leachate, determined as a result of carrying out the TCLP in relation to the substance, are not each more than the amount worked out by multiplying the relevant concentration stated in the 'Australian Drinking Water Guidelines', jointly prepared by NHMRC and NRMMC, by 10; and

(b) for a substance that contains—

(i) only 1 of the radionuclides stated in schedule 1, column 1—the concentration of the radionuclide is less than the amount worked out by multiplying the

concentration stated in schedule 1, column 2 shown opposite the radionuclide by 10; or

(ii) more than 1 of the radionuclides stated in schedule 1, column 1—the substance's disposal factor is not more than 1.

(3) In this section—

disposal factor, for a mineral substance containing more than 1 of the radionuclides stated in schedule 1, column 1, means the total of the amounts worked out by applying the formula to each of the radionuclides—

$$\textbf{disposal factor} = \frac{\mathbf{C}}{\mathbf{MC}}$$

where—

C, for a radionuclide, means the radionuclide's concentration, measured in Bq per gram.

MC, for a radionuclide, means the amount worked out by multiplying the concentration stated in schedule 1, column 2 shown opposite the radionuclide by 10.

79 Persons who have been injected with a radioactive substance etc. as part of a diagnostic or therapeutic procedure—Act, s 210

(1) This section applies if—

(a) a person has been injected with a radioactive substance, or a radioactive substance has been administered to or implanted in a person, as part of a diagnostic or therapeutic procedure; and

(b) the person disposes of the substance's radionuclide as part of his or her bodily waste.

(2) For the Act, section 210, the bodily waste is exempt from the Act, section 26 only to the extent that it is disposed of by the person.

Note—

This section does not exempt another person from the requirements of the Act, section 26 for the disposal of the bodily waste.

80 Radionuclide krypton-85, incorporated in a cold cathode gas discharge tube—Act, s 210

(1) For the Act, section 210, a radioactive substance containing the radionuclide krypton-85, incorporated in a cold cathode gas discharge tube, is exempt from the Act, sections 12, 13 and 26.

(2) To remove any doubt, it is declared that subsection (1) does not apply while the tube is being manufactured or repaired.

Part 13 Registers

81 Register of licensees—Act, s 207

For the Act, section 207(2), the register the chief executive must keep about licensees must contain the following information about a licensee—

(a) the licensee's name;

(b) the licence number;

(c) the licence type;

(d) the expiry date of the licence;

(e) any conditions on the licence;

(f) if the licensee is a possession licensee—

(i) particulars of the radiation source the licensee is allowed to possess; and

(ii) the radiation practice for which the licensee is allowed to possess the source;

(g) if the licensee is a use licensee—

(i) particulars of the radiation source the licensee is allowed to use; and

(ii) the radiation practice the licensee is allowed to carry out using the source;

(h) if the licensee is a transport licensee—

(i) particulars of the radioactive substance the licensee is allowed to transport; and

(ii) how the substance is to be transported; and

(iii) the amount of the substance the licensee is allowed to transport at a time.

82 Register of accredited persons—Act, s 207

For the Act, section 207(2), the register the chief executive must keep about accredited persons must contain the following information about an accredited person—

(a) the accredited person's name;

(b) the accreditation certificate number;

(c) the expiry date of the accreditation certificate;

(d) any conditions on the accreditation certificate;

(e) the type of radiation source or premises for which the accredited person may issue a certificate;

(f) the accredited person's contact details.

Examples of contact details—

address, telephone number, facsimile number, email address

83 Register of qualified persons—Act, s 207

For the Act, section 207(2), the register the chief executive must keep about qualified persons must contain the following information about a qualified person—

(a) the qualified person's name;

(b) the radiation safety officer certificate number;

(c) the expiry date of the radiation safety officer certificate;

(d) any conditions on the radiation safety officer certificate;

(e) the radiation practice for which the qualified person may perform the functions of a radiation safety officer.

84 Register of inspectors—Act, s 207

For the Act, section 207(2), the register the chief executive must keep about inspectors must contain the following information about an inspector—

(a) the inspector's name;

(b) if the inspector is appointed for a term—the term of the appointment;

(c) any conditions of the inspector's appointment.

85 Register of State radiation analysts—Act, s 207

For the Act, section 207(2), the register the chief executive must keep about State radiation analysts must contain the following information about a State radiation analyst—

(a) the State radiation analyst's name;

(b) if the State radiation analyst is appointed for a term—the term of the appointment;

(c) any conditions of the State radiation analyst's appointment.

Part 14 Disclosure of protected information

86 Disclosure of protected information

For the Act, section 209(4), the purposes for which protected information may be disclosed by the chief executive are as follows—

(a) for the development of a plan to avoid or limit the impact of an emergency situation on persons, property or the environment;

(b) to enable persons dealing with an emergency situation to know the hazards, or possible hazards, the persons may face in dealing with the emergency situation;

(c) to protect national security, including, for example—

(i) to facilitate the tracking of radiation sources within or outside Australia; and

(ii) to enable State or national alerts, advisory documents and other relevant information to be provided about an incident involving a radiation source; and

(iii) in the case of a security breach relating to a radiation source, to enable a coordinated response to be initiated and implemented; and

(iv) to monitor and evaluate initiatives implemented to ensure the security of radiation sources; and

(v) to help the development, review or improvement of policies, operational guidelines, codes, standards or legislation relating to national security; and

(vi) to develop or implement training programs about the security of radiation sources, including policies, codes, standards or legislation relating to the programs; and

(vii) to undertake or facilitate research about best practice associated with the security of radiation sources.

Part 15 Fees

87 Fees—general

The fees payable under the Act are stated in schedule 8.

88 Fees—Act, s 51(1)(c)(i)

(1) Subsection (2) applies to an application for a possession licence for the possession of a radioactive substance for a radiation practice.

(2) For the Act, section 51(1)(c)(i), the fee is the total of the following—

(a) an application fee;

(b) a licence fee consisting of—

(i) a base fee; and

(ii) a fee calculated having regard to the number of sealed radioactive substances, or types of unsealed radioactive substances, that are the subject of the application.

(3) Subsection (4) applies to an application for a possession licence for the possession of a radiation apparatus for a radiation practice.

(4) For the Act, section 51(1)(c)(i), the fee is the total of the following—

(a) an application fee;

(b) a licence fee consisting of—

(i) a base fee; and

(ii) a fee calculated having regard to the number of radiation apparatus that are the subject of the application.

(5) Subsection (6) applies to an application for a use licence or transport licence.

(6) For the Act, section 51(1)(c)(i), the fee is the total of the following—

(a) an application fee;

(b) a licence fee.

(7) Subsection (8) applies to an application for an accreditation certificate.

(8) For the Act, section 51(1)(c)(i), the fee is the total of the following—

(a) an application fee;

(b) an accreditation certificate fee.

(9) Subsection (10) applies to an application for a radiation safety officer certificate.

(10) For the Act, section 51(1)(c)(i), the fee is the total of the following—

(a) an application fee;

(b) a radiation safety officer certificate fee.

89 Fees—Act, s 79(3)(b)(i)

(1) Subsection (2) applies to an application for the renewal of a possession licence for the possession of a radioactive substance for a radiation practice.

(2) For the Act, section 79(3)(b)(i), the fee is a licence fee consisting of the following—

(a) a base fee;

(b) a fee calculated having regard to the number of sealed radioactive substances, or types of unsealed radioactive substances, that are the subject of the application.

(3) Subsection (4) applies to an application for the renewal of a possession licence for the possession of a radiation apparatus for a radiation practice.

(4) For the Act, section 79(3)(b)(i), the fee is a licence fee consisting of the following—

(a) a base fee;

(b) a fee calculated having regard to the number of radiation apparatus that are the subject of the application.

(5) Subsection (6) applies to an application for the renewal of a use or transport licence.

(6) For the Act, section 79(3)(b)(i), the fee is a licence fee.

(7) Subsection (8) applies to an application for the renewal of an accreditation certificate.

(8) For the Act, section 79(3)(b)(i), the fee is an accreditation certificate fee.

(9) Subsection (10) applies to an application for the renewal of a radiation safety officer certificate.

(10) For the Act, section 79(3)(b)(i), the fee is a radiation safety officer certificate fee.

90 Who pays fee for security check or criminal history check—Act, s 103A

The following person must pay the prescribed fee for a security check or criminal history check—

(a) for a check for an individual applicant for a licence—the applicant;

(b) for a check for the nominated person for a corporation that is an applicant for a licence—the corporation;

(c) for a check for a person who is to have access to a security enhanced source under the approved security plan for the source—the possession licensee requesting the check;

(d) for a check for a person who is to have access to a security enhanced source under the approved transport security plan for the transport of the source—the transport security plan holder requesting the check.

91 Waiver of fees—general

(1) Subsection (2) applies if—

(a) under the Act, section 220, a person is taken to be the holder of a column 2 licence; and

(b) before the expiry of the licence, the person applies for the same type of licence.

(2) The application fee, payable under this regulation, for the licence is not payable by the person.

(3) Subsection (4) applies if a person—

(a) is required to use a radiation source during the person's study or training at an educational institution; and

(b) under the Act, the person needs a use licence allowing the use of the source.

(4) The application fee and licence fee, payable under this regulation, for the licence are not payable by the person.

(5) Subsection (6) applies if—

(a) under the Act, section 224(3), a person is taken to be a radiation safety officer for a radiation practice; and

(b) while continuing as a radiation safety officer for the practice, the person applies for a radiation safety officer certificate.

(6) The application fee, payable under this regulation, for the certificate is not payable by the person.

(7) Subsection (8) applies to a use licensee who, under the licence, is allowed to use a radiation source to carry out a diagnostic or therapeutic procedure involving the irradiation of a person.

(8) If the licensee applies for another use licence to carry out a diagnostic or therapeutic procedure involving the irradiation of a person, the application fee, payable under this regulation, for the licence is not payable by the licensee.

(9) The following fees are not payable by the State—

(a) the fees stated in schedule 8, parts 1 and 4;

(b) the fee for approval to dispose;

(c) the fee for approval to acquire;

(d) the fee for approval to relocate.

92 Waiver of fees—undergraduates' professional development year

(1) This section applies to a graduate practitioner who—

(a) undertakes his or her professional development year; and

(b) applies for a use licence to carry out a diagnostic or therapeutic procedure involving the irradiation of another person during the person's professional development year.

(2) The application fee payable under this regulation for the licence is not payable by the graduate practitioner.

(3) In this section—

accrediting body means the Australian Institute of Radiography ACN 000 084 462 or the Australian and New Zealand Society of Nuclear Medicine Limited ACN 133 630 029.

graduate practitioner means a person who—

(a) is a graduate from an undergraduate medical radiation science degree course accredited by an accrediting body, regardless of the title of the course; or

(b) is assessed by an accrediting body to be the equivalent of a person mentioned in paragraph (a).

professional development year means the period, the equivalent of 48 weeks full-time work, during which a graduate practitioner must work under the guidance of another practitioner before the graduate practitioner is recognised as an accredited practitioner by an accrediting body.

93 Waiver of fee—licensee applying for new licences within the transitional period

(1) This section applies if a relevant licensee makes a relevant application and a relevant licence fee becomes payable.

(2) The relevant licence fee, otherwise payable under this regulation, is not payable by the relevant licensee.

(3) In this section—

relevant application means—

(a) an application for a new possession licence under the Act, section 232(4); or

(b) an application for a new use licence under the Act, section 233(2); or

(c) an application for a new transport licence under the Act, section 234(2).

relevant licence fee means—

(a) the application fee for a possession licence—schedule 8, item 1(a); or

(b) the base fee for a possession licence for 1 year or less—schedule 8, item 2(a)(i); or

(c) the application fee for a use or transport licence—schedule 8, item 7; or

(d) the use or transport licence fee for 1 year or less—schedule 8, item 8(a).

relevant licensee means—

(a) a possession licensee to whom the Act, section 232 applies; or

(b) a use licensee to whom the Act, section 233 applies; or

(c) a transport licensee to whom the Act, section 234 applies.

94 Refund of fees

(1) The chief executive must as soon as practicable refund the fees, other than the application fee, paid on an application for the grant or renewal of an accreditation certificate, licence or radiation safety officer certificate if—

(a) the chief executive refuses to grant the application; or

(b) the applicant withdraws the application before it is decided.

(2) The chief executive must not refund any of the following fees—

(a) an application by a possession licensee to change the licensee's approved security plan;

(b) an application for approval of a transport security plan;

(c) an application by a transport security plan holder to change the holder's approved transport security plan;

(d) an application for approval to acquire;

(e) an application for approval to dispose;

(f) an application for approval to relocate;

(g) an application by the holder of a conditional Act instrument to change the conditions of the instrument imposed by the chief executive;

(h) an application by a possession licensee to change the licensee's approved radiation safety and protection plan for a radiation practice.

Part 16 Repeal and transitional provisions

Division 1 Repeal and transitional provision for repeal

95 Repeal

The Radiation Safety Regulation 1999, SL No. 330 is repealed.

96 Transitional provision for Radiation Safety Regulation 2010

(1) In a document, a reference to the repealed *Radiation Safety Regulation 1999* may, if the context permits, be taken to be a reference to this regulation.

(2) Without limiting subsection (1), a reference in a document to schedule 3A of the repealed *Radiation Safety Regulation 1999* may, if the context permits, be taken to be a reference to schedule 6.

Division 2 Transitional provisions for Radiation Safety Amendment Regulation (No. 1) 2013

97 Definition for div 2

In this division—

commencement means the commencement of this section.

98 Application of s 64A

(1) This section applies if a possession licensee, under the licence—

(a) possesses a relevant solarium immediately before the commencement; and

(b) continues to possess the relevant solarium on the commencement.

(2) Section 64A does not apply to the relevant solarium until the earlier of the following—

(a) the licence ends;

(b) 31 December 2014.

