Australian Capital Territory

Radiation Act 1983 No 58

Republication No 4

Republication date: 1 March 2002

Last amendment made by Act 2001 No 56

Amendments incorporated to 12 September 2001

Not all amendments are in force: see last endnote

Authorised by the ACT Parliamentary Counsel

About this republication

The republished law

This is a republication of the *Radiation Act 1983* as in force on 1 March 2002. It includes any amendment, repeal or expiry affecting the republished law to 12 September 2001 and any amendment made under the *Legislation Act 2001*, part 11.3 (Editorial changes).

The legislation history and amendment history of the republished law are set out in endnotes 3 and 4.

Kinds of republications

The Parliamentary Counsel's Office prepares 2 kinds of republications of ACT laws (see the ACT legislation register at www.legislation.act.gov.au):

- authorised republications to which the *Legislation Act 2001* applies
- unauthorised republications.

The status of this republication appears on the bottom of each page.

Editorial changes

The *Legislation Act 2001*, part 11.3 authorises the Parliamentary Counsel to make editorial amendments and other changes of a formal nature when preparing a law for republication. Editorial changes do not change the effect of the law, but have effect as if they had been made by an Act commencing on the republication date (see *Legislation Act 2001*, s 115 and s 117). The changes are made if the Parliamentary Counsel considers they are desirable to bring the law into line, or more closely into line, with current legislative drafting practice.

This republication includes amendments made under part 11.3 (see endnote 1).

Uncommenced provisions and amendments

If a provision of the republished law has not commenced or is affected by an uncommenced amendment, the symbol **U** appears immediately before the provision heading. The text of the uncommenced provision or amendment appears only in the last endnote.

Modifications

If a provision of the republished law is affected by a current modification, the symbol **M** appears immediately before the provision heading. The text of the modifying provision appears in the endnotes. For the legal status of modifications, see *Legislation Act 2001*, section 95.

Penalties

The value of a penalty unit for an offence against this republished law at the republication date is—

(a) if the person charged is an individual—$100; or

(b) if the person charged is a corporation—$500.

Amendments incorporated to
12 September 2001

Australian Capital Territory

Radiation Act 1983

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Amendments incorporated to
12 September 2001

Australian Capital Territory

Radiation Act 1983

An Act to provide for the safe use, transportation and disposal of radioactive materials and irradiating apparatus, and for related purposes

Part 1 Preliminary

1 Short title

This Act may be cited as the *Radiation Act 1983*.

U 5 Interpretation for Act

(1) In this Act:

Note A definition applies except so far as the contrary intention appears (see *Legislation Act 2001*, s 155).

absorbed dose, in relation to irradiated matter, means the quantity of energy imparted to the matter by ionising radiation per unit mass of the matter.

activity means the number of nuclear transformations that occur per unit time in a quantity of a radionuclide.

alpha particle means a particle that is composed of 2 protons and 2 neutrons and that is emitted spontaneously by a radionuclide in the process of radioactive decay.

beta particle means an electron that is emitted spontaneously by a radionuclide in the process of radioactive decay.

chairperson means the chairperson of the council.

council means the Radiation Council established by section 7.

deputy chairperson means the deputy chairperson of the council.

dose equivalent, in relation to a person, means the product, expressed in millisieverts, of the absorbed dose in relation to that person and the quality factor of the type of radiation involved.

dose equivalent limit means—

(a) if a person, being a radiation worker, is exposed to radiation for a calendar year—50 mSv; and

(b) if a person other than a radiation worker is exposed to radiation for a calendar year—5mSv.

electron means a particle having a specific mass and that is positively or negatively charged.

gamma ray means electromagnetic radiation emitted spontaneously by a radionuclide in the process of radioactive decay.

identity card means an identity card issued under section 18A.

inspector means an inspector under section 18.

irradiating apparatus means an instrument or apparatus containing material or equipment that emits, or is capable of emitting, ionising radiation, other than—

(a) an instrument or apparatus from which the dose equivalent to a person when situated at a distance of 0.1m from the external surface of the instrument or apparatus does not exceed, even under worst case or fault conditions, 1μSv per hour; or

(b) an instrument or apparatus in which electrons are accelerated to an energy not exceeding 5 000 volts; or

(c) an instrument or apparatus embodying a cathode ray tube from which the dose equivalent to a person when situated at a distance of 5cm from the external surface of the instrument or apparatus does not exceed, even under worst case or fault conditions, 5μSv per hour.

licence means a licence granted under this Act.

licensed premises means the premises specified in a licence as the premises to which the licence relates.

licensee means the holder of a licence.

maximum permissible concentration, in relation to a radioactive material specified in schedule 1, column 1, means—

(a) if the material is present in air and the person exposed to the concentration of the material is a radiation worker—the

concentration of the radioactivity of that material specified in schedule 1, column 2 opposite to the reference to the material in that schedule, column 1;

(b) if the material is present in air and a person other than a radiation worker is exposed to the concentration of the material—the concentration of the radioactivity of that material that is equal to $^1/_{10}$ of the concentration specified in schedule 1, column 2, opposite to the reference to the material in that schedule, column 1; and

(c) if the material is present in potable water and any person is exposed to the concentration of the material—the concentration of the radioactivity of that material specified in schedule 1, column 3, opposite to the reference to the material in that schedule, column 1.

member means a member of the council, and includes the chairperson.

neutron means a particle that has no electric charge and has a mass slightly greater than that of the proton.

nuclide means a species of atom having specific numbers of neutrons and protons in its nucleus.

package includes a pack, packet, parcel, carton, box or closed receptacle of any kind.

place and ***premises*** include a building, ship, aircraft, vehicle and any other premises on land or water and all other land, whether occupied or not.

proton means a particle of unit mass number having a charge equal to and opposite to that of an electron.

quality factor, in relation to a type of radiation, means the factor ascertained in accordance with schedule 2 in relation to that type of radiation.

radiation means—

(a) electromagnetic radiation, being X-rays or gamma rays; or

(b) particulate radiation, being alpha particles, beta particles, electrons, protons, neutrons and heavy particles capable of causing ionisation of matter through which they pass.

radiation hazard means a danger to health that arises from exposure to radiation levels in excess of the relevant maximum permissible concentrations or dose equivalent limits.

radiation safety officer means a person appointed as a radiation safety officer for section 34 (1).