99 Particular solarium continues to be relevant solarium

(1) This section applies to a solarium if, immediately before the commencement, the solarium is a relevant solarium.

(2) Despite schedule 9, definition *relevant solarium*, the solarium continues to be a relevant solarium after the commencement.

Schedule 1 Radionuclide concentrations and activities

sections 4, 5, 17 and 78

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
1	Actinium-225	$1 \times 10^{+1}$	$1 \times 10^{+4}$
2	Actinium-227	1×10^{-1}	$1 \times 10^{+3}$
3	Actinium-228	$1 \times 10^{+1}$	$1 \times 10^{+6}$
4	Americium-241	1×10^{0}	$1 \times 10^{+4}$
5	Americium-242	$1 \times 10^{+3}$	$1 \times 10^{+6}$
6	Americium-242m[1]	1×10^{0}	$1 \times 10^{+4}$
7	Americium-243[1]	1×10^{0}	$1 \times 10^{+3}$
8	Antimony-122	$1 \times 10^{+2}$	$1 \times 10^{+4}$
9	Antimony-124	$1 \times 10^{+1}$	$1 \times 10^{+6}$
10	Antimony-125	$1 \times 10^{+2}$	$1 \times 10^{+6}$
11	Argon-37	$1 \times 10^{+6}$	$1 \times 10^{+8}$
12	Argon-41	$1 \times 10^{+2}$	$1 \times 10^{+9}$
13	Arsenic-73	$1 \times 10^{+3}$	$1 \times 10^{+7}$
14	Arsenic-74	$1 \times 10^{+1}$	$1 \times 10^{+6}$
15	Arsenic-76	$1 \times 10^{+2}$	$1 \times 10^{+5}$
16	Arsenic-77	$1 \times 10^{+3}$	$1 \times 10^{+6}$
17	Astatine-211	$1 \times 10^{+3}$	$1 \times 10^{+7}$
18	Barium-131	$1 \times 10^{+2}$	$1 \times 10^{+6}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
19	Barium-133	$1 \times 10^{+2}$	$1 \times 10^{+6}$
20	Barium-140[1]	$1 \times 10^{+1}$	$1 \times 10^{+5}$
21	Berkelium-249	$1 \times 10^{+3}$	$1 \times 10^{+6}$
22	Beryllium-7	$1 \times 10^{+3}$	$1 \times 10^{+7}$
23	Bismuth-206	$1 \times 10^{+1}$	$1 \times 10^{+5}$
24	Bismuth-207	$1 \times 10^{+1}$	$1 \times 10^{+6}$
25	Bismuth-210	$1 \times 10^{+3}$	$1 \times 10^{+6}$
26	Bismuth-212[1]	$1 \times 10^{+1}$	$1 \times 10^{+5}$
27	Bismuth-213	$1 \times 10^{+2}$	$1 \times 10^{+6}$
28	Bromine-75	$1 \times 10^{+1}$	$1 \times 10^{+6}$
29	Bromine-76	$1 \times 10^{+1}$	$1 \times 10^{+5}$
30	Bromine-82	$1 \times 10^{+1}$	$1 \times 10^{+6}$
31	Cadmium-109	$1 \times 10^{+4}$	$1 \times 10^{+6}$
32	Cadmium-115	$1 \times 10^{+2}$	$1 \times 10^{+6}$
33	Cadmium-115m	$1 \times 10^{+3}$	$1 \times 10^{+6}$
34	Caesium-129	$1 \times 10^{+2}$	$1 \times 10^{+5}$
35	Caesium-131	$1 \times 10^{+3}$	$1 \times 10^{+6}$
36	Caesium-132	$1 \times 10^{+1}$	$1 \times 10^{+5}$
37	Caesium-134	$1 \times 10^{+1}$	$1 \times 10^{+4}$
38	Caesium-134m	$1 \times 10^{+3}$	$1 \times 10^{+5}$
39	Caesium-135	$1 \times 10^{+4}$	$1 \times 10^{+7}$
40	Caesium-136	$1 \times 10^{+1}$	$1 \times 10^{+5}$
41	Caesium-137[1]	$1 \times 10^{+1}$	$1 \times 10^{+4}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
42	Caesium-138	$1 \times 10^{+1}$	$1 \times 10^{+4}$
43	Calcium-47	$1 \times 10^{+1}$	$1 \times 10^{+6}$
44	Calcium-45	$1 \times 10^{+4}$	$1 \times 10^{+7}$
45	Californium-246	$1 \times 10^{+3}$	$1 \times 10^{+6}$
46	Californium-248	$1 \times 10^{+1}$	$1 \times 10^{+4}$
47	Californium-249	1×10^{0}	$1 \times 10^{+3}$
48	Californium-250	$1 \times 10^{+1}$	$1 \times 10^{+4}$
49	Californium-251	1×10^{0}	$1 \times 10^{+3}$
50	Californium-252	$1 \times 10^{+1}$	$1 \times 10^{+4}$
51	Californium-253	$1 \times 10^{+2}$	$1 \times 10^{+5}$
52	Californium-254	1×10^{0}	$1 \times 10^{+3}$
53	Carbon-14	$1 \times 10^{+4}$	$1 \times 10^{+7}$
54	Carbon-11	$1 \times 10^{+1}$	$1 \times 10^{+6}$
55	Cerium-139	$1 \times 10^{+2}$	$1 \times 10^{+6}$
56	Cerium-141	$1 \times 10^{+2}$	$1 \times 10^{+7}$
57	Cerium-143	$1 \times 10^{+2}$	$1 \times 10^{+6}$
58	Cerium-144[1]	$1 \times 10^{+2}$	$1 \times 10^{+5}$
59	Chlorine-36	$1 \times 10^{+4}$	$1 \times 10^{+6}$
60	Chlorine-38	$1 \times 10^{+1}$	$1 \times 10^{+5}$
61	Chromium-51	$1 \times 10^{+3}$	$1 \times 10^{+7}$
62	Cobalt-57	$1 \times 10^{+2}$	$1 \times 10^{+6}$
63	Cobalt-56	$1 \times 10^{+1}$	$1 \times 10^{+5}$
64	Cobalt-55	$1 \times 10^{+1}$	$1 \times 10^{+6}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
65	Cobalt-62m	$1 \times 10^{+1}$	$1 \times 10^{+5}$
66	Cobalt-60m	$1 \times 10^{+3}$	$1 \times 10^{+6}$
67	Cobalt-60	$1 \times 10^{+1}$	$1 \times 10^{+5}$
68	Cobalt-58	$1 \times 10^{+1}$	$1 \times 10^{+6}$
69	Cobalt-61	$1 \times 10^{+2}$	$1 \times 10^{+6}$
70	Cobalt-58m	$1 \times 10^{+4}$	$1 \times 10^{+7}$
71	Copper-64	$1 \times 10^{+2}$	$1 \times 10^{+6}$
72	Copper-67	$1 \times 10^{+2}$	$1 \times 10^{+6}$
73	Curium-242	$1 \times 10^{+2}$	$1 \times 10^{+5}$
74	Curium-243	1×10^{0}	$1 \times 10^{+4}$
75	Curium-244	$1 \times 10^{+1}$	$1 \times 10^{+4}$
76	Curium-245	1×10^{0}	$1 \times 10^{+3}$
77	Curium-246	1×10^{0}	$1 \times 10^{+3}$
78	Curium-247	1×10^{0}	$1 \times 10^{+4}$
79	Curium-248	1×10^{0}	$1 \times 10^{+3}$
80	Dysprosium-165	$1 \times 10^{+3}$	$1 \times 10^{+6}$
81	Dysprosium-166	$1 \times 10^{+3}$	$1 \times 10^{+6}$
82	Einsteinium-253	$1 \times 10^{+2}$	$1 \times 10^{+5}$
83	Einsteinium-254	$1 \times 10^{+1}$	$1 \times 10^{+4}$
84	Einsteinium-254m	$1 \times 10^{+2}$	$1 \times 10^{+6}$
85	Erbium-161	$1 \times 10^{+1}$	$1 \times 10^{+6}$
86	Erbium-169	$1 \times 10^{+4}$	$1 \times 10^{+7}$
87	Erbium-171	$1 \times 10^{+2}$	$1 \times 10^{+6}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
88	Europium-152	$1 \times 10^{+1}$	$1 \times 10^{+6}$
89	Europium-152m	$1 \times 10^{+2}$	$1 \times 10^{+6}$
90	Europium-154	$1 \times 10^{+1}$	$1 \times 10^{+6}$
91	Europium-155	$1 \times 10^{+2}$	$1 \times 10^{+7}$
92	Fermium-254	$1 \times 10^{+4}$	$1 \times 10^{+7}$
93	Fermium-255	$1 \times 10^{+3}$	$1 \times 10^{+6}$
94	Fluorine-18	$1 \times 10^{+1}$	$1 \times 10^{+6}$
95	Gadolinium-153	$1 \times 10^{+2}$	$1 \times 10^{+7}$
96	Gadolinium-159	$1 \times 10^{+3}$	$1 \times 10^{+6}$
97	Gallium-67	$1 \times 10^{+2}$	$1 \times 10^{+6}$
98	Gallium-72	$1 \times 10^{+1}$	$1 \times 10^{+5}$
99	Germanium-71	$1 \times 10^{+4}$	$1 \times 10^{+8}$
100	Germanium-68	$1 \times 10^{+1}$	$1 \times 10^{+5}$
101	Gold-198	$1 \times 10^{+2}$	$1 \times 10^{+6}$
102	Gold-199	$1 \times 10^{+2}$	$1 \times 10^{+6}$
103	Hafnium-181	$1 \times 10^{+1}$	$1 \times 10^{+6}$
104	Holmium-166	$1 \times 10^{+3}$	$1 \times 10^{+5}$
105	Holmium-166m	$1 \times 10^{+1}$	$1 \times 10^{+6}$
106	Hydrogen-3	$1 \times 10^{+6}$	$1 \times 10^{+9}$
107	Indium-111	$1 \times 10^{+2}$	$1 \times 10^{+6}$
108	Indium-113m	$1 \times 10^{+2}$	$1 \times 10^{+6}$
109	Indium-114m	$1 \times 10^{+2}$	$1 \times 10^{+6}$
110	Indium-115m	$1 \times 10^{+2}$	$1 \times 10^{+6}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
111	Iodine-123	$1 \times 10^{+2}$	$1 \times 10^{+7}$
112	Iodine-124	$1 \times 10^{+1}$	$1 \times 10^{+6}$
113	Iodine-125	$1 \times 10^{+3}$	$1 \times 10^{+6}$
114	Iodine-126	$1 \times 10^{+2}$	$1 \times 10^{+6}$
115	Iodine-129	$1 \times 10^{+2}$	$1 \times 10^{+5}$
116	Iodine-130	$1 \times 10^{+1}$	$1 \times 10^{+6}$
117	Iodine-131	$1 \times 10^{+2}$	$1 \times 10^{+6}$
118	Iodine-132	$1 \times 10^{+1}$	$1 \times 10^{+5}$
119	Iodine-133	$1 \times 10^{+1}$	$1 \times 10^{+6}$
120	Iodine-134	$1 \times 10^{+1}$	$1 \times 10^{+5}$
121	Iodine-135	$1 \times 10^{+1}$	$1 \times 10^{+6}$
122	Iridium-190	$1 \times 10^{+1}$	$1 \times 10^{+6}$
123	Iridium-192	$1 \times 10^{+1}$	$1 \times 10^{+4}$
124	Iridium-194	$1 \times 10^{+2}$	$1 \times 10^{+5}$
125	Iron-52	$1 \times 10^{+1}$	$1 \times 10^{+6}$
126	Iron-55	$1 \times 10^{+4}$	$1 \times 10^{+6}$
127	Iron-59	$1 \times 10^{+1}$	$1 \times 10^{+6}$
128	Krypton-74	$1 \times 10^{+2}$	$1 \times 10^{+9}$
129	Krypton-76	$1 \times 10^{+2}$	$1 \times 10^{+9}$
130	Krypton-77	$1 \times 10^{+2}$	$1 \times 10^{+9}$
131	Krypton-79	$1 \times 10^{+3}$	$1 \times 10^{+5}$
132	Krypton-81	$1 \times 10^{+4}$	$1 \times 10^{+7}$
133	Krypton-83m	$1 \times 10^{+5}$	$1 \times 10^{+12}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
134	Krypton-85	$1 \times 10^{+5}$	$1 \times 10^{+4}$
135	Krypton-85m	$1 \times 10^{+3}$	$1 \times 10^{+10}$
136	Krypton-87	$1 \times 10^{+2}$	$1 \times 10^{+9}$
137	Krypton-88	$1 \times 10^{+2}$	$1 \times 10^{+9}$
138	Lanthanum-140	$1 \times 10^{+1}$	$1 \times 10^{+5}$
139	Lead-203	$1 \times 10^{+2}$	$1 \times 10^{+6}$
140	Lead-210[1]	$1 \times 10^{+1}$	$1 \times 10^{+4}$
141	Lead-212[1]	$1 \times 10^{+1}$	$1 \times 10^{+5}$
142	Lutetium-177	$1 \times 10^{+3}$	$1 \times 10^{+7}$
143	Magnesium-28	$1 \times 10^{+1}$	$1 \times 10^{+5}$
144	Manganese-51	$1 \times 10^{+1}$	$1 \times 10^{+5}$
145	Manganese-53	$1 \times 10^{+4}$	$1 \times 10^{+9}$
146	Manganese-52m	$1 \times 10^{+1}$	$1 \times 10^{+5}$
147	Manganese-52	$1 \times 10^{+1}$	$1 \times 10^{+5}$
148	Manganese-56	$1 \times 10^{+1}$	$1 \times 10^{+5}$
149	Manganese-54	$1 \times 10^{+1}$	$1 \times 10^{+6}$
150	Mercury-195m	$1 \times 10^{+2}$	$1 \times 10^{+6}$
151	Mercury-197	$1 \times 10^{+2}$	$1 \times 10^{+7}$
152	Mercury-197m	$1 \times 10^{+2}$	$1 \times 10^{+6}$
153	Mercury-203	$1 \times 10^{+2}$	$1 \times 10^{+5}$
154	Molybdenum-101	$1 \times 10^{+1}$	$1 \times 10^{+6}$
155	Molybdenum-90	$1 \times 10^{+1}$	$1 \times 10^{+6}$
156	Molybdenum-93	$1 \times 10^{+3}$	$1 \times 10^{+8}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
157	Molybdenum-99	$1 \times 10^{+2}$	$1 \times 10^{+6}$
158	Neodymium-147	$1 \times 10^{+2}$	$1 \times 10^{+6}$
159	Neodymium-149	$1 \times 10^{+2}$	$1 \times 10^{+6}$
160	Neptunium-237[1]	1×10^{0}	$1 \times 10^{+3}$
161	Neptunium-239	$1 \times 10^{+2}$	$1 \times 10^{+7}$
162	Neptunium-240	$1 \times 10^{+1}$	$1 \times 10^{+6}$
163	Nickel-63	$1 \times 10^{+5}$	$1 \times 10^{+8}$
164	Nickel-59	$1 \times 10^{+4}$	$1 \times 10^{+8}$
165	Nickel-65	$1 \times 10^{+1}$	$1 \times 10^{+6}$
166	Niobium-93m	$1 \times 10^{+4}$	$1 \times 10^{+7}$
167	Niobium-94	$1 \times 10^{+1}$	$1 \times 10^{+6}$
168	Niobium-95	$1 \times 10^{+1}$	$1 \times 10^{+6}$
169	Niobium-97	$1 \times 10^{+1}$	$1 \times 10^{+6}$
170	Niobium-98	$1 \times 10^{+1}$	$1 \times 10^{+5}$
171	Nitrogen-13	$1 \times 10^{+2}$	$1 \times 10^{+9}$
172	Osmium-185	$1 \times 10^{+1}$	$1 \times 10^{+6}$
173	Osmium-191	$1 \times 10^{+2}$	$1 \times 10^{+7}$
174	Osmium-191m	$1 \times 10^{+3}$	$1 \times 10^{+7}$
175	Osmium-193	$1 \times 10^{+2}$	$1 \times 10^{+6}$
176	Oxygen-15	$1 \times 10^{+2}$	$1 \times 10^{+9}$
177	Palladium-103	$1 \times 10^{+3}$	$1 \times 10^{+8}$
178	Palladium-109	$1 \times 10^{+3}$	$1 \times 10^{+6}$
179	Phosphorus-32	$1 \times 10^{+3}$	$1 \times 10^{+5}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
180	Phosphorus-33	$1 \times 10^{+5}$	$1 \times 10^{+8}$
181	Platinum-191	$1 \times 10^{+2}$	$1 \times 10^{+6}$
182	Platinum-193m	$1 \times 10^{+3}$	$1 \times 10^{+7}$
183	Platinum-197	$1 \times 10^{+3}$	$1 \times 10^{+6}$
184	Platinum-197m	$1 \times 10^{+2}$	$1 \times 10^{+6}$
185	Plutonium-234	$1 \times 10^{+2}$	$1 \times 10^{+7}$
186	Plutonium-235	$1 \times 10^{+2}$	$1 \times 10^{+7}$
187	Plutonium-236	$1 \times 10^{+1}$	$1 \times 10^{+4}$
188	Plutonium-237	$1 \times 10^{+3}$	$1 \times 10^{+7}$
189	Plutonium-238	1×10^{0}	$1 \times 10^{+4}$
190	Plutonium-239	1×10^{0}	$1 \times 10^{+4}$
191	Plutonium-240	1×10^{0}	$1 \times 10^{+3}$
192	Plutonium-241	$1 \times 10^{+2}$	$1 \times 10^{+5}$
193	Plutonium-242	1×10^{0}	$1 \times 10^{+4}$
194	Plutonium-243	$1 \times 10^{+3}$	$1 \times 10^{+7}$
195	Plutonium-244	1×10^{0}	$1 \times 10^{+4}$
196	Polonium-203	$1 \times 10^{+1}$	$1 \times 10^{+6}$
197	Polonium-205	$1 \times 10^{+1}$	$1 \times 10^{+6}$
198	Polonium-207	$1 \times 10^{+1}$	$1 \times 10^{+6}$
199	Polonium-210	$1 \times 10^{+1}$	$1 \times 10^{+4}$
200	Potassium-43	$1 \times 10^{+1}$	$1 \times 10^{+6}$
201	Potassium-42	$1 \times 10^{+2}$	$1 \times 10^{+6}$
202	Potassium-40	$1 \times 10^{+2}$	$1 \times 10^{+6}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
203	Praseodymium-142	$1 \times 10^{+2}$	$1 \times 10^{+5}$
204	Praseodymium-143	$1 \times 10^{+4}$	$1 \times 10^{+6}$
205	Promethium-147	$1 \times 10^{+4}$	$1 \times 10^{+7}$
206	Promethium-149	$1 \times 10^{+3}$	$1 \times 10^{+6}$
207	Protactinium-230	$1 \times 10^{+1}$	$1 \times 10^{+6}$
208	Protactinium-231	1×10^{0}	$1 \times 10^{+3}$
209	Protactinium-233	$1 \times 10^{+2}$	$1 \times 10^{+7}$
210	Radium-223[1]	$1 \times 10^{+2}$	$1 \times 10^{+5}$
211	Radium-224[1]	$1 \times 10^{+1}$	$1 \times 10^{+5}$
212	Radium-225	$1 \times 10^{+2}$	$1 \times 10^{+5}$
213	Radium-226[1]	$1 \times 10^{+1}$	$1 \times 10^{+4}$
214	Radium-227	$1 \times 10^{+2}$	$1 \times 10^{+6}$
215	Radium-228[1]	$1 \times 10^{+1}$	$1 \times 10^{+5}$
216	Radon-220[1]	$1 \times 10^{+4}$	$1 \times 10^{+7}$
217	Radon-222[1]	$1 \times 10^{+1}$	$1 \times 10^{+8}$
218	Rhenium-186	$1 \times 10^{+3}$	$1 \times 10^{+6}$
219	Rhenium-188	$1 \times 10^{+2}$	$1 \times 10^{+5}$
220	Rhodium-103m	$1 \times 10^{+4}$	$1 \times 10^{+8}$
221	Rhodium-105	$1 \times 10^{+2}$	$1 \times 10^{+7}$
222	Rubidium-81	$1 \times 10^{+1}$	$1 \times 10^{+6}$
223	Rubidium-86	$1 \times 10^{+2}$	$1 \times 10^{+5}$
224	Ruthenium-103	$1 \times 10^{+2}$	$1 \times 10^{+6}$
225	Ruthenium-105	$1 \times 10^{+1}$	$1 \times 10^{+6}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
226	Ruthenium-106[1]	$1 \times 10^{+2}$	$1 \times 10^{+5}$
227	Ruthenium-97	$1 \times 10^{+2}$	$1 \times 10^{+7}$
228	Samarium-147	$1 \times 10^{+1}$	$1 \times 10^{+4}$
229	Samarium-151	$1 \times 10^{+4}$	$1 \times 10^{+8}$
230	Samarium-153	$1 \times 10^{+2}$	$1 \times 10^{+6}$
231	Scandium-44	$1 \times 10^{+1}$	$1 \times 10^{+4}$
232	Scandium-48	$1 \times 10^{+1}$	$1 \times 10^{+5}$
233	Scandium-46	$1 \times 10^{+1}$	$1 \times 10^{+6}$
234	Scandium-47	$1 \times 10^{+2}$	$1 \times 10^{+6}$
235	Selenium-72	$1 \times 10^{+1}$	$1 \times 10^{+4}$
236	Selenium-73	$1 \times 10^{+1}$	$1 \times 10^{+6}$
237	Selenium-75	$1 \times 10^{+2}$	$1 \times 10^{+6}$
238	Silicon-31	$1 \times 10^{+3}$	$1 \times 10^{+6}$
239	Silicon-32	$1 \times 10^{+1}$	$1 \times 10^{+4}$
240	Silver-105	$1 \times 10^{+2}$	$1 \times 10^{+6}$
241	Silver-108m	$1 \times 10^{+1}$	$1 \times 10^{+6}$
242	Silver-110m	$1 \times 10^{+1}$	$1 \times 10^{+6}$
243	Silver-111	$1 \times 10^{+3}$	$1 \times 10^{+6}$
244	Sodium-22	$1 \times 10^{+1}$	$1 \times 10^{+6}$
245	Sodium-24	$1 \times 10^{+1}$	$1 \times 10^{+5}$
246	Strontium-82	$1 \times 10^{+1}$	$1 \times 10^{+4}$
247	Strontium-85	$1 \times 10^{+2}$	$1 \times 10^{+6}$
248	Strontium-85m	$1 \times 10^{+2}$	$1 \times 10^{+7}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
249	Strontium-87m	$1 \times 10^{+2}$	$1 \times 10^{+6}$
250	Strontium-89	$1 \times 10^{+3}$	$1 \times 10^{+6}$
251	Strontium-90[l]	$1 \times 10^{+2}$	$1 \times 10^{+4}$
252	Strontium-91	$1 \times 10^{+1}$	$1 \times 10^{+5}$
253	Strontium-92	$1 \times 10^{+1}$	$1 \times 10^{+6}$
254	Sulphur-35	$1 \times 10^{+5}$	$1 \times 10^{+8}$
255	Tantalum-182	$1 \times 10^{+1}$	$1 \times 10^{+4}$
256	Technetium-95m	$1 \times 10^{+1}$	$1 \times 10^{+6}$
257	Technetium-96	$1 \times 10^{+1}$	$1 \times 10^{+6}$
258	Technetium-96m	$1 \times 10^{+3}$	$1 \times 10^{+7}$
259	Technetium-97	$1 \times 10^{+3}$	$1 \times 10^{+8}$
260	Technetium-97m	$1 \times 10^{+3}$	$1 \times 10^{+7}$
261	Technetium-99	$1 \times 10^{+4}$	$1 \times 10^{+7}$
262	Technetium-99m	$1 \times 10^{+2}$	$1 \times 10^{+7}$
263	Tellurium-123m	$1 \times 10^{+2}$	$1 \times 10^{+7}$
264	Tellurium-125m	$1 \times 10^{+3}$	$1 \times 10^{+7}$
265	Tellurium-127	$1 \times 10^{+3}$	$1 \times 10^{+6}$
266	Tellurium-127m	$1 \times 10^{+3}$	$1 \times 10^{+7}$
267	Tellurium-129	$1 \times 10^{+2}$	$1 \times 10^{+6}$
268	Tellurium-129m	$1 \times 10^{+3}$	$1 \times 10^{+6}$
269	Tellurium-131	$1 \times 10^{+2}$	$1 \times 10^{+5}$
270	Tellurium-131m	$1 \times 10^{+1}$	$1 \times 10^{+6}$
271	Tellurium-132	$1 \times 10^{+2}$	$1 \times 10^{+7}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
272	Tellurium-133	$1 \times 10^{+1}$	$1 \times 10^{+5}$
273	Tellurium-133m	$1 \times 10^{+1}$	$1 \times 10^{+5}$
274	Tellurium-134	$1 \times 10^{+1}$	$1 \times 10^{+6}$
275	Terbium-160	$1 \times 10^{+1}$	$1 \times 10^{+6}$
276	Thallium-200	$1 \times 10^{+1}$	$1 \times 10^{+6}$
277	Thallium-201	$1 \times 10^{+2}$	$1 \times 10^{+6}$
278	Thallium-202	$1 \times 10^{+2}$	$1 \times 10^{+6}$
279	Thallium-204	$1 \times 10^{+4}$	$1 \times 10^{+4}$
280	Thorium-226[1]	$1 \times 10^{+3}$	$1 \times 10^{+7}$
281	Thorium-227	$1 \times 10^{+1}$	$1 \times 10^{+4}$
282	Thorium-228[1]	1×10^{0}	$1 \times 10^{+4}$
283	Thorium-229[1]	1×10^{0}	$1 \times 10^{+3}$
284	Thorium-230	1×10^{0}	$1 \times 10^{+4}$
285	Thorium-231	$1 \times 10^{+3}$	$1 \times 10^{+7}$
286	Thorium-234[1]	$1 \times 10^{+3}$	$1 \times 10^{+5}$
287	Thorium-nat including thorium-232	1×10^{0}	$1 \times 10^{+3}$
288	Thulium-170	$1 \times 10^{+3}$	$1 \times 10^{+6}$
289	Thulium-171	$1 \times 10^{+4}$	$1 \times 10^{+8}$
290	Tin-113	$1 \times 10^{+3}$	$1 \times 10^{+7}$
291	Tin-117m	$1 \times 10^{+2}$	$1 \times 10^{+6}$
292	Tin-121	$1 \times 10^{+5}$	$1 \times 10^{+7}$
293	Tin-125	$1 \times 10^{+2}$	$1 \times 10^{+5}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
294	Tungsten-181	$1 \times 10^{+3}$	$1 \times 10^{+7}$
295	Tungsten-185	$1 \times 10^{+4}$	$1 \times 10^{+7}$
296	Tungsten-187	$1 \times 10^{+2}$	$1 \times 10^{+6}$
297	Tungsten-188	$1 \times 10^{+2}$	$1 \times 10^{+5}$
298	Uranium-240[1]	$1 \times 10^{+1}$	$1 \times 10^{+6}$
299	Uranium-230[1]	$1 \times 10^{+1}$	$1 \times 10^{+5}$
300	Uranium-231	$1 \times 10^{+2}$	$1 \times 10^{+7}$
301	Uranium-232[1]	1×10^{0}	$1 \times 10^{+3}$
302	Uranium-233	$1 \times 10^{+1}$	$1 \times 10^{+4}$
303	Uranium-234	$1 \times 10^{+1}$	$1 \times 10^{+4}$
304	Uranium-235[1]	$1 \times 10^{+1}$	$1 \times 10^{+4}$
305	Uranium-236	$1 \times 10^{+1}$	$1 \times 10^{+4}$
306	Uranium-237	$1 \times 10^{+2}$	$1 \times 10^{+6}$
307	Uranium-238[1]	$1 \times 10^{+1}$	$1 \times 10^{+4}$
308	Uranium-239	$1 \times 10^{+2}$	$1 \times 10^{+6}$
309	Uranium-240	$1 \times 10^{+3}$	$1 \times 10^{+7}$
310	Uranium-nat	1×10^{0}	$1 \times 10^{+3}$
311	Vanadium-48	$1 \times 10^{+1}$	$1 \times 10^{+5}$
312	Xenon-131m	$1 \times 10^{+4}$	$1 \times 10^{+4}$
313	Xenon-133	$1 \times 10^{+3}$	$1 \times 10^{+4}$
314	Xenon-135	$1 \times 10^{+3}$	$1 \times 10^{+10}$
315	Ytterbium-169	$1 \times 10^{+2}$	$1 \times 10^{+7}$
316	Ytterbium-175	$1 \times 10^{+3}$	$1 \times 10^{+7}$

Item	Column 1 Radionuclide	Column 2 Concentration (Bq/g)	Column 3 Activity (Bq)
317	Yttrium-88	$1 \times 10^{+1}$	$1 \times 10^{+6}$
318	Yttrium-90	$1 \times 10^{+3}$	$1 \times 10^{+5}$
319	Yttrium-91	$1 \times 10^{+3}$	$1 \times 10^{+6}$
320	Yttrium-91m	$1 \times 10^{+2}$	$1 \times 10^{+6}$
321	Yttrium-92	$1 \times 10^{+2}$	$1 \times 10^{+5}$
322	Yttrium-93	$1 \times 10^{+2}$	$1 \times 10^{+5}$
323	Zinc-69m	$1 \times 10^{+2}$	$1 \times 10^{+6}$
324	Zinc-65	$1 \times 10^{+1}$	$1 \times 10^{+6}$
325	Zinc-69	$1 \times 10^{+4}$	$1 \times 10^{+6}$
326	Zirconium-93[1]	$1 \times 10^{+3}$	$1 \times 10^{+7}$
327	Zirconium-95	$1 \times 10^{+1}$	$1 \times 10^{+6}$
328	Zirconium-97[1]	$1 \times 10^{+1}$	$1 \times 10^{+5}$
329	alpha-emitting radionuclide not mentioned in another item	1×10^{0}	$1 \times 10^{+3}$
330	radionuclide that is not alpha-emitting and not mentioned in another item	$1 \times 10^{+1}$	$1 \times 10^{+4}$

The superscript '1' immediately following an item in column 1 indicates that the item's concentration and activity are the concentration and activity of the parent radionuclide and its progeny when in secular equilibrium.

Schedule 2 Security categorisation of a radiation source or an aggregation of radiation sources

section 8

Part 1 Security categories

Security category	Activity ratio
1	Equal to or greater than 1,000
2	Less than 1,000 but greater than or equal to 10
3	Less than 10 but greater than or equal to 1
4	Less than 1 but greater than or equal to 0.01
5	Less than 0.01

Part 2 Radionuclide activity values

Item	Column 1 Radionuclide	Column 2 Activity value (GBq)
1	Americium-241	60
2	Americium-241/Beryllium	60
3	Cadmium-109	2×10^4
4	Caesium-137	100
5	Californium-252	20

Item	Column 1 Radionuclide	Column 2 Activity value (GBq)
6	Cobalt-57	700
7	Cobalt-60	30
8	Curium-244	50
9	Gadolinium-153	1×10^3
10	Germanium-68	700
11	Gold-198	200
12	Iodine-125	200
13	Iodine-131	200
14	Iridium-192	80
15	Iron-55	8×10^5
16	Krypton-85	3×10^4
17	Molybdenum-99	300
18	Nickel-63	6×10^4
19	Palladium-103	9×10^4
20	Phosphorus-32	1×10^4
21	Plutonium-238	60
22	Plutonium-239/Beryllium	60
23	Polonium-210	60
24	Promethium-147	4×10^4
25	Radium-226	40
26	Ruthenium-106 (Rhodium-106)	300
27	Selenium-75	200
28	Strontium-90 (Yttrium-90)	1×10^3

Item	Column 1 Radionuclide	Column 2 Activity value (GBq)
29	Technetium-99m	700
30	Thallium-204	2×10^4
31	Thulium	2×10^4
32	Tritium (H-3)	2×10^6
33	Ytterbium-169	300
34	All other radioisotopes	20