radiation worker means a person who, in the course of employment, is required to use or handle, or assist in the use or handling of, a radioactive material, or to use or operate, or assist in the use or operation of, irradiating apparatus, but does not include a person who handles a radioactive material—

(a) in the course of transport; or

(b) that is contained in a category 1, a category 2 or a category 3 package.

radioactive contamination means the lodgment, attachment or incorporation of a radioactive material on, to or in an organ or tissue of a person or on, to or in any other material.

radioactive material means material that consists of or contains a radionuclide.

radioactive source means any quantity of radioactive material that is intended for use as a source of ionising radiation.

radioactivity means the spontaneous transformation of a radionuclide into another nuclide or a spontaneous change in energy level of the nucleus of a radionuclide with the emission of ionising radiation.

radionuclide means an unstable nuclide that spontaneously emits ionising radiation.

transport includes load, unload, discharge, stack, stow or store for the purposes of transportation and any act incidental to or arising out of any of those acts.

transport index, in relation to a package, means the number calculated in accordance with the formula

$$\frac{R}{10}$$

where:

R means the maximum level of radiation, expressed in microsieverts per hour, emitted from the package when measured at a distance of 1m from the external surface of the package.

X-ray means electromagnetic ionising radiation that is produced by the transitions of electrons between the electron shells of an atom or by the deceleration of electrons in the vicinity of a nucleus.

(2) For this Act—

(a) a package shall be treated as a category 1 package if—

(i) the level of the radiation emitted from the package at any time during normal transportation does not exceed 5μSv per hour at any point on the external surface of the package; and

(ii) the transport index of the package is less than 0.05; and

(b) a package, other than a package referred to in paragraph (a), shall be treated as a category 2 package if—

(i) the level of the radiation emitted from the package at any time during normal transportation does not exceed 500 μSv per hour at any point on the external surface of the package; and

(ii) the transport index of the package is less than 1; and

(c) a package, other than a package referred to in paragraph (a) or (b), shall be treated as a category 3 package if—

(i) the level of the radiation emitted from the package at any time during normal transportation does not exceed 2 mlSv per hour at any point on the external surface of the package; and

(ii) the transport index of the package is less than 10.

6 Exemptions

(1) Nothing in this Act applies to or in relation to radioactive material if the radioactivity of the material does not exceed—

(a) for material specified in an item in schedule 3, column 2—the measure of activity specified in column 3 of that item; and

(b) in any other case—4 kBq.

(2) The council, on application made by a person in possession of radioactive material or irradiating apparatus, may, if it is satisfied that the material or apparatus does not give rise to a radiation hazard, make a declaration accordingly.

(3) A declaration under subsection (2) shall be in writing signed by the chairperson.

(4) While a declaration under subsection (2) is in force, nothing in part 3, 4 or 6 applies in relation to the material or apparatus specified in the declaration.

(5) If the council is satisfied that any radioactive material or irradiating apparatus in respect of which a declaration under subsection (2) is in force gives rise to a radiation hazard, the council may revoke the declaration.

Part 2 Administration

Division 2.1 Radiation council

7 Establishment of council

(1) For this Act, there shall be a council to be known as the Radiation Council.

(2) The council—

(a) is a body corporate with perpetual succession; and

(b) shall have a common seal; and

(c) may sue and be sued in its corporate name.

(3) All courts, judges and persons acting judicially shall take judicial notice of the seal of the council affixed to a document and shall presume that it was duly affixed.

8 Membership of council

(1) The council shall consist of—

(a) a member who is registered as a medical practitioner under the *Medical Practitioners Registration Act 1930* and is a member of the Royal Australasian College of Radiologists; and

(b) a member, being a person with expert knowledge of the physical properties or biological effects of ionising radiation, nominated by the Australian National University; and

(c) a member, being a person with expert knowledge of the physical properties or biological effects of ionising radiation, nominated by the Commonwealth Scientific and Industrial Research Organization; and

(d) 2 persons nominated by the Minister.

(2) The members of the council shall be appointed by the Minister.

(3) Subject to this Act, a member of the council appointed under subsection (2) holds office for such period, not exceeding 3 years, as is specified in the instrument of appointment and is eligible for reappointment.

(4) The exercise of the functions or powers of the council is not affected by reason only of there being a vacancy or vacancies in the membership of the council.

9 Chairperson and deputy chairperson of council

(1) The Minister shall appoint 1 of the members to be the chairperson of the council.

(2) The chairperson may resign the office of chairperson by signed notice delivered to the Minister.

(3) The members shall, from time to time, as occasion requires, elect 1 of their number to be deputy chairperson of the council.

(4) The deputy chairperson holds office for a period of 1 year from the date of election, unless he or she sooner ceases to be a member, and is eligible for re-election.

(5) The deputy chairperson may resign the office of deputy chairperson by signed notice delivered to the chairperson.

10 Resignation

A member may resign his or her office by signed notice delivered to the Minister.

11 Termination of appointment

(1) The Minister may terminate the appointment of a member by reason of misbehaviour or physical or mental incapacity.

(2) If a member—

(a) becomes bankrupt, applies to take the benefit of any law for the relief of bankrupt or insolvent debtors, compounds with creditors or makes an assignment of remuneration for their benefit; or

(b) is absent, except on leave granted by the Minister, from 3 consecutive meetings of the council;

the Minister shall terminate the appointment of the member.

12 Acting members

(1) The Minister may, in writing, appoint a person to act as a member of the council (otherwise than as chairperson)—

(a) during a vacancy in an office of member, whether or not an appointment has previously been made to the office; or

(b) during any period or during all periods, when a member is absent from duty or from the ACT or, for any other reason, is unable to exercise the functions of the office;

but a person appointed to act during a vacancy shall not continue so to act for more than 12 months.

(5) The validity of anything done by a person purporting to act in accordance with this section shall not be called in question on the ground that the occasion for the appointment had not arisen, that there is a defect or irregularity in or in connection with the appointment, that the appointment had ceased to have effect or that the occasion for the person to act had not arisen or had ceased.

13 Meetings

(1) The chairperson shall convene the meetings of the council that he or she considers necessary for the exercise of its functions, but so that an interval longer than 6 months does not occur between any 2 consecutive meetings.

(2) The chairperson shall, on receipt of a written request signed by not less than 2 members of the council, convene a meeting of the council.

(3) The chairperson shall preside at all meetings of the council at which he or she is present.

(4) At a meeting of the council at which the chairperson is not present, the deputy chairperson shall preside.