Schedule 3 Disposal of radioactive material—radionuclide concentrations

sections 15 and 16

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
1	Actinium-225	3.77×10^{-3}	$2.85 \times 10^{+4}$	$5.71 \times 10^{+4}$
2	Actinium-227	4.73×10^{-5}	$6.23 \times 10^{+2}$	$1.25 \times 10^{+3}$
3	Actinium-228	1.03×10^{0}	$1.59 \times 10^{+6}$	$3.19 \times 10^{+6}$
4	Americium-241	7.64×10^{-4}	$3.42 \times 10^{+3}$	$6.85 \times 10^{+3}$
5	Americium-242	1.86×10^{0}	$2.28 \times 10^{+6}$	$4.57 \times 10^{+6}$
6	Americium-242m[1]	8.51×10^{-4}	$3.60 \times 10^{+3}$	$7.21 \times 10^{+3}$
7	Americium-243[1]	7.64×10^{-4}	$3.42 \times 10^{+3}$	$6.85 \times 10^{+3}$
8	Antimony-122	$2.48 \times 10^{+1}$	$4.03 \times 10^{+5}$	$8.06 \times 10^{+5}$
9	Antimony-124	4.88×10^{0}	$2.74 \times 10^{+5}$	$5.48 \times 10^{+5}$
10	Antimony-125	6.62×10^{0}	$6.23 \times 10^{+5}$	$1.25 \times 10^{+6}$
11	Argon-37	$3.34 \times 10^{+8}$	-	-
12	Argon-41	$2.58 \times 10^{+2}$	-	-
13	Arsenic-73	$3.20 \times 10^{+1}$	$2.63 \times 10^{+6}$	$5.27 \times 10^{+6}$
14	Arsenic-74	$1.42 \times 10^{+1}$	$5.27 \times 10^{+5}$	$1.05 \times 10^{+6}$
15	Arsenic-76	$3.24 \times 10^{+1}$	$4.28 \times 10^{+5}$	$8.56 \times 10^{+5}$
16	Arsenic-77	$7.09 \times 10^{+1}$	$1.71 \times 10^{+6}$	$3.42 \times 10^{+6}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
17	Astatine-211	2.71×10^{-1}	$6.23 \times 10^{+4}$	$1.25 \times 10^{+5}$
18	Barium-131	$8.51 \times 10^{+1}$	$1.52 \times 10^{+6}$	$3.04 \times 10^{+6}$
19	Barium-133	$1.65 \times 10^{+1}$	$6.85 \times 10^{+5}$	$1.37 \times 10^{+6}$
20	Barium-140[1]	$1.86 \times 10^{+1}$	$2.74 \times 10^{+5}$	$5.48 \times 10^{+5}$
21	Berkelium-249	1.99×10^{-1}	$7.06 \times 10^{+5}$	$1.41 \times 10^{+6}$
22	Beryllium-7	$5.73 \times 10^{+2}$	$2.45 \times 10^{+7}$	$4.89 \times 10^{+7}$
23	Bismuth-206	$1.42 \times 10^{+1}$	$3.60 \times 10^{+5}$	$7.21 \times 10^{+5}$
24	Bismuth-207	5.73×10^{0}	$5.27 \times 10^{+5}$	$1.05 \times 10^{+6}$
25	Bismuth-210	3.55×10^{-1}	$5.27 \times 10^{+5}$	$1.05 \times 10^{+6}$
26	Bismuth-212[1]	7.64×10^{-1}	$2.63 \times 10^{+6}$	$5.27 \times 10^{+6}$
27	Bismuth-213	7.26×10^{-1}	$3.42 \times 10^{+6}$	$6.85 \times 10^{+6}$
28	Bromine-75	$3.50 \times 10^{+2}$	$8.67 \times 10^{+6}$	$1.73 \times 10^{+7}$
29	Bromine-76	$5.13 \times 10^{+1}$	$1.49 \times 10^{+6}$	$2.98 \times 10^{+6}$
30	Bromine-82	$3.38 \times 10^{+1}$	$1.27 \times 10^{+6}$	$2.54 \times 10^{+6}$
31	Cadmium-109	3.10×10^{0}	$3.42 \times 10^{+5}$	$6.85 \times 10^{+5}$
32	Cadmium-115	$2.29 \times 10^{+1}$	$4.89 \times 10^{+5}$	$9.78 \times 10^{+5}$
33	Cadmium-115m	4.08×10^{0}	$2.08 \times 10^{+5}$	$4.15 \times 10^{+5}$
34	Caesium-129	$3.68 \times 10^{+2}$	$1.14 \times 10^{+7}$	$2.28 \times 10^{+7}$
35	Caesium-131	$6.62 \times 10^{+2}$	$1.18 \times 10^{+7}$	$2.36 \times 10^{+7}$
36	Caesium-132	$7.84 \times 10^{+1}$	$1.37 \times 10^{+6}$	$2.74 \times 10^{+6}$
37	Caesium-134	3.10×10^{0}	$3.60 \times 10^{+4}$	$7.21 \times 10^{+4}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
38	Caesium-134m	$1.15 \times 10^{+3}$	$3.42 \times 10^{+7}$	$6.85 \times 10^{+7}$
39	Caesium-135	$3.01 \times 10^{+1}$	$3.42 \times 10^{+5}$	$6.85 \times 10^{+5}$
40	Caesium-136	$1.57 \times 10^{+1}$	$2.28 \times 10^{+5}$	$4.57 \times 10^{+5}$
41	Caesium-137[1]	4.44×10^{0}	$5.27 \times 10^{+4}$	$1.05 \times 10^{+5}$
42	Caesium-138	$6.47 \times 10^{+2}$	$7.44 \times 10^{+6}$	$1.49 \times 10^{+7}$
43	Calcium-45	$1.10 \times 10^{+1}$	$9.01 \times 10^{+5}$	$1.80 \times 10^{+6}$
44	Calcium-47	$1.42 \times 10^{+1}$	$4.28 \times 10^{+5}$	$8.56 \times 10^{+5}$
45	Californium-246	7.09×10^{-2}	$2.08 \times 10^{+5}$	$4.15 \times 10^{+5}$
46	Californium-248	3.63×10^{-3}	$2.45 \times 10^{+4}$	$4.89 \times 10^{+4}$
47	Californium-249	4.51×10^{-4}	$1.96 \times 10^{+3}$	$3.91 \times 10^{+3}$
48	Californium-250	9.31×10^{-4}	$4.28 \times 10^{+3}$	$8.56 \times 10^{+3}$
49	Californium-251	4.44×10^{-4}	$1.90 \times 10^{+3}$	$3.81 \times 10^{+3}$
50	Californium-252	1.65×10^{-3}	$7.61 \times 10^{+3}$	$1.52 \times 10^{+4}$
51	Californium-253	2.48×10^{-2}	$4.89 \times 10^{+5}$	$9.78 \times 10^{+5}$
52	Californium-254	8.05×10^{-4}	$1.71 \times 10^{+3}$	$3.42 \times 10^{+3}$
53	Carbon-11	$9.31 \times 10^{+3}$	$2.85 \times 10^{+7}$	$5.71 \times 10^{+7}$
54	Carbon-14	$5.13 \times 10^{+1}$	$1.18 \times 10^{+6}$	$2.36 \times 10^{+6}$
55	Cerium-139	$1.65 \times 10^{+1}$	$2.63 \times 10^{+6}$	$5.27 \times 10^{+6}$
56	Cerium-141	8.27×10^{0}	$9.65 \times 10^{+5}$	$1.93 \times 10^{+6}$
57	Cerium-143	$2.98 \times 10^{+1}$	$6.23 \times 10^{+5}$	$1.25 \times 10^{+6}$
58	Cerium-144[1]	6.08×10^{-1}	$1.32 \times 10^{+5}$	$2.63 \times 10^{+5}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
59	Chlorine-36	4.32×10^{0}	$7.36 \times 10^{+5}$	$1.47 \times 10^{+6}$
60	Chlorine-38	$4.08 \times 10^{+2}$	$5.71 \times 10^{+6}$	$1.14 \times 10^{+7}$
61	Chromium-51	$8.27 \times 10^{+2}$	$1.80 \times 10^{+7}$	$3.60 \times 10^{+7}$
62	Cobalt-55	$3.59 \times 10^{+1}$	$6.23 \times 10^{+5}$	$1.25 \times 10^{+6}$
63	Cobalt-56	4.73×10^{0}	$2.74 \times 10^{+5}$	$5.48 \times 10^{+5}$
64	Cobalt-57	$3.17 \times 10^{+1}$	$3.26 \times 10^{+6}$	$6.52 \times 10^{+6}$
65	Cobalt-58	$1.49 \times 10^{+1}$	$9.26 \times 10^{+5}$	$1.85 \times 10^{+6}$
66	Cobalt-58m	$1.75 \times 10^{+3}$	$2.85 \times 10^{+7}$	$5.71 \times 10^{+7}$
67	Cobalt-60	1.03×10^{0}	$2.01 \times 10^{+5}$	$4.03 \times 10^{+5}$
68	Cobalt-60m	$2.29 \times 10^{+4}$	$4.03 \times 10^{+8}$	$8.06 \times 10^{+8}$
69	Cobalt-61	$3.97 \times 10^{+2}$	$9.26 \times 10^{+6}$	$1.85 \times 10^{+7}$
70	Cobalt-62m	$8.05 \times 10^{+2}$	$1.46 \times 10^{+7}$	$2.91 \times 10^{+7}$
71	Copper-64	$1.99 \times 10^{+2}$	$5.71 \times 10^{+6}$	$1.14 \times 10^{+7}$
72	Copper-67	$5.13 \times 10^{+1}$	$2.01 \times 10^{+6}$	$4.03 \times 10^{+6}$
73	Curium-242	6.20×10^{-3}	$5.71 \times 10^{+4}$	$1.14 \times 10^{+5}$
74	Curium-243	1.03×10^{-3}	$4.57 \times 10^{+3}$	$9.13 \times 10^{+3}$
75	Curium-244	1.19×10^{-3}	$5.71 \times 10^{+3}$	$1.14 \times 10^{+4}$
76	Curium-245	7.44×10^{-4}	$3.26 \times 10^{+3}$	$6.52 \times 10^{+3}$
77	Curium-246	7.44×10^{-4}	$3.26 \times 10^{+3}$	$6.52 \times 10^{+3}$
78	Curium-247	8.27×10^{-4}	$3.60 \times 10^{+3}$	$7.21 \times 10^{+3}$
79	Curium-248	2.13×10^{-4}	$8.90 \times 10^{+2}$	$1.78 \times 10^{+3}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
80	Dysprosium-165	$3.42 \times 10^{+2}$	$6.23 \times 10^{+6}$	$1.25 \times 10^{+7}$
81	Dysprosium-166	$1.65 \times 10^{+1}$	$4.28 \times 10^{+5}$	$8.56 \times 10^{+5}$
82	Einsteinium-253	1.19×10^{-2}	$1.12 \times 10^{+5}$	$2.25 \times 10^{+5}$
83	Einsteinium-254	3.72×10^{-3}	$2.45 \times 10^{+4}$	$4.89 \times 10^{+4}$
84	Einsteinium-254m	6.77×10^{-2}	$1.63 \times 10^{+5}$	$3.26 \times 10^{+5}$
85	Erbium-161	$3.50 \times 10^{+2}$	$8.56 \times 10^{+6}$	$1.71 \times 10^{+7}$
86	Erbium-169	$3.04 \times 10^{+1}$	$1.85 \times 10^{+6}$	$3.70 \times 10^{+6}$
87	Erbium-171	$9.93 \times 10^{+1}$	$1.90 \times 10^{+6}$	$3.81 \times 10^{+6}$
88	Europium-152	7.64×10^{-1}	$4.89 \times 10^{+5}$	$9.78 \times 10^{+5}$
89	Europium-152m	$9.31 \times 10^{+1}$	$1.37 \times 10^{+6}$	$2.74 \times 10^{+6}$
90	Europium-154	5.96×10^{-1}	$3.42 \times 10^{+5}$	$6.85 \times 10^{+5}$
91	Europium-155	4.58×10^{0}	$2.14 \times 10^{+6}$	$4.28 \times 10^{+6}$
92	Fermium-254	3.87×10^{-1}	$1.56 \times 10^{+6}$	$3.11 \times 10^{+6}$
93	Fermium-255	1.15×10^{-1}	$2.74 \times 10^{+5}$	$5.48 \times 10^{+5}$
94	Fluorine-18	$3.20 \times 10^{+2}$	$1.4 \times 10^{+7}$	$2.8 \times 10^{+7}$
95	Gadolinium-153	$1.19 \times 10^{+1}$	$2.54 \times 10^{+6}$	$5.07 \times 10^{+6}$
96	Gadolinium-159	$7.64 \times 10^{+1}$	$1.40 \times 10^{+6}$	$2.80 \times 10^{+6}$
97	Gallium-67	$1.06 \times 10^{+2}$	$3.60 \times 10^{+6}$	$7.21 \times 10^{+6}$
98	Gallium-72	$3.55 \times 10^{+1}$	$6.23 \times 10^{+5}$	$1.25 \times 10^{+6}$
99	Germanium-68	2.29×10^{0}	$5.27 \times 10^{+5}$	$1.05 \times 10^{+6}$
100	Germanium-71	$2.71 \times 10^{+3}$	$5.71 \times 10^{+7}$	$1.14 \times 10^{+8}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
101	Gold-198	$2.71 \times 10^{+1}$	$6.85 \times 10^{+5}$	$1.37 \times 10^{+6}$
102	Gold-199	$3.92 \times 10^{+1}$	$1.56 \times 10^{+6}$	$3.11 \times 10^{+6}$
103	Hafnium-181	6.34×10^{0}	$6.23 \times 10^{+5}$	$1.25 \times 10^{+6}$
104	Holmium-166	$3.59 \times 10^{+1}$	$4.89 \times 10^{+5}$	$9.78 \times 10^{+5}$
105	Holmium-166m	2.71×10^{-1}	$3.42 \times 10^{+5}$	$6.84 \times 10^{+5}$
106	Hydrogen-3	$1.65 \times 10^{+7}$	$3.81 \times 10^{+7}$	$7.61 \times 10^{+7}$
107	Indium-111	$9.61 \times 10^{+1}$	$2.36 \times 10^{+6}$	$4.72 \times 10^{+6}$
108	Indium-113m	$9.31 \times 10^{+2}$	$2.45 \times 10^{+7}$	$4.89 \times 10^{+7}$
109	Indium-114m	2.71×10^{0}	$1.67 \times 10^{+5}$	$3.34 \times 10^{+5}$
110	Indium-115m	$3.42 \times 10^{+2}$	$7.96 \times 10^{+6}$	$1.59 \times 10^{+7}$
111	Iodine-123	$2.71 \times 10^{+2}$	$3.26 \times 10^{+6}$	$6.52 \times 10^{+6}$
112	Iodine-124	4.73×10^{0}	$5.27 \times 10^{+4}$	$1.05 \times 10^{+5}$
113	Iodine-125	4.08×10^{0}	$4.57 \times 10^{+4}$	$9.13 \times 10^{+4}$
114	Iodine-126	2.13×10^{0}	$2.36 \times 10^{+4}$	$4.72 \times 10^{+4}$
115	Iodine-129	5.84×10^{-1}	$6.23 \times 10^{+3}$	$1.25 \times 10^{+4}$
116	Iodine-130	$3.10 \times 10^{+1}$	$3.42 \times 10^{+5}$	$6.85 \times 10^{+5}$
117	Iodine-131	2.71×10^{0}	$3.11 \times 10^{+4}$	$6.23 \times 10^{+4}$
118	Iodine-132	$1.49 \times 10^{+2}$	$2.36 \times 10^{+6}$	$4.72 \times 10^{+6}$
119	Iodine-133	$1.42 \times 10^{+1}$	$1.59 \times 10^{+5}$	$3.19 \times 10^{+5}$
120	Iodine-134	$3.77 \times 10^{+2}$	$6.23 \times 10^{+6}$	$1.25 \times 10^{+7}$
121	Iodine-135	$6.47 \times 10^{+1}$	$7.36 \times 10^{+5}$	$1.47 \times 10^{+6}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
122	Iridium-190	$1.19 \times 10^{+1}$	$5.71 \times 10^{+5}$	$1.14 \times 10^{+6}$
123	Iridium-192	4.80×10^{0}	$4.89 \times 10^{+5}$	$9.78 \times 10^{+5}$
124	Iridium-194	$3.97 \times 10^{+1}$	$5.27 \times 10^{+5}$	$1.05 \times 10^{+6}$
125	Iron-52	$3.13 \times 10^{+1}$	$4.89 \times 10^{+5}$	$9.78 \times 10^{+5}$
126	Iron-55	$3.24 \times 10^{+1}$	$2.08 \times 10^{+6}$	$4.15 \times 10^{+6}$
127	Iron-59	8.51×10^{0}	$3.81 \times 10^{+5}$	$7.61 \times 10^{+5}$
128	Krypton-74	-	-	-
129	Krypton-76	$8.56 \times 10^{+2}$	-	-
130	Krypton-77	$3.51 \times 10^{+2}$	-	-
131	Krypton-79	$1.41 \times 10^{+3}$	-	-
132	Krypton-81	$6.52 \times 10^{+4}$	-	-
133	Krypton-83m	$6.52 \times 10^{+6}$	-	-
134	Krypton-85	$6.23 \times 10^{+4}$	-	-
135	Krypton-85m	$2.32 \times 10^{+3}$	-	-
136	Krypton-87	$4.03 \times 10^{+2}$	-	-
137	Krypton-88	$1.63 \times 10^{+2}$	-	-
138	Lanthanum-140	$1.99 \times 10^{+1}$	$3.42 \times 10^{+5}$	$6.85 \times 10^{+5}$
139	Lead-203	$1.86 \times 10^{+2}$	$2.85 \times 10^{+6}$	$5.71 \times 10^{+6}$
140	Lead-210[1]	2.71×10^{-2}	$1.01 \times 10^{+3}$	$2.01 \times 10^{+3}$
141	Lead-212[1]	9.02×10^{-1}	$1.16 \times 10^{+5}$	$2.32 \times 10^{+5}$
142	Lutetium-177	$2.71 \times 10^{+1}$	$1.29 \times 10^{+6}$	$2.58 \times 10^{+6}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
143	Magnesium-28	$1.75 \times 10^{+1}$	$3.11 \times 10^{+5}$	$6.23 \times 10^{+5}$
144	Manganese-51	$4.38 \times 10^{+2}$	$7.36 \times 10^{+6}$	$1.47 \times 10^{+7}$
145	Manganese-52	$1.65 \times 10^{+1}$	$3.81 \times 10^{+5}$	$7.61 \times 10^{+5}$
146	Manganese-52m	$5.96 \times 10^{+2}$	$9.93 \times 10^{+6}$	$1.99 \times 10^{+7}$
147	Manganese-53	$5.73 \times 10^{+2}$	$2.28 \times 10^{+7}$	$4.57 \times 10^{+7}$
148	Manganese-54	$1.99 \times 10^{+1}$	$9.65 \times 10^{+5}$	$1.93 \times 10^{+6}$
149	Manganese-56	$1.49 \times 10^{+2}$	$2.74 \times 10^{+6}$	$5.48 \times 10^{+6}$
150	Mercury-195m	$4.58 \times 10^{+1}$	$1.22 \times 10^{+6}$	$2.45 \times 10^{+6}$
151	Mercury-197	$1.03 \times 10^{+2}$	$2.98 \times 10^{+6}$	$5.96 \times 10^{+6}$
152	Mercury-197m	$4.51 \times 10^{+1}$	$1.46 \times 10^{+6}$	$2.91 \times 10^{+6}$
153	Mercury-203	$1.29 \times 10^{+1}$	$3.60 \times 10^{+5}$	$7.21 \times 10^{+5}$
154	Molybdenum-101	$6.62 \times 10^{+2}$	$1.63 \times 10^{+7}$	$3.26 \times 10^{+7}$
155	Molybdenum-90	$5.32 \times 10^{+1}$	$1.10 \times 10^{+6}$	$2.21 \times 10^{+6}$
156	Molybdenum-93	$1.35 \times 10^{+1}$	$2.63 \times 10^{+5}$	$5.27 \times 10^{+5}$
157	Molybdenum-99	$2.71 \times 10^{+1}$	$5.71 \times 10^{+5}$	$1.14 \times 10^{+6}$
158	Neodymium-147	$1.29 \times 10^{+1}$	$6.23 \times 10^{+5}$	$1.25 \times 10^{+6}$
159	Neodymium-149	$2.29 \times 10^{+2}$	$5.71 \times 10^{+6}$	$1.14 \times 10^{+7}$
160	Neptunium-237[1]	1.42×10^{-3}	$6.23 \times 10^{+3}$	$1.25 \times 10^{+4}$
161	Neptunium-239	$2.71 \times 10^{+1}$	$8.56 \times 10^{+5}$	$1.71 \times 10^{+6}$
162	Neptunium-240	$2.29 \times 10^{+2}$	$8.35 \times 10^{+6}$	$1.67 \times 10^{+7}$
163	Nickel-59	$1.35 \times 10^{+2}$	$1.09 \times 10^{+7}$	$2.17 \times 10^{+7}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
164	Nickel-63	$5.73 \times 10^{+1}$	$4.57 \times 10^{+6}$	$9.13 \times 10^{+6}$
165	Nickel-65	$2.29 \times 10^{+2}$	$3.81 \times 10^{+6}$	$7.61 \times 10^{+6}$
166	Niobium-93m	$3.46 \times 10^{+1}$	$5.71 \times 10^{+6}$	$1.14 \times 10^{+7}$
167	Niobium-94	6.62×10^{-1}	$4.03 \times 10^{+5}$	$8.06 \times 10^{+5}$
168	Niobium-95	$1.86 \times 10^{+1}$	$1.18 \times 10^{+6}$	$2.36 \times 10^{+6}$
169	Niobium-97	$4.14 \times 10^{+2}$	$1.01 \times 10^{+7}$	$2.01 \times 10^{+7}$
170	Niobium-98	$3.01 \times 10^{+2}$	$6.23 \times 10^{+6}$	$1.25 \times 10^{+7}$
171	Nitrogen-13[1]	-	-	-
172	Osmium-185	$1.99 \times 10^{+1}$	$1.34 \times 10^{+6}$	$2.69 \times 10^{+6}$
173	Osmium-191	$1.65 \times 10^{+1}$	$1.20 \times 10^{+6}$	$2.40 \times 10^{+6}$
174	Osmium-191m	$1.99 \times 10^{+2}$	$7.13 \times 10^{+6}$	$1.43 \times 10^{+7}$
175	Osmium-193	$4.38 \times 10^{+1}$	$8.46 \times 10^{+5}$	$1.69 \times 10^{+6}$
176	Oxygen-15	-	-	-
177	Palladium-103	$7.44 \times 10^{+1}$	$3.60 \times 10^{+6}$	$7.21 \times 10^{+6}$
178	Palladium-109	$5.96 \times 10^{+1}$	$1.25 \times 10^{+6}$	$2.49 \times 10^{+6}$
179	Phosphorus-32	9.31×10^{0}	$2.85 \times 10^{+5}$	$5.71 \times 10^{+5}$
180	Phosphorus-33	$2.13 \times 10^{+1}$	$2.85 \times 10^{+6}$	$5.71 \times 10^{+6}$
181	Platinum-191	$1.57 \times 10^{+2}$	$2.01 \times 10^{+6}$	$4.03 \times 10^{+6}$
182	Platinum-193m	$1.42 \times 10^{+2}$	$1.52 \times 10^{+6}$	$3.04 \times 10^{+6}$
183	Platinum-197	$1.86 \times 10^{+2}$	$1.71 \times 10^{+6}$	$3.42 \times 10^{+6}$
184	Platinum-197m	$6.93 \times 10^{+2}$	$8.15 \times 10^{+6}$	$1.63 \times 10^{+7}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
185	Plutonium-234	1.35×10^{0}	$4.28 \times 10^{+6}$	$8.56 \times 10^{+6}$
186	Plutonium-235	$1.15 \times 10^{+4}$	$3.26 \times 10^{+8}$	$6.52 \times 10^{+8}$
187	Plutonium-236	1.65×10^{-3}	$7.96 \times 10^{+3}$	$1.59 \times 10^{+4}$
188	Plutonium-237	$8.27 \times 10^{+1}$	$6.85 \times 10^{+6}$	$1.37 \times 10^{+7}$
189	Plutonium-238	6.93×10^{-4}	$2.98 \times 10^{+3}$	$5.96 \times 10^{+3}$
190	Plutonium-239	6.34×10^{-4}	$2.74 \times 10^{+3}$	$5.48 \times 10^{+3}$
191	Plutonium-240	6.34×10^{-4}	$2.74 \times 10^{+3}$	$5.48 \times 10^{+3}$
192	Plutonium-241	3.50×10^{-2}	$1.46 \times 10^{+5}$	$2.91 \times 10^{+5}$
193	Plutonium-242	6.77×10^{-4}	$2.85 \times 10^{+3}$	$5.71 \times 10^{+3}$
194	Plutonium-243	$2.71 \times 10^{+2}$	$8.06 \times 10^{+6}$	$1.61 \times 10^{+7}$
195	Plutonium-244	6.77×10^{-4}	$2.85 \times 10^{+3}$	$5.71 \times 10^{+3}$
196	Polonium-203	$4.88 \times 10^{+2}$	$1.32 \times 10^{+7}$	$2.63 \times 10^{+7}$
197	Polonium-205	$3.35 \times 10^{+2}$	$1.16 \times 10^{+7}$	$2.32 \times 10^{+7}$
198	Polonium-207	$1.99 \times 10^{+2}$	$4.89 \times 10^{+6}$	$9.78 \times 10^{+6}$
199	Polonium-210	9.93×10^{-3}	$2.85 \times 10^{+3}$	$5.71 \times 10^{+3}$
200	Potassium-40	9.93×10^{0}	$1.10 \times 10^{+5}$	$2.21 \times 10^{+5}$
201	Potassium-42	$1.49 \times 10^{+2}$	$1.59 \times 10^{+6}$	$3.19 \times 10^{+6}$
202	Potassium-43	$1.15 \times 10^{+2}$	$2.74 \times 10^{+6}$	$5.48 \times 10^{+6}$
203	Praseodymium-142	$4.02 \times 10^{+1}$	$5.27 \times 10^{+5}$	$1.05 \times 10^{+6}$
204	Praseodymium-143	$1.29 \times 10^{+1}$	$5.71 \times 10^{+5}$	$1.14 \times 10^{+6}$
205	Promethium-147	6.34×10^{0}	$2.63 \times 10^{+6}$	$5.27 \times 10^{+6}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
206	Promethium-149	$3.63 \times 10^{+1}$	$6.92 \times 10^{+5}$	$1.38 \times 10^{+6}$
207	Protactinium-230	4.19×10^{-2}	$7.44 \times 10^{+5}$	$1.49 \times 10^{+6}$
208	Protactinium-231	2.29×10^{-4}	$9.65 \times 10^{+2}$	$1.93 \times 10^{+3}$
209	Protactinium-233	8.05×10^{0}	$7.87 \times 10^{+5}$	$1.87 \times 10^{+6}$
210	Radium-223[1]	4.32×10^{-3}	$6.85 \times 10^{+3}$	$1.37 \times 10^{+4}$
211	Radium-224[1]	1.03×10^{-2}	$1.05 \times 10^{+4}$	$2.11 \times 10^{+4}$
212	Radium-225	5.13×10^{-3}	$7.21 \times 10^{+3}$	$1.44 \times 10^{+4}$
213	Radium-226[1]	1.86×10^{-3}	$2.45 \times 10^{+3}$	$4.89 \times 10^{+3}$
214	Radium-227	$1.06 \times 10^{+2}$	$8.15 \times 10^{+6}$	$1.63 \times 10^{+7}$
215	Radium-228[1]	1.15×10^{-2}	$1.02 \times 10^{+3}$	$2.04 \times 10^{+3}$
216	Radon-220[1]	$2.25 \times 10^{+1}$	-	-
217	Radon-222[1]	$1.12 \times 10^{+2}$	-	-
218	Rhenium-186	$2.48 \times 10^{+1}$	$4.57 \times 10^{+5}$	$9.13 \times 10^{+5}$
219	Rhenium-188	$4.02 \times 10^{+1}$	$4.89 \times 10^{+5}$	$9.78 \times 10^{+5}$
220	Rhodium-103m	$1.19 \times 10^{+4}$	$1.80 \times 10^{+8}$	$3.60 \times 10^{+8}$
221	Rhodium-105	$6.77 \times 10^{+1}$	$1.85 \times 10^{+6}$	$3.70 \times 10^{+6}$
222	Rubidium-81	$4.38 \times 10^{+2}$	$1.27 \times 10^{+7}$	$2.54 \times 10^{+7}$
223	Rubidium-86	$2.29 \times 10^{+1}$	$2.45 \times 10^{+5}$	$4.89 \times 10^{+5}$
224	Ruthenium-10	$1.06 \times 10^{+1}$	$9.38 \times 10^{+5}$	$1.88 \times 10^{+6}$
225	Ruthenium-105	$1.19 \times 10^{+2}$	$2.63 \times 10^{+6}$	$5.27 \times 10^{+6}$
226	Ruthenium-106[1]	4.80×10^{-1}	$9.78 \times 10^{+4}$	$1.96 \times 10^{+5}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
227	Ruthenium-97	$1.86 \times 10^{+2}$	$4.57 \times 10^{+6}$	$9.13 \times 10^{+6}$
228	Samarium-147	3.35×10^{-3}	$1.40 \times 10^{+4}$	$2.80 \times 10^{+4}$
229	Samarium-151	8.05×10^{0}	$6.99 \times 10^{+6}$	$1.40 \times 10^{+7}$
230	Samarium-153	$4.38 \times 10^{+1}$	$9.26 \times 10^{+5}$	$1.85 \times 10^{+6}$
231	Scandium-44	$9.93 \times 10^{+1}$	$1.96 \times 10^{+6}$	$3.91 \times 10^{+6}$
232	Scandium-46	4.65×10^{0}	$4.57 \times 10^{+5}$	$9.13 \times 10^{+5}$
233	Scandium-47	$4.08 \times 10^{+1}$	$1.27 \times 10^{+6}$	$2.54 \times 10^{+6}$
234	Scandium-48	$1.86 \times 10^{+1}$	$4.03 \times 10^{+5}$	$8.06 \times 10^{+5}$
235	Selenium-73	$1.24 \times 10^{+2}$	$1.76 \times 10^{+6}$	$3.51 \times 10^{+6}$
236	Selenium-75	$1.75 \times 10^{+1}$	$2.63 \times 10^{+5}$	$5.27 \times 10^{+5}$
237	Silicon-31	$2.71 \times 10^{+2}$	$4.28 \times 10^{+6}$	$8.56 \times 10^{+6}$
238	Silicon-32	2.71×10^{-1}	$1.22 \times 10^{+6}$	$2.45 \times 10^{+6}$
239	Silver-105	$3.72 \times 10^{+1}$	$1.46 \times 10^{+6}$	$2.91 \times 10^{+6}$
240	Silver-108m	8.51×10^{-1}	$2.98 \times 10^{+5}$	$5.96 \times 10^{+5}$
241	Silver-110m	2.48×10^{0}	$2.45 \times 10^{+5}$	$4.89 \times 10^{+5}$
242	Silver-111	$1.75 \times 10^{+1}$	$5.27 \times 10^{+5}$	$1.05 \times 10^{+6}$
243	Sodium-22	$1.49 \times 10^{+1}$	$2.14 \times 10^{+5}$	$4.28 \times 10^{+5}$
244	Sodium-24	$5.62 \times 10^{+1}$	$1.59 \times 10^{+6}$	$3.19 \times 10^{+6}$
245	Strontium-82	2.98×10^{0}	$1.12 \times 10^{+5}$	$2.25 \times 10^{+5}$
246	Strontium-85	$3.87 \times 10^{+1}$	$1.22 \times 10^{+6}$	$2.45 \times 10^{+6}$
247	Strontium-85m	$4.02 \times 10^{+3}$	$1.12 \times 10^{+8}$	$2.25 \times 10^{+8}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
248	Strontium-87m	$8.51 \times 10^{+2}$	$2.08 \times 10^{+7}$	$4.15 \times 10^{+7}$
249	Strontium-89	3.97×10^{0}	$2.63 \times 10^{+5}$	$5.27 \times 10^{+5}$
250	Strontium-90[1]	1.99×10^{-1}	$2.45 \times 10^{+4}$	$4.89 \times 10^{+4}$
251	Strontium-91	$5.22 \times 10^{+1}$	$9.01 \times 10^{+5}$	$1.80 \times 10^{+6}$
252	Strontium-92	$8.76 \times 10^{+1}$	$1.40 \times 10^{+6}$	$2.80 \times 10^{+6}$
253	Sulphur-35	$2.29 \times 10^{+2}$	$8.90 \times 10^{+5}$	$1.78 \times 10^{+6}$
254	Tantalum-182	3.07×10^{0}	$4.57 \times 10^{+5}$	$9.13 \times 10^{+5}$
255	Technetium-95m	$3.42 \times 10^{+1}$	$1.10 \times 10^{+6}$	$2.21 \times 10^{+6}$
256	Technetium-96	$2.98 \times 10^{+1}$	$6.23 \times 10^{+5}$	$1.25 \times 10^{+6}$
257	Technetium-96m	$2.71 \times 10^{+3}$	$5.27 \times 10^{+7}$	$1.05 \times 10^{+8}$
258	Technetium-97	$1.42 \times 10^{+2}$	$8.25 \times 10^{+6}$	$1.65 \times 10^{+7}$
259	Technetium-97m	9.61×10^{0}	$1.04 \times 10^{+6}$	$2.08 \times 10^{+6}$
260	Technetium-99	7.64×10^{0}	$8.78 \times 10^{+5}$	$1.76 \times 10^{+6}$
261	Technetium-99m	$1.03 \times 10^{+3}$	$3.11 \times 10^{+7}$	$6.23 \times 10^{+7}$
262	Tellurium-123m	7.64×10^{0}	$4.89 \times 10^{+5}$	$9.78 \times 10^{+5}$
263	Tellurium-125m	9.02×10^{0}	$7.87 \times 10^{+5}$	$1.57 \times 10^{+6}$
264	Tellurium-127	$1.65 \times 10^{+2}$	$4.03 \times 10^{+6}$	$8.06 \times 10^{+6}$
265	Tellurium-127m	4.14×10^{0}	$2.98 \times 10^{+5}$	$5.96 \times 10^{+5}$
266	Tellurium-129	$5.22 \times 10^{+2}$	$1.09 \times 10^{+7}$	$2.17 \times 10^{+7}$
267	Tellurium-129m	4.73×10^{0}	$2.28 \times 10^{+5}$	$4.57 \times 10^{+5}$
268	Tellurium-131	$4.88 \times 10^{+2}$	$7.87 \times 10^{+6}$	$1.57 \times 10^{+7}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
269	Tellurium-131m	$1.86 \times 10^{+1}$	$3.60 \times 10^{+5}$	$7.21 \times 10^{+5}$
270	Tellurium-132	9.93×10^{0}	$1.85 \times 10^{+5}$	$3.70 \times 10^{+5}$
271	Tellurium-133	$6.77 \times 10^{+2}$	$9.51 \times 10^{+6}$	$1.90 \times 10^{+7}$
272	Tellurium-133m	$1.57 \times 10^{+2}$	$2.45 \times 10^{+6}$	$4.89 \times 10^{+6}$
273	Tellurium-134	$2.71 \times 10^{+2}$	$6.23 \times 10^{+6}$	$1.25 \times 10^{+7}$
274	Terbium-160	4.51×10^{0}	$4.28 \times 10^{+5}$	$8.56 \times 10^{+5}$
275	Thallium-200	$1.19 \times 10^{+2}$	$3.42 \times 10^{+6}$	$6.85 \times 10^{+6}$
276	Thallium-201	$3.92 \times 10^{+2}$	$7.21 \times 10^{+6}$	$1.44 \times 10^{+7}$
277	Thallium-202	$9.61 \times 10^{+1}$	$1.52 \times 10^{+6}$	$3.04 \times 10^{+6}$
278	Thallium-204	$4.80 \times 10^{+1}$	$5.27 \times 10^{+5}$	$1.05 \times 10^{+6}$
279	Thorium-226[1]	3.82×10^{-1}	$1.90 \times 10^{+6}$	$3.81 \times 10^{+6}$
280	Thorium-227	3.10×10^{-3}	$7.70 \times 10^{+4}$	$1.54 \times 10^{+5}$
281	Thorium-228[1]	7.64×10^{-4}	$9.78 \times 10^{+3}$	$1.96 \times 10^{+4}$
282	Thorium-229[1]	3.01×10^{-4}	$1.43 \times 10^{+3}$	$2.85 \times 10^{+3}$
283	Thorium-230	7.44×10^{-4}	$3.26 \times 10^{+3}$	$6.52 \times 10^{+3}$
284	Thorium-231	$7.44 \times 10^{+1}$	$2.01 \times 10^{+6}$	$4.03 \times 10^{+6}$
285	Thorium-234[1]	4.08×10^{0}	$2.01 \times 10^{+5}$	$4.03 \times 10^{+5}$
286	Thorium-nat including thorium-232	7.09×10^{-4}	$3.11 \times 10^{+3}$	$6.23 \times 10^{+3}$
287	Thulium-170	4.51×10^{0}	$5.27 \times 10^{+5}$	$1.05 \times 10^{+6}$
288	Thulium-171	$2.29 \times 10^{+1}$	$6.23 \times 10^{+6}$	$1.25 \times 10^{+7}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
289	Tin-113	$1.19 \times 10^{+1}$	$9.38 \times 10^{+5}$	$1.88 \times 10^{+6}$
290	Tin-117m	$1.29 \times 10^{+1}$	$9.65 \times 10^{+5}$	$1.93 \times 10^{+6}$
291	Tin-12	$1.06 \times 10^{+2}$	$2.98 \times 10^{+6}$	$5.96 \times 10^{+6}$
292	Tin-125	9.93×10^{0}	$2.21 \times 10^{+5}$	$4.42 \times 10^{+5}$
293	Tungsten-181	$6.93 \times 10^{+2}$	$8.35 \times 10^{+6}$	$1.67 \times 10^{+7}$
294	Tungsten-185	$1.35 \times 10^{+2}$	$1.37 \times 10^{+6}$	$2.74 \times 10^{+6}$
295	Tungsten-187	$9.02 \times 10^{+1}$	$9.65 \times 10^{+5}$	$1.93 \times 10^{+6}$
296	Tungsten-188	$3.55 \times 10^{+1}$	$2.98 \times 10^{+5}$	$5.96 \times 10^{+5}$
297	Uranium-230[1]	1.99×10^{-3}	$1.25 \times 10^{+4}$	$2.49 \times 10^{+4}$
298	Uranium-231	$7.44 \times 10^{+1}$	$2.45 \times 10^{+6}$	$4.89 \times 10^{+6}$
299	Uranium-232[1]	8.51×10^{-4}	$2.08 \times 10^{+3}$	$4.15 \times 10^{+3}$
300	Uranium-233	3.42×10^{-3}	$1.37 \times 10^{+4}$	$2.74 \times 10^{+4}$
301	Uranium-234	3.50×10^{-3}	$1.40 \times 10^{+4}$	$2.80 \times 10^{+4}$
302	Uranium-235[1]	3.87×10^{-3}	$1.49 \times 10^{+4}$	$2.98 \times 10^{+4}$
303	Uranium-236	3.77×10^{-3}	$1.49 \times 10^{+4}$	$2.98 \times 10^{+4}$
304	Uranium-237	$1.65 \times 10^{+1}$	$8.90 \times 10^{+5}$	$1.78 \times 10^{+6}$
305	Uranium-238	4.08×10^{-3}	$1.56 \times 10^{+4}$	$3.11 \times 10^{+4}$
306	Uranium-239	$8.51 \times 10^{+2}$	$2.45 \times 10^{+7}$	$4.89 \times 10^{+7}$
307	Uranium-240	$3.55 \times 10^{+1}$	$6.23 \times 10^{+5}$	$1.25 \times 10^{+6}$
308	Uranium-nat	4.08×10^{-3}	$1.56 \times 10^{+4}$	$3.11 \times 10^{+4}$
309	Vanadium-48	$1.10 \times 10^{+1}$	$3.42 \times 10^{+5}$	$6.85 \times 10^{+5}$