(5) At a meeting of the council, a quorum is constituted by a majority of the members of the council for the time being holding office.

(6) A question arising at a meeting of the council shall be determined by a majority of votes of the members present and voting.

(7) The person presiding at a meeting of the council has a deliberative vote only.

(8) Subject to this Act, the procedure of the council shall be as the council determines.

14 Protection of members

An action or proceeding, civil or criminal, does not lie against a member of the council for or in respect of any act or thing done in good faith by the member in his or her capacity as a member.

15 Council may seek advice

The council may invite a person to attend a meeting of the council for the purpose of advising or informing the council on any matter.

15A Report to Minister

If the Minister gives a written direction to the chairperson requiring the council to inquire into and report on a matter, the council shall provide the Minister with a report on the matter, including a recommendation where appropriate, within the period specified in the direction.

16 Disclosure of pecuniary interest

(1) A member who has a direct or indirect pecuniary interest in a matter being considered or about to be considered by the council shall, as soon as possible after the relevant facts have come to his or her knowledge, disclose the nature of his or her interest at a meeting of the council.

(2) A disclosure under subsection (1) shall be recorded in the minutes of the meeting of the council and the member shall not, unless the Minister or the council otherwise determines—

(a) be present during any deliberation of the council with respect to that matter; or

(b) take part in any decision of the council with respect to that matter.

(3) For the making of a determination by the council under subsection (2) in relation to a member who has made a disclosure under subsection (1), a member who has a direct or indirect pecuniary interest in the matter to which the disclosure relates shall not—

(a) be present during any deliberation of the council for the purpose of making the determination; or

(b) take part in the making by the council of the determination.

(4) If a member fails, without reasonable excuse, to comply with this section, the Minister shall terminate the appointment of the member.

Division 2.2 Inspectors

17 Interpretation for div 2.2

(1) For this division, a thing is ***connected*** with a particular offence if it is—

(a) a thing with respect to which the offence has been committed; or

(b) a thing that will afford evidence of the commission of the offence; or

(c) a thing that was used, or is intended to be used, for committing the offence.

(2) A reference in this division to an ***offence*** includes a reference to an offence that there are reasonable grounds for believing has been, or is to be, committed.

18 Inspectors

(1) There may be 1 or more inspectors for this Act.

(2) The chief executive shall create and maintain 1 or more offices in the public service the duties of which include exercising the functions of an inspector.

(3) An inspector shall be any public servant for the time being exercising the duties of a public service office referred to in subsection (2).

18A Identity cards

(1) The chief executive shall issue to an inspector an identity card that specifies the inspector's name and office, and on which appears a recent photograph of the inspector.

(2) On ceasing to occupy, or to act in, the office of inspector, a person shall not, without reasonable excuse, fail to return his or her identity card to the chief executive.

Maximum penalty: 1 penalty unit.

19 Powers of inspectors in relation to licensed premises

(1) An inspector may, at any reasonable hour of the day or night, with the assistance he or she thinks necessary, enter on or into any licensed premises, without the authority of a warrant issued under section 21, for the purpose of ensuring that the provisions of this Act are being complied with.

(2) An inspector who enters on or into premises under subsection (1) is not authorised to remain on the premises if, on request by or on behalf of the occupier or person in charge of the premises, he or she does not produce his or her identity card.

(3) An inspector who enters on or into premises under subsection (1) may—

(a) conduct the search and inspection of the premises and the inspection of any material or apparatus on the premises that he or she thinks necessary to determine whether there is any contravention of this Act; and

(b) test any material or apparatus that he or she has reason to believe is radioactive material or irradiating apparatus; and

(c) inspect any books, records or documents relating to radioactive material, irradiating apparatus or the use of ionising radiation that are kept on the premises and any books, records or documents that are required by this Act to be kept on the premises; and

(d) make copies of, or take extracts from, any books, records or documents referred to in paragraph (c); and

(e) take samples of any material that he or she has reason to believe is radioactive material; and

(f) seize any thing that he or she believes on reasonable grounds to be connected with an offence against this Act.

(4) If an inspector destroys or damages the property of any person in the course of taking a sample of material under subsection (3) (e), there is due to the person by the Territory the amount necessary to compensate the person for the loss suffered as a result of that destruction or damage.

20 Powers of entry and seizure

An inspector may enter on or into premises and may search for and seize any thing that he or she believes on reasonable grounds to be connected with an offence against this Act that is found on the premises if, and only if, the search and seizure is made by the inspector—

(a) in accordance with section 19; or

(b) under a warrant issued under section 21; or

(c) in circumstances of seriousness and urgency, in accordance with section 22; or

(d) after obtaining the consent of the occupier or the person in charge of the premises.

21 Search warrants

(1) If an information on oath is laid before a magistrate alleging that there are reasonable grounds for suspecting that there may be on or in any premises a thing or things of a particular kind connected with a particular offence against a provision of this Act, and the information sets out those grounds, the magistrate may issue a search warrant authorising the inspector named in the warrant, with the assistance he or she thinks necessary and if necessary by force—

(a) to enter on or into the premises; and

(b) to search the premises for things of that kind; and

(c) to seize any thing of that kind found on or in the premises that he or she believes on reasonable grounds to be connected with that offence.

(2) A magistrate shall not issue a warrant under subsection (1) unless—

(a) the informant or some other person has given to the magistrate, either orally or by affidavit, the further information (if any) the magistrate requires concerning the grounds on which the issue of the warrant is being sought; and

(b) the magistrate is satisfied that there are reasonable grounds for issuing the warrant.

(3) There shall be stated in a warrant issued under this section—

(a) a statement of the purpose for which the warrant is issued, which shall include a reference to the nature of the offence in relation to which the entry and search are authorised; and

(b) whether entry is authorised to be made at any time of the day or night or during specified hours of the day or night; and

(c) a description of the kind of things authorised to be seized; and

(d) a date, not being later than 1 month after the date of issue of the warrant, when the warrant ceases to have effect.

(4) If, in the course of searching, in accordance with a warrant issued under this section, for things connected with a particular offence against this Act, being things of a kind specified in the warrant, an inspector finds any thing that he or she believes on reasonable grounds to be connected with the offence, although not of a kind specified in the warrant, or to be connected with another offence against this Act, and he or she believes on reasonable grounds that it is necessary to seize that thing in order to prevent its concealment, loss or destruction, or its use in committing, continuing or repeating the offence or in committing the other offence, the warrant shall be deemed to authorise the seizure.

22 Searches in emergencies

(1) An inspector may enter on or into any premises where he or she believes on reasonable grounds that any thing connected with an offence against this Act is situated and may seize any such thing found on or in the premises if—

(a) the inspector believes on reasonable grounds that it is necessary to do so in order to prevent the concealment, loss or destruction of any thing connected with an offence against this Act; and

(b) the entry is made in circumstances of such seriousness and urgency as to require and justify immediate search or entry without the authority of a warrant issued under section 21.

(2) An inspector who enters on or into premises under subsection (1) is not authorised to remain on the premises if, on request by or on behalf of the occupier or persons in charge of the premises, he or she does not produce his or her identity card.

23 Consent to entry

(1) Before obtaining the consent of a person for section 20, an inspector shall inform the person that he or she may refuse to give that consent.

(2) An inspector who obtains the consent of a person for section 20 shall ask the person to sign a written acknowledgment—

(a) of the fact that he or she has been informed that he or she may refuse to give that consent; and

(b) of the fact that he or she has voluntarily given that consent; and

(c) of the date and time when he or she gave that consent.

(3) An entry by an inspector under the consent of a person is not lawful unless the person voluntarily consented to the entry.

(4) If it is material, in any proceedings, for a court to be satisfied of the voluntary consent of a person for section 20 and an acknowledgment, in accordance with subsection (2), signed by the person is not produced in evidence, the court shall assume, unless the contrary is proved, that the person did not voluntarily give consent.

24 Obstruction of inspector

A person who, without reasonable excuse—

(a) obstructs or delays an inspector in the exercise of his or her powers under this Act; or

(b) fails to comply with a reasonable requirement of an inspector who has entered on or in any premises under this Act;

commits an offence.

Maximum penalty:

(a) for paragraph (a)—50 penalty units, imprisonment for 6 months or both; or

(b) for paragraph (b)—50 penalty units.

Part 3 Radiation safety

U 25 Exemptions

(1) Nothing in this part applies to or in relation to—

(a) the possession or use of a radioactive material or irradiating apparatus by a person who is undergoing a diagnostic procedure or who is receiving therapeutic treatment, being a procedure or treatment involving the use of that material or apparatus; or

(b) the possession or use by the keeper of an animal of radioactive material in connection with veterinary treatment being administered to that animal; or

(c) the use of radioactive material or irradiating apparatus by a person who is a student at an educational establishment and who is using that material or apparatus under the direction and supervision of a person who is the holder of a licence authorising the use of that material or apparatus.

(2) Section 26 does not apply to or in relation to—

(a) the use of radioactive material or irradiating apparatus by a radiation safety officer appointed under section 34 (1); or

(b) the use of radioactive material or irradiating apparatus by a person acting under the direction and supervision of another person who is the holder of a licence authorising the use of that material or apparatus; or

(c) the possession of radioactive material by a person, other than the consignor of that material, who is engaged in the transportation of that material in accordance with the provisions of part 5.

26 Certain activities prohibited except in accordance with licence

(1) Subject to this Act, a person shall not sell, let on hire, manufacture, own, purchase, have in possession, use or cause or permit to be used radioactive material except in accordance with a licence granted under this part in relation to that material.

Maximum penalty: 100 penalty units, imprisonment for 1 year or both.

(2) A person shall not sell, let on hire, manufacture, own, purchase, have in possession, use or cause or permit to be used irradiating apparatus except in accordance with a licence granted under this part in relation to that apparatus or in relation to a class of apparatus that includes that apparatus.

Maximum penalty: 100 penalty units, imprisonment for 1 year or both.

27 Effect of licence

(1) Subject to this part, a licence granted in relation to radioactive material specified in the licence authorises the licensee to do such of the following acts as are specified in the licence:

(a) to sell, let on hire or purchase that radioactive material;

(b) to manufacture, own or have in possession, at the premises specified in the licence, that radioactive material;

(c) to use, or cause or permit to be used, at the premises specified in the licence, that radioactive material for the purpose, and in the manner (if any), specified in the licence.

(2) Subject to this part and part 4, a licence granted in relation to an irradiating apparatus, or to a class of irradiating apparatus, specified in the licence authorises the licensee—

(a) to sell, let on hire or purchase that irradiating apparatus or an irradiating apparatus included in that class; or

(b) to manufacture, own or have in possession, at the premises specified in the licence, that irradiating apparatus or an irradiating apparatus included in that class; or

(c) to use, or cause or permit to be used, at the premises specified in the licence, that irradiating apparatus or an irradiating apparatus included in that class for the purpose, and in the manner (if any), specified in the licence.

28 Application for licence

An application for a licence is not duly made unless—

(a) the application is in writing; and

(b) the application is signed by the applicant; and

(c) the application is lodged with the chairperson.

29 Grant of licence

(1) If an application for a licence has been duly made, the chairperson shall refer the application to the council and, if the council is satisfied that—

(a) the applicant is a fit and proper person to hold the licence; and

(b) the applicant has made, or proposes to make, arrangements that are reasonably adequate to prevent the creation of a radiation hazard and to prevent an unauthorised person gaining access to the material or apparatus in respect of which the licence is sought; and

(c) if the applicant intends to use the material or apparatus in respect of which the licence is sought—the applicant holds a prescribed qualification;

the council shall grant the licence sought by the applicant.

(2) If the council grants a licence under this part, the chairperson shall, if required to do so by the council, notify the fire commissioner of the name and address of the licensee, the address of the licensed premises and particulars of the radioactive material or irradiating apparatus in respect of which the licence is granted.

(3) In this section:

prescribed qualification means a qualification declared by the Minister, in writing, to be a prescribed qualification for this section.

(4) A declaration is a notifiable instrument.

Note A notifiable instrument must be notified under the *Legislation Act 2001*.

30 Conditions of licence

(1) A licence is subject to the conditions (if any) specified in the licence.

(2) The conditions that may be specified in a licence are the conditions that are reasonable and necessary for the protection of persons handling or using the material or apparatus to which the licence relates or of persons employed to work at the licensed premises or of any other persons.

(3) The council may at any time vary the conditions specified in a licence in the manner as the council considers reasonable and necessary for the protection of persons handling or using the material or apparatus to which the licence relates or of persons employed to work at the licensed premises or of any other persons.