Item	Column 1 Radionuclide	Column 2 Release to air concentration (Bq/m^3)	Column 3 Release to water concentration (Bq/m^3)	Column 4 Release to sewerage system concentration (Bq/m^3)
310	Xenon-131m	$4.28 \times 10^{+4}$	-	-
311	Xenon-133	$1.14 \times 10^{+4}$	-	-
312	Xenon-135	$1.43 \times 10^{+3}$	-	-
313	Ytterbium-169	$1.06 \times 10^{+1}$	$9.65 \times 10^{+5}$	$1.93 \times 10^{+6}$
314	Ytterbium-175	$4.25 \times 10^{+1}$	$1.56 \times 10^{+6}$	$3.11 \times 10^{+6}$
315	Yttrium-88	7.26×10^{0}	$5.27 \times 10^{+5}$	$1.05 \times 10^{+6}$
316	Yttrium-90	$1.75 \times 10^{+1}$	$2.54 \times 10^{+5}$	$5.07 \times 10^{+5}$
317	Yttrium-91	3.55×10^{0}	$2.85 \times 10^{+5}$	$5.71 \times 10^{+5}$
318	Yttrium-91m	$1.99 \times 10^{+3}$	$6.23 \times 10^{+7}$	$1.25 \times 10^{+8}$
319	Yttrium-92	$1.06 \times 10^{+2}$	$1.40 \times 10^{+6}$	$2.80 \times 10^{+6}$
320	Yttrium-93	$4.96 \times 10^{+1}$	$5.71 \times 10^{+5}$	$1.14 \times 10^{+6}$
321	Zinc-65	$1.03 \times 10^{+1}$	$1.76 \times 10^{+5}$	$3.51 \times 10^{+5}$
322	Zinc-69	$6.93 \times 10^{+2}$	$2.21 \times 10^{+7}$	$4.42 \times 10^{+7}$
323	Zinc-69m	$9.02 \times 10^{+1}$	$2.08 \times 10^{+6}$	$4.15 \times 10^{+6}$
324	Zirconium-93[1]	1.03×10^{0}	$2.45 \times 10^{+6}$	$4.89 \times 10^{+6}$
325	Zirconium-95	5.41×10^{0}	$7.78 \times 10^{+5}$	$1.56 \times 10^{+6}$
326	Zirconium-97[1]	$2.13 \times 10^{+1}$	$3.26 \times 10^{+5}$	$6.52 \times 10^{+5}$