31 Duration of licence

(1) Subject to this Act, a licence granted under section 29 shall remain in force for the period, not exceeding 5 years, that is specified in the licence and may be renewed in accordance with this section.

(2) On application by the licensee before the licence expires, the licence must be renewed for the period of not longer than 5 years decided by the council.

Note A fee may be determined under s 77 (Determination of fees) for this section.

32 Cancellation of licence

(1) Subject to this section, the council may cancel a licence if—

(a) the licensee has contravened a condition of the licence; or

(b) it is necessary, in the interest of the safety of members of the public, that the licence be cancelled.

(2) The council shall not cancel a licence under subsection (1) unless it has given to the licensee a written notice that—

(a) specifies the ground on which the council intends to cancel the licence; and

(b) states the facts and circumstances that, in the opinion of the council, constitute that ground; and

(c) informs the licensee that he or she may, within a period of 28 days from the date of the notice, by writing given to the council, place before the council any matters in answer to the matters stated in the notice.

(3) For the purpose of deciding whether to exercise its power under subsection (1), the council shall have regard to any matter placed before it in accordance with a notice given under subsection (2).

(4) If the council cancels a licence under this section, the cancellation takes effect on the date when notice is given to the licensee under section 73.

U 33 Records to be kept

(1) A licensee shall keep in a register on the licensed premises a record specifying all radioactive materials and irradiating apparatus that come into his or her possession and describing the use to which those radioactive materials or that apparatus are put and any change in that use.

Maximum penalty: 20 penalty units.

(2) A licensee who employs radiation workers, or the person in charge of licensed premises where radiation workers are employed, shall keep on the licensed premises a record in a form approved by the council showing—

(a) the full name, address, age and sex of each radiation worker; and

(b) the date of commencement of the employment of each radiation worker; and

(c) the date from which, and the periods during which, each radiation worker has been, or may have been, exposed to ionising radiation; and

(d) the details of all calculations of the dose of ionising radiation received by each radiation worker; and

(e) all facts known to the licensee or person relating to any accidental dose of ionising radiation that may have been received by a radiation worker.

Maximum penalty: 10 penalty units.

34 Duties of licensees in relation to radioactive material etc

(1) A licensee who has in his or her possession any radioactive material or irradiating apparatus—

(a) may appoint a person to be the radiation safety officer in respect of the licensed premises and all radioactive materials and irradiating apparatus in his or her possession; and

(b) shall give to the chairperson—

(i) within 24 hours after first coming into possession of a radioactive material or an irradiating apparatus; and

(ii) as soon as is reasonably practicable after the appointment of a radiation safety officer;

written notice of the residential address and telephone number (if any) of the licensee and the residential address and telephone number (if any) of the person appointed as radiation safety officer; and

(c) shall forward a copy of every report and recommendation of the radiation safety officer to the chairperson within 24 hours of the receipt by the licensee of the report or recommendation.

(2) A person who contravenes subsection (1) (b) or (c) commits an offence.

Maximum penalty: 5 penalty units.

(3) If a radiation safety officer is not appointed, or during the absence from licensed premises of the radiation safety officer, this Act, other than section 39 (1) (f) and (g), applies as if the licensee were the radiation safety officer.

35 Other duties of licensees

(1) A licensee shall—

(a) take reasonable steps to ensure that every person under his or her supervision or control complies with the requirements of this Act; and

(b) by means of doors, bars, locks or warning or cautionary notices, signs or lights, prohibit the access of unauthorised persons to all parts of the licensed premises in which they may be subjected to ionising radiation; and

(c) immediately on becoming aware that radioactive material in his or her possession or under his or her control has been damaged, lost or involved in an accident or fire, immediately notify the chairperson or an inspector of the fact by telegram, telephone or personal communication and confirm that notification in writing as soon as is reasonably practicable; and

(d) carry out all instructions that the chairperson or an inspector gives consequent on a notification under paragraph (c); and

(e) take reasonable steps to ensure that the concentrations of radioactive material in air and potable water in the licensed premises, when averaged over a period of 7 days, do not exceed the relevant maximum permissible concentrations.

(2) A person who contravenes this section commits an offence.

Maximum penalty: 20 penalty units.

36 Measurement of ionising radiation on premises

(1) A licensee who employs radiation workers shall—

(a) carry out, or cause to be carried out, at the times and in the manner required by the council, measurements of ionising radiation in and around the licensed premises and in air and water discharged from the licensed premises; and

(b) provide and maintain for each radiation worker the instruments, apparatus, devices or accessories that the council requires for the purpose of measuring the amount of ionising radiation to which a radiation worker is or has been exposed; and

(c) instruct those workers, or cause those workers to be instructed, in the method of using those instruments, apparatus, devices or accessories.

(2) A person who contravenes this section commits an offence.

Maximum penalty: 20 penalty units.

U 37 Maximum doses of radiation

(1) A licensee or the person in charge of any part of licensed premises where radioactive material or irradiating apparatus is used shall take reasonable steps to ensure that a person on the licensed premises or that part of those premises—

(a) does not receive a radiation dose in excess of the relevant dose equivalent limit; and

(b) is not exposed to a concentration of radioactive material in air or potable water in excess of the relevant maximum permissible concentration.

(2) A person who contravenes this section commits an offence.

Maximum penalty: 50 penalty units, imprisonment for 6 months or both.

U 38 Excessive doses to be reported

A licensee who employs radiation workers or a person in charge of any part of licensed premises where radioactive material or irradiating apparatus is used—

(a) who has reasonable grounds for suspecting that a person has received (other than as a patient undergoing a diagnostic procedure or receiving therapeutic treatment) a dose equivalent in excess of 2 000μSv in a period of 1 month or that some unusual occurrence has taken place in or about a source of ionising radiation; or

(b) who becomes aware that a personal monitoring device has recorded in respect of a person a dose equivalent exceeding 2 000μSv in a period of 1 month;

shall report the fact to the chairperson forthwith.

Maximum penalty: 10 penalty units.

U 39 Duties of radiation safety officer

(1) A radiation safety officer shall—

(a) as soon as practicable after having been appointed to be the radiation safety officer by a licensee, investigate and record all radioactive sources on the licensed premises; and

(b) record each radioactive source that comes onto or leaves the licensed premises; and

(c) assess and record any matters in relation to the licensed premises that in his or her opinion may result in an accident or an emergency involving ionising radiation; and

(d) prepare and record appropriate procedures for dealing with an accident or an emergency on the licensed premises involving ionising radiation and take all reasonable steps to ensure that any apparatus, instruments, devices or accessories required for the purpose of carrying out those procedures are readily available for that purpose; and

(e) from time to time assess and record the reasonable likelihood of any person being exposed to ionising radiation in excess of the relevant dose equivalent limit from any radioactive material or irradiating apparatus on the licensed premises or from the use of that material or apparatus; and

(f) prepare, within 28 days of appointment, and thereafter at intervals not exceeding 12 months, a report—

(i) recommending the safe working procedures that should be adopted for work on the licensed premises in connection with radioactive material or irradiating apparatus; and

(ii) recommending, if necessary, the installation or use of facilities for the purpose of minimising the absorbed dose that each person may receive; and

(g) provide a copy of each report made under paragraph (f) to the employer of each person working in the place to which the report relates who may be subjected to ionising radiation and, where the employer and the licensee are different persons, to the licensee; and

(h) take reasonable steps to ensure that all persons likely to be subjected to ionising radiation on the licensed premises are adequately instructed in the use of all safeguards and safety procedures and are supplied with the apparatus, clothing, instruments, shields, devices or accessories that are necessary for the protection of those persons from ionising radiation; and

(i) take reasonable steps to ensure that persons on the licensed premises not engaged in work involving the use or handling of irradiating apparatus or radioactive material are not subject to ionising radiation (other than that naturally occurring) exceeding 100μSv per week; and

(j) take reasonable steps to ensure that no radioactive material is removed from the licensed premises in contravention of this Act; and

(k) if he or she becomes aware of the existence on the licensed premises of any ionising radiation from a source not under his or her control—report the matter in writing immediately to the licensee and to the chairperson; and

(l) take reasonable steps to ensure that all persons employed on the licensed premises carry out all the procedures and do all the acts that will ensure the safe performance of their work; and

(m) take reasonable steps to ensure that each radioactive source on the licensed premises is held in a safe and secure place when not in use; and

(n) at least once in each calendar month, check all radioactive sources on the licensed premises against the records kept under paragraphs (a) and (b) and, if there is a discrepancy, report the matter immediately to the licensee and to the chairperson; and

(o) take reasonable steps to ensure that all apparatus, instruments, devices, clothing, shields and accessories used for the protection of persons from ionising radiation or for the detection and measurement of ionising radiation, absorbed doses and dose equivalents and of radioactive contamination are maintained in good working condition and are properly used; and

(p) if he or she becomes aware that any person has been, or may have been exposed to ionising radiation in excess of the relevant dose equivalent limit—report the matter immediately to the licensee and to the chairperson.

(2) If a radiation safety officer is required to make a record of any matter under subsection (1), that officer shall keep that record on the licensed premises.

(3) A radiation safety officer who contravenes subsection (1) or (2) commits an offence.

Maximum penalty:

(a) for subsection (1)—20 penalty units; or

(b) for subsection (2)—5 penalty units.

40 Radiation workers to observe safety procedures

A radiation worker shall use in a proper manner all apparatus, instruments, devices, clothing, shields and accessories supplied for his or her protection and shall observe all procedures laid down by the radiation safety officer appointed for the premises where the worker is employed to work.

Maximum penalty: 10 penalty units.

41 Use of measuring instruments etc

A radiation worker using or handling radioactive material or an irradiating apparatus shall, while doing so or while in the vicinity of radioactive material or an irradiating apparatus, carry attached to his or her person or clothing the instrument, apparatus, device or accessory provided in accordance with section 36 (1) (b).

Maximum penalty: 10 penalty units.

U 42 Medical examinations

(1) The council may, if it has reasonable cause to believe that a licensee, a radiation safety officer or a radiation worker has been, or may have been, exposed to ionising radiation in excess of the relevant dose equivalent limit, require that licensee, radiation safety officer or radiation worker to submit to the medical examination that the council specifies.

(2) A person required to submit to a medical examination under subsection (1) shall not, without reasonable excuse, refuse or fail to comply with the requirement.

Maximum penalty: 10 penalty units.

(3) If a person submits to a medical examination in accordance with a requirement of the council under subsection (1), the person shall pay any fees or costs payable in respect of the medical examination.

U 43 Persons receiving dose exceeding dose equivalent limit not to perform certain work

(1) If a radiation worker has been exposed to radiation in excess of the relevant dose equivalent limit, the council may direct the licensee or other person who employs the worker not to require the worker, during the period that the council specifies, to perform any work in which the worker will or may be exposed to ionising radiation.

(2) A person shall not, without reasonable excuse, refuse or fail to comply with a direction given under subsection (1).

Maximum penalty: 50 penalty units, imprisonment for 6 months or both.

44 Direction by council

(1) If there are reasonable grounds for believing that there will be a serious risk to the health of a radiation worker who continues to be exposed to ionising radiation, the council may direct the licensee or other person who employs the worker not to require the worker to perform further work that may expose him or her to ionising radiation.

(2) A person shall not, without reasonable excuse, refuse or fail to comply with a direction given under subsection (1).

Maximum penalty: 50 penalty units, imprisonment for 6 months or both.

45 Radiation workers to provide information on previous employment

A person who is employed as a radiation worker shall, immediately before commencing to work as a radiation worker, forward to his or her employer a written statement setting out particulars of any other employment undertaken as a radiation worker.

Maximum penalty: 5 penalty units.

U 46 Matters to be considered in calculating dose

(1) In calculating for this Act the dose of ionising radiation received by a person—

(a) doses received by a person from any radioactive source or irradiating apparatus shall be counted; and

(b) doses received by a person in undergoing a diagnostic procedure or in receiving therapeutic treatment or doses received as the result of exposure to naturally occurring radiation shall not be counted.

(2) If the dose to a person accumulated by that person during any part of a calendar year is not known, it shall be assumed, for subsection (1), that the person has received during the whole of that calendar year a dose equal to 365 times the average daily dose calculated from the part of the calendar year for which the person's dose is known.

Part 4 Registration of irradiating apparatus

47 Irradiating apparatus to be registered

A person, other than an employee acting in the course of employment, shall not use, or cause or permit to be used, an irradiating apparatus unless the apparatus is registered under this part.

Maximum penalty: 100 penalty units, imprisonment for 1 year or both.

48 Registration of apparatus

(1) Subject to this Act, a person who acquires possession of any irradiating apparatus for a purpose other than the sale or letting on hire of the apparatus shall, within 7 days after so acquiring possession, make written application to the council for the registration of that irradiating apparatus.

Maximum penalty: 50 penalty units, imprisonment for 6 months or both.

(2) An application under subsection (1) shall be lodged with the chairperson.

(3) On receipt of an application under subsection (1), the chairperson shall refer the application to the council.

(4) For subsection (1), a person who, at the commencement of this section, is in possession of irradiating apparatus shall be taken to have acquired possession of the apparatus at that commencement.

(5) If the council is satisfied that—

(a) the irradiating apparatus in respect of which an application has been made under subsection (1) is in such a condition that it may be operated with safety; and

(b) the apparatus is suitable for the use proposed; and

(c) the location and installation of the apparatus are appropriate; and

(d) the apparatus is adequately protected and, if shielding of the apparatus or of the room or place in which it is installed is necessary, the apparatus, room or place is adequately shielded.

the council shall register the irradiating apparatus.

49 Certificate to be issued and displayed

(1) The council shall issue a certificate of registration in respect of each item of irradiating apparatus that is registered.

(2) A person to whom a certificate of registration is issued shall display the certificate in a prominent position on or near the irradiating apparatus to which it relates.

Maximum penalty (subsection (2)): 5 penalty units.

50 Duration of registration

(1) Subject to this Act, the registration of an item of irradiating apparatus shall remain in force for the period, not exceeding 5 years, that is specified in the certificate and may be renewed in accordance with this section.

(2) On application by the person issued with the certificate before the registration expires, the registration must be renewed for the period of not longer than 5 years decided by the council.

Note A fee may be determined under s 77 (Determination of fees) for this section.

51 Apparatus not to be altered or modified

(1) A person shall not, without the approval of the council—

(a) alter or modify, in a material particular, any registered irradiating apparatus; or

(b) alter, in a material particular, the location, installation or shielding of any registered irradiating apparatus.

Maximum penalty: 100 penalty units.

(2) The council shall not approve an alteration to, or modification of, any registered irradiating apparatus unless the council is satisfied that the apparatus, if it had been so altered or modified when the application for the registration of the apparatus was made, could have been registered in accordance with section 48.

(3) The council shall not approve an alteration to the location, installation or shielding of any registered irradiating apparatus unless the council is satisfied that the apparatus, if it had been so located, installed or shielded when the application for the registration of the apparatus was made, could have been registered in accordance with section 48.

52 Cancellation of registration

(1) If the council is satisfied that—

(a) any registered irradiating apparatus has been altered or modified, or the location, installation or shielding of any registered irradiating apparatus has been altered, contrary to section 51 (1); or

(b) any registered irradiating apparatus is in a dangerous condition or requires repair or modification;

the council may cancel the registration of the apparatus and require the person in possession of the apparatus to deliver to the chairperson the certificate of registration.

(2) A person shall not, without reasonable excuse, refuse or fail to comply with a requirement of the council under subsection (1).

Maximum penalty: 5 penalty units.

(3) The council shall not cancel the registration of an irradiating apparatus under subsection (1) unless it has given the person to whom the certificate of registration was issued a written notice that—

(a) specifies the ground on which the council intends to cancel the registration; and

(b) states the facts and circumstances that, in the opinion of the council, constitute that ground; and

(c) informs the person that he or she may, within a period of 28 days from the date of the notice, by writing given to the council, place before the council any matters in answer to the matters stated in the notice.

(4) For the purpose of deciding whether to exercise its power under subsection (1), the council shall have regard to any matter placed before it in accordance with a notice given under subsection (3).

(5) If the council cancels a registration under this section, the cancellation takes effect on the date when notice is given under section 73 to the person to whom the certificate of registration was issued.

U Part 5 Transportation of radioactive materials

U 53 Definitions for pt 5

In this part:

exempt material means radioactive material in respect of which there is in force a declaration made by the council under section 54.

special form radioactive material means radioactive material that is—

(a) in an indispersable solid form that has at least 1 dimension measuring not less than 5mL; or

(b) contained within a sealed capsule that has at least 1 dimension measuring not less than 5mL and that cannot be opened except by destroying the capsule.

U 54 Exempt material

(1) The council may, on application made by a person in possession of radioactive material, if it is satisfied that—

(a) the material does not give rise to a radiation hazard during normal transportation; or

(b) that the material does not give rise to a radiation hazard during transportation in accordance with conditions specified by the council;

declare the material to be exempt material for this part.

(2) A declaration under subsection (1) may be made subject to the conditions as to the transportation of the material specified in the declaration that the council thinks fit.

(3) If a declaration under subsection (1) is made subject to conditions as to the transportation of the material specified in the declaration, a person shall not transport that material except in accordance with those conditions.

(4) A person who contravenes subsection (3) commits an offence.

Maximum penalty: 50 penalty units, imprisonment for 6 months or both.

(5) A declaration under subsection (1) shall be in writing signed by the chairperson.

(6) If the council is satisfied that any radioactive material in respect of which a declaration is in force under subsection (1)—

(a) gives rise to a radiation hazard during normal transportation; or

(b) gives rise to a radiation hazard during transportation in accordance with conditions specified in the declaration;

the council may revoke the declaration.

U 55 Transportation of radioactive material

(1) A person shall not transport a radioactive material, other than exempt material, unless—

(a) the material is enclosed within a category 1, a category 2 or a category 3 package, the smallest overall external dimension of which measures not less than 10cm; and

(b) if the material is in liquid form—the material is enclosed within a separate inner container that is enclosed within a package referred to in paragraph (a) and surrounded with sufficient absorbent material to ensure that, if the container is broken in the course of transportation—

(i) the radioactive material will be completely absorbed by the absorbent material; and

(ii) the level of radioactivity at any point on the external surface of the package is not more than 2mSv per hour; and

(c) the material is transported in accordance with the requirements of this part.

(2) A person who contravenes this section commits an offence.

Maximum penalty: 50 penalty units, imprisonment for 6 months or both.

U 56 Limits on contents of packages

(1) Except with the written approval of the chairperson, a person shall not pack in a category 1, a category 2 or a category 3 package a radioactive material if—

(a) for a special form radioactive material consisting of or containing a radionuclide the symbol of which is specified in schedule 4, column 1—the radioactivity of the substance is more than the level specified in that schedule, column 2 opposite the symbol so specified; and

(b) for a radioactive material consisting of or containing a radionuclide the symbol of which is specified in schedule 4, column 1 that is not a special form radioactive material—the radioactivity of the material is more than the level specified in that schedule, column 3 opposite the symbol so specified.