The superscript '1' immediately following an item in column 1 indicates that the item's concentration is the concentration of the parent radionuclide and its progeny when in secular equilibrium.

Schedule 4 Proof of identity documents

section 10

Part 1 Primary identity documents

1 Australian birth certificate

2 overseas birth certificate accompanied by a passport or Australian visa document issued by the Commonwealth Department of Immigration and Citizenship

3 document of identity recognised by the Commonwealth Department of Immigration and Citizenship

4 Australian passport that is current or has not been expired for more than 2 years

5 current foreign passport

6 document evidencing Australian citizenship issued by the Commonwealth Department of Immigration and Citizenship

7 Australian driver's licence that is current or has not been expired for more than 2 years

Part 2 Secondary identity documents

1 current identification card issued by the Commonwealth or a State as evidence of the person's entitlement to a financial benefit

Example—

1 seniors health card

2 health care card

3 Medicare card

4 pensioner concession card

5 entitlement card issued by the Department of Veteran's Affairs

2 current account card or credit card, issued by a financial institution, that contains the person's name and signature

3 account statement issued by a financial institution within the previous year

4 document evidencing discharge from military service within the previous 2 years

5 student identification card containing the person's photograph and signature that is current or has not been expired for more than 2 years

6 document evidencing enrolment in an education institution within the previous 2 years

7 document evidencing electoral enrolment within the previous 2 years

8 utilities account statement issued by a utilities provider within the previous year

9 notice of land valuation, water rates or council rates issued within the previous year

Schedule 5 Qualifications

section 50

Column 1 Radiation practice	Column 2 Qualification
intra-oral, or extra-oral, dental diagnostic radiography of a person or dental therapeutic procedures carried out with a laser apparatus	general registration under the Health Practitioner Regulation National Law as a dentist
plain film diagnostic radiography of a person	general registration under the Health Practitioner Regulation National Law as a medical practitioner
plain film diagnostic radiography of the spine, pelvis or extremities of a person	general registration under the Health Practitioner Regulation National Law as a chiropractor
plain film diagnostic radiography of an animal	registration under the *Veterinary Surgeons Act 1936*

Schedule 6 Authorised persons

section 63

Part 1 Diagnostic procedures

	Column 1 Diagnostic procedure	Column 2 Authorised person
1	intra-oral and extra-oral dental diagnostic radiography of the teeth and facial bones	a dentist or oral health therapist
2	intra-oral bitewing dental diagnostic radiography	a dental therapist if the intra-oral bitewing dental radiography is to be performed under a protocol for intra-oral bitewing dental radiography approved by the chief executive
3	plain film diagnostic radiography	a person who is— (a) a medical practitioner; or (b) a nurse practitioner; or (c) a registered nurse; or (d) a physiotherapist
4	plain film diagnostic radiography of the hand and wrist or lateral plain film diagnostic radiography projections of the cervical spine	a dentist

	Column 1 Diagnostic procedure	Column 2 Authorised person
5	plain film diagnostic radiography of the foot, ankle, lower leg, knee, thigh and hip	a person registered under the Health Practitioner Regulation National Law to practise in the podiatry profession, other than as a student
6	plain film diagnostic radiography of the neuromusculoskeletal system	a chiropractor
7	plain film diagnostic radiography of the chest	the chief executive, for screening for tuberculosis, under a protocol for tuberculosis screening approved by the chief executive, of a person who presents at a public sector health service facility which undertakes screening procedures for tuberculosis
8	mammography	the chief executive, for mammography, under a protocol for breast cancer screening approved by the chief executive, of a woman who— (a) presents at a BreastScreen Queensland Service for the purpose of breast cancer screening; and (b) is eligible to participate in the Queensland Health BreastScreen Queensland Program; and (c) signs the "BreastScreen Queensland Consent for Screening Mammogram" form
9	computed tomography, and mammography	a person who is— (a) a specialist health practitioner in the specialty of radiology—diagnostic radiology; or

	Column 1 Diagnostic procedure	Column 2 Authorised person
		(b) a medical practitioner undergoing a period of training in the specialty of radiology—diagnostic radiology
10	computed tomography, mammography and bone mineral densitometry	a person who is either of the following if the computed tomography, mammography or bone mineral densitometry is part of a radiation oncology procedure— (a) a specialist health practitioner in the specialty of radiation oncology; (b) a medical practitioner undergoing a period of training in the specialty of radiation oncology
11	fluoroscopy	a person who is— (a) a specialist health practitioner in a recognised specialty; or (b) a medical practitioner undergoing a period of training in a recognised specialty
12	bone mineral densitometry	a person who is— (a) a specialist health practitioner in the specialty of— (i) radiology—diagnostic radiology; or (ii) radiology—nuclear medicine; or (iii) physician—endocrinology; or (iv) physician—nuclear medicine; or (b) a medical practitioner undergoing a period of training in a specialty mentioned in paragraph (a); or

	Column 1 Diagnostic procedure	Column 2 Authorised person
		(c) the holder of a written approval from the chief executive stating the person is competent to carry out the procedure, and who is— (i) a specialist health practitioner in a specialty other than a specialty mentioned in paragraph (a); or (ii) a medical practitioner undergoing a period of training in a specialty other than a specialty mentioned in paragraph (a)
13	diagnostic nuclear medicine	a person who is— (a) a specialist health practitioner in the specialty of radiology—nuclear medicine; or (b) a medical practitioner undergoing a period of training in the specialty of radiology—nuclear medicine; or (c) a specialist health practitioner in the specialty of physician—nuclear medicine; or (d) a medical practitioner undergoing a period of training in the specialty of physician—nuclear medicine
14	in vivo tests for pathology involving the use of unsealed radioactive substances	a person who is— (a) a specialist health practitioner in the specialty of pathology; or (b) a medical practitioner undergoing a period of training in the specialty of pathology

Part 2 Therapeutic procedures

	Column 1 Therapeutic procedure	Column 2 Authorised person
16	treatment of malignant and benign conditions involving the use of radiation sources	a person who is— (a) a specialist health practitioner in the specialty of radiation oncology; or (b) a medical practitioner undergoing a period of training in the specialty of radiation oncology
17	treatment of malignant and benign conditions involving the use of unsealed radioactive substances	a person who is— (a) a specialist health practitioner in the specialty of radiology—nuclear medicine; or (b) a medical practitioner undergoing a period of training in the specialty of radiology—nuclear medicine; or (c) a specialist health practitioner in the specialty of physician—nuclear medicine; or (d) a medical practitioner undergoing a period of training in the specialty of physician—nuclear medicine
18	treatment of skin lesions involving the use of sealed radioactive substances	a person— (a) who is— (i) a specialist health practitioner in the specialty of dermatology; or (ii) a medical practitioner undergoing a period of training in the specialty of dermatology; and

	Column 1 Therapeutic procedure	Column 2 Authorised person
		(b) whose decision to prescribe the procedure is in accordance with a decision, about the desired outcome of the treatment, made by the person and another person who is a specialist health practitioner in the specialty of radiation oncology
19	treatment of eye lesions involving the use of sealed radioactive substances	a person who is— (a) a specialist health practitioner in the specialty of ophthalmology; or (b) a medical practitioner undergoing a period of training in the specialty of ophthalmology
20	treatment of vascular stenosis	a person— (a) who is— (i) a specialist health practitioner in the specialty of— (A) physician—cardiology; or (B) surgery—vascular surgery; or (C) radiology—diagnostic radiology; or (ii) a medical practitioner undergoing a period of training in the specialty of— (A) physician—cardiology; or (B) surgery—vascular surgery; or (C) radiology—diagnostic radiology; and

	Column 1 Therapeutic procedure	Column 2 Authorised person
		(b) whose decision to prescribe the procedure is in accordance with a decision about the desired outcome of the treatment, made by the person and another person— (i) who is a specialist health practitioner in the specialty of radiology—nuclear medicine and holds a written approval from the chief executive stating the person is competent to carry out the procedure; or (ii) who is a specialist health practitioner in the specialty of radiation oncology; or (iii) who is a specialist health practitioner in the specialty of physician—nuclear medicine
21	therapeutic procedures involving the use of laser apparatus	a person who is— (a) a medical practitioner; or (b) a dentist

Schedule 7 Training

section 67

1 course entitled ‘Compliance testing of diagnostic imaging equipment training course’ conducted by the department

2 course entitled ‘Laser concepts in health care’ conducted by the Australian Centre for Medical Laser Technology Inc.