(2) A person who contravenes this section commits an offence.

Maximum penalty: 50 penalty units, imprisonment for 6 months or both.

U 57 Packages to be separated from members of public etc

(1) A person who has in possession or under his or her control a category 2 or a category 3 package, or a group of such packages, having a transport index, or a total of transport indexes, within a range of transport indexes specified in schedule 5, column 1 shall

ensure that, in the course of transportation or when stored in a place for the purposes of transportation, the package or group of packages is kept in a place that is separated from—

(a) living accommodation; and

(b) regularly occupied working places; and

(c) places to which passengers or members of the public have access;

by a distance not less than the distance specified in that schedule, column 2 opposite that range of transport indexes.

(2) A person who contravenes this section commits an offence.

Maximum penalty: 50 penalty units, imprisonment for 6 months or both.

U 58 Groups of packages

A person who has in possession or under his or her control a group or groups of category 2 or category 3 packages shall ensure that, in the course of transportation or when stored for the purposes of transportation—

(a) the total of the transport indexes of the packages in that group or in each of those groups is not more than 50; and

(b) each group of such packages is kept separated from each other group of such packages by a distance of at least 6m.

(2) A person who contravenes this section commits an offence.

Maximum penalty: 50 penalty units, imprisonment for 6 months or both.

U 59 Labelling of packages

(1) A person shall not consign for transportation a category 1 package unless there is affixed to each of 2 external surfaces of the package a label that shall—

(a) conform with schedule 6, figure 1; and

(b) comply with the colour and other requirements indicated in that schedule for that figure; and

(c) contain details of the principal radioactive content of the package and the activity of that content.

(2) A person shall not consign for transportation a category 2 package unless there is affixed to each of 2 external surfaces of the package a label that shall—

(a) conform with schedule 6, figure 2; and

(b) comply with the colour and other requirements indicated in that schedule for that figure; and

(c) contain details of the transport index of the package, the principal radioactive content of the package and the activity of that content.

(3) A person shall not consign for transportation a category 3 package unless there is affixed to each of 2 external surfaces of the package a label that shall—

(a) conform with schedule 6, figure 3;

(b) comply with the colour and other requirements indicated in that schedule for that figure; and

(c) contain details of the transport index of the package, the principal radioactive content of the package and the activity of that content.

(4) A person who contravenes this section commits an offence.

Maximum penalty: 10 penalty units.

U 60 Information to be affixed to packages

(1) A person shall not consign for transportation a category 1, a category 2 or a category 3 package, unless there is affixed to an external surface of the package a document containing the words '**radioactive material**' together with particulars of—

(a) the name and address of the consignor of the package; and

(b) the name and address of the consignee of the package; and

(c) the name and physical and chemical form of the radioactive material contained in the package; and

(d) the activity of the radioactive material contained in the package; and

(e) the category of the package; and

(f) for a category 2 or category 3 package—the transport index of the package.

(2) A person who contravenes this section commits an offence.

Maximum penalty: 10 penalty units.

U 61 Packages not to be altered

(1) A person shall not, without reasonable excuse, alter or modify, in any material particular, a category 1, a category 2 or a category 3 package, or any label or document affixed to such a package, in the course of transportation.

(2) A person who contravenes this section commits an offence.

Maximum penalty: 50 penalty units, imprisonment for 6 months or both.

U 62 Packages to be secured during transportation

A person who transports a category 1, a category 2 or a category 3 package shall ensure that the package is so secured that its position in or on any vehicle or vessel in which it is being transported remains fixed in the course of transportation.

Maximum penalty: 10 penalty units.

U 63 Leaking packages not to be used

(1) A person shall not use a package as a container for radioactive material if there are reasonable grounds for suspecting that a leakage of radioactive material from the package has occurred unless the package has been repaired and decontaminated.

(2) A person who has reasonable grounds for suspecting that there has been a leakage of radioactive material from a category 1, a category 2 or a category 3 package in his or her possession or under his or her control shall—

(a) take all reasonable steps to prevent other persons from having access to the package and from ingesting or inhaling any material contained in the package; and

(b) notify the chairperson or an inspector of the suspected leakage; and

(c) carry out all instructions that the chairperson or an inspector gives consequent on a notification under paragraph (b).

(3) A person who contravenes subsection (1) commits an offence.

Maximum penalty: 50 penalty units, imprisonment for 6 months or both.

(4) A person who contravenes subsection (2) (a) commits an offence.

Maximum penalty: 50 penalty units.

(5) A person who contravenes subsection (2) (b) or (c) commits an offence.

Maximum penalty: 10 penalty units.

U 64 Vehicles to carry warning signs

(1) If a person uses a road vehicle for the purpose of transporting a category 1, a category 2 or a category 3 package, the person shall, when the vehicle is being so used, cause to be affixed to the external surface of each of the 2 lateral sides and to the external surface of the rear of the vehicle a warning sign—

(a) conforming with schedule 6, figure 4; and

(b) complying with the requirements in that schedule for that figure.

(2) A person who contravenes this section commits an offence.

Maximum penalty: 50 penalty units.

U 65 Passengers not to ride in certain vehicles

(1) A person who transports a category 1, a category 2 or a category 3 package in or on a road vehicle shall not permit a person, other than the driver of the vehicle or a person assisting the driver, to ride in or on the vehicle at any time when the package is in or on the vehicle.

(2) If there is in or on any road vehicle a category 1, a category 2 or a category 3 package, a person, other than the driver of the vehicle or a person assisting the driver, shall not ride in or on the vehicle.

(3) A person who contravenes subsection (1) commits an offence.

Maximum penalty: 5 penalty units.

(4) A person who contravenes subsection (2) commits an offence.

Maximum penalty: 2 penalty units.

Part 6 Storage and disposal of radioactive materials

66 Storage of radioactive materials

(1) A person (other than a licensee) shall not use a place, other than licensed premises or a place approved by the council, to store radioactive material.

Maximum penalty: 50 penalty units.

(2) The council shall not approve a place for the purpose of subsection (1) unless the council is satisfied that the facilities provided and the precautions taken at the place are adequate to prevent—

(a) giving rise to a radiation hazard; and

(b) access by unauthorised persons to radioactive material stored in the place.

(3) The chairperson shall, if