Schedule 8 Fees

sections 87, 88 and 89

Part 1 Possession licences

Division 1 Possession licences for radioactive substances

			$
1	Application fee for a possession licence—		
	(a)	if the radioactive substance is a security enhanced source	947.00
	(b)	otherwise	473.50
2	Licence fee for a possession licence for the possession of a radioactive substance for a radiation practice—		
	(a)	if the term of the licence is 1 year or less—	
		(i) base fee	270.00
		(ii) for each sealed radioactive substance or type of unsealed radioactive substance	108.00
	(b)	if the term of the licence is more than 1 year but not more than 2 years—	
		(i) base fee	540.00
		(ii) for each sealed radioactive substance or type of unsealed radioactive substance	216.00
	(c)	if the term of the licence is more than 2 years but not more than 3 years—	
		(i) base fee	810.00

		$
	(ii) for each sealed radioactive substance or type of unsealed radioactive substance	324.00

Division 2 Possession licences for radiation apparatus

		$
3	Application fee for a possession licence for the possession of a radiation apparatus for a radiation practice	473.50
4	Licence fee for a possession licence for the possession of a radiation apparatus for a radiation practice—	
	(a) if the term of the licence is 1 year or less—	
	(i) base fee	270.00
	(ii) for each radiation apparatus	80.50
	(b) if the term of the licence is more than 1 year but not more than 2 years—	
	(i) base fee	540.00
	(ii) for each radiation apparatus	161.00
	(c) if the term of the licence is more than 2 years but not more than 3 years—	
	(i) base fee	810.00
	(ii) for each radiation apparatus	241.50

Part 2 Use and transport licences

		$
5	Application fee for a use licence or transport licence	94.50
6	Licence fee for a use licence or transport licence—	
	(a) if the term of the licence is 1 year or less	67.50
	(b) if the term of the licence is more than 1 year but not more than 2 years	135.00
	(c) if the term of the licence is more than 2 years but not more than 3 years	202.50

Part 3 Other Act instruments

		$
7	Application for an approval to acquire	40.50
8	Application for an approval to dispose	473.50
9	Application for an approval to relocate	27.50
10	Application fee for an accreditation certificate	270.00
11	Accreditation certificate fee—	
	(i) if the term of the certificate is 1 year or less	135.00
	(ii) if the term of the certificate is more than 1 year but not more than 2 years	270.00
	(iii) if the term of the certificate is more than 2 years but not more than 3 years	405.00
12	Application fee for a radiation safety officer certificate	94.50
13	Radiation safety officer certificate fee—	

		$
(i)	if the term of the certificate is 1 year or less	67.50
(ii)	if the term of the certificate is more than 1 year but not more than 2 years	135.00
(iii)	if the term of the certificate is more than 2 years but not more than 3 years	202.50

Part 4 Other fees

		$
14	Application by a possession licensee to change the licensee's approved radiation safety and protection plan for a radiation practice (Act, s 31(2)(b))	473.50
15	Application by a possession licensee to change the licensee's approved security plan (Act, s 34D(2)(b))	473.50
16	Application for approval of a transport security plan (Act, s 34J(1)(c)(iii))	473.50
17	Application by a transport security plan holder to change the holder's approved transport security plan (Act, s 34O(2)(b))	473.50
18	Application by the holder of a conditional Act instrument to change the conditions of the instrument imposed by the chief executive (Act, s 96(2)(b))	473.50
19	Issue of an Act instrument to replace a lost, stolen, destroyed or damaged Act instrument (Act, s 101(4))	27.50
20	Security check and criminal history check (Act, s 103A(3))	112.00
21	Copy of the register, or a part of it, for each page (Act, s 208(c))	1.00

Schedule 9 Dictionary

section 3

administrative security actions means administrative procedures, security checks, assessments and other measures to deal with risks to the security of a security enhanced source at different threat levels.

ancillary imaging equipment, used in connection with the use of a radiation source to carry out a radiation practice involving the production of images, means equipment, other than the source, used in the production and viewing of the images.

ARPANSA means the Australian Radiation Protection and Nuclear Safety Agency.

AS/NZS means an Australian/New Zealand Standard jointly published by Standards Australia and Standards New Zealand.

Bq means a becquerel.

cabinet radiation apparatus means an ionising radiation apparatus—

(a) contained in a cabinet that is shielded in a way that minimises the transmission of ionising radiation through the shielding; and

(b) used for the radiographic, or fluoroscopic, imaging of—

(i) things for security, or quality control, purposes; or

(ii) excised tissue for pathology purposes.

chiropractor means a person registered under the Health Practitioner Regulation National Law to practise in the chiropractic profession, other than as a student.

commissioning means the tasks involved in installing a radiation source, including tasks to ensure the source is operating in the way it is designed to operate.

dental therapist means a person registered under the Health Practitioner Regulation National Law—

(a) to practise in the dental profession, other than as a student; and

(b) in the dental therapists division of that profession.

dentist means a person registered under the Health Practitioner Regulation National Law—

(a) to practise in the dental profession, other than as a student; and

(b) in the dentists division of that profession.

diagnostic radiography protocol means a document certified by the chief executive and published by the department stating the circumstances in which, and the conditions under which, a person who may act under the protocol may request plain film diagnostic radiography.

document of identity means any document given by a person to the Commonwealth Department of Immigration and Citizenship for the purpose of proving their identity.

educational institution means a school, university, training institution or professional college that—

(a) educates persons about radiation sources; or

(b) uses radiation sources in the course of its education of persons.

enclosed radiation apparatus means an ionising radiation apparatus—

(a) contained in a cabinet that is shielded in a way that minimises the transmission of ionising radiation through the shielding; and

(b) used for monitoring industrial processes or industrial gauging.

equivalent dose, for a person's organ or tissue that is exposed to radiation, means the equivalent dose for the organ or tissue, calculated in accordance with the document entitled 'Recommendations for limiting exposure to ionizing radiation (1995) (Guidance note [NOHSC:3022(1995)])' published by ARPANSA.

Editor's note—

The document is available on the internet or may be purchased from ARPANSA, 619 Lower Plenty Road, Yallambie, Victoria 3085.

external effective dose, received by a person, means the total of the weighted equivalent doses for all organs and tissues of the person as a result of exposure of the organs and tissues to radiation emitted from ionising radiation sources external to the person's body.

gaseous tritium light device means equipment or an instrument, article or subassembly, other than equipment or an instrument, article or subassembly that is a timepiece, incorporating a sealed glass container—

(a) filled with the radionuclide hydrogen-3 in a gaseous form; and

(b) coated internally with a phosphor.

GBq means a gigabecquerel.

gigabecquerel means 1,000,000,000 becquerels.

health-related exposure, of a person to ionising radiation, means the exposure of the person to the radiation while undergoing a diagnostic or therapeutic procedure involving the irradiation of the person.

ICRP means the International Commission on Radiological Protection.

internal effective dose, received by a person, means the effective dose from a radionuclide inhaled, ingested or introduced into the person's body, calculated in accordance with the document entitled 'Dose Coefficients for Intakes of Radionuclides by Workers', and known as 'ICRP Publication 68', prepared by ICRP.

Editor's note—

The document may be purchased from Elsevier, Tower 1, Level 12, 475 Victoria Ave, Chatswood, New South Wales 2067.

kBq means a kilobecquerel.

kilobecquerel means 1,000 becquerels.

laser apparatus means a laser that is a radiation apparatus under section 7.

laser standard means AS/NZS 2211.1-2004 (Safety of laser products, Part 1: Equipment classification, requirements and user's guide).

MBq means a megabecquerel.

megabecquerel means 1,000,000 becquerels.

microgray means 1/1,000,000 part of a gray.

millisievert means 1/1,000 part of a sievert.

mineral see the *Mineral Resources Act 1989*, section 6.

mineral substances see section 5(1).

mSv means a millisievert.

natural background exposure, of a person to ionising radiation, means the exposure of the person to ionising radiation occurring naturally in the environment, other than exposure to ionising radiation directly attributable to the carrying out of a radiation practice.

NHMRC means the National Health and Medical Research Council.

NRMMC means the Natural Resource Management Ministerial Council.

nuclear medicine image means an image produced as a result of the detection of the radiation emitted by a radionuclide in a person, after the person has been administered, or injected with, a radiopharmaceutical.

nurse practitioner means a person registered under the Health Practitioner Regulation National Law—

(a) to practise in the nursing profession, other than as a student; and

(b) whose registration is endorsed under that law as being qualified to practise as a nurse practitioner.

occupational exposure, of a person to ionising radiation, means the exposure of the person to the radiation in the course

of the person's work, other than natural background exposure to ionising radiation.

oral health therapist means a person registered under the Health Practitioner Regulation National Law—

(a) to practise in the dental profession, other than as a student; and

(b) in the oral health therapists division of that profession.

personal protective equipment means equipment that, when worn by a person while involved in carrying out a radiation practice, reduces the exposure of the person to radiation attributable to the carrying out of the practice.

physician's assistant means a person—

(a) appointed by the chief executive, and employed by the department, as a physician's assistant; or

(b) appointed by a Hospital and Health Service established under the *Hospital and Health Boards Act 2011*, and employed by the Service, as a physician's assistant.

physiotherapist means a person registered under the Health Practitioner Regulation National Law to practise in the physiotherapy profession, other than as a student.

plain film diagnostic radiography includes a digital equivalent of plain film diagnostic radiography.

practice plan, for a physician's assistant, means a document that—

(a) is developed and signed by a physician's assistant and his or her supervising medical officer; and

(b) states the circumstances and conditions for a physician's assistant to request a specified diagnostic procedure; and

(c) is in a form approved by the chief executive.

public exposure, of a person to ionising radiation, means the exposure of the person to the radiation, other than health-related exposure, natural background exposure or occupational exposure to ionising radiation.

public sector health service facility see the *Hospital and Health Boards Act 2011*, schedule 2.

quality control procedures, for ancillary imaging equipment used in connection with the use of a radiation source to carry out a radiation practice involving the production of images, means preventative maintenance, or routine checking, procedures undertaken to ensure the correct operation of the equipment for the practice.

quality control procedures, for a radiation source used in carrying out a radiation practice, means—

(a) if the source is a radiation apparatus—preventative maintenance, or routine checking, procedures undertaken to ensure the correct operation of the apparatus for the practice; or

(b) if the source is a radioactive substance—routine checking procedures undertaken to verify the suitability of the substance for the practice.

quality control procedures, for a sealed source apparatus used in carrying out a radiation practice, means preventative maintenance, or routine checking, procedures undertaken to ensure the correct operation of the apparatus for the practice.

recognised specialty see the Health Practitioner Regulation National Law (Queensland), section 5.

registered nurse means a person registered under the Health Practitioner Regulation National Law—

(a) to practise in the nursing profession, other than as a student; and

(b) in the registered nurses division of that profession.

relevant solarium means a solarium other than a solarium owned by an individual and not used for a business.

security enhanced source see section 8.

SI means the International System of Units.

sievert, for a total effective or equivalent dose, means the SI unit for the dose.

skin photo type means a classification of skin using the Fitzpatrick scale of skin photo typing.

solarium means an electrically powered apparatus designed to produce tanning of human skin by exposure of the skin to non-ionising radiation emitted by the apparatus.

specialist health practitioner, in a specialty, means a person registered under the Health Practitioner Regulation National Law to practise in the medical profession as a specialist registrant in the specialty.

supervising medical officer, for a physician's assistant, means a person who—

(a) is a medical practitioner; and

(b) supervises the work performed by the physician's assistant in his or her employment with the department or a Hospital and Health Service established under the *Hospital and Health Boards Act 2011*.

TCLP means the toxicity characteristics leaching procedure stated in AS 4439.2-1997 (Wastes, sediments and contaminated soils, Part 2: Preparation of leachates—Zero headspace procedure).

threat level see section 34.

total effective dose, for a person for a period, means the total of the external, and internal, effective doses received by the person during the period.

transport code of practice means the Code for the Safe Transport of Radioactive Material (2014) published by ARPANSA.

veterinary surgeon see the *Veterinary Surgeons Act 1936*, schedule.

weighted equivalent dose, for a person's organ or tissue that is exposed to radiation, means the product of—

(a) the tissue weighting factor for the organ or tissue stated in table 2 of the document entitled 'Recommendations for limiting exposure to ionizing radiation (1995)

(Guidance note [NOHSC:3022(1995)])' published by ARPANSA; and

(b) the equivalent dose for the organ or tissue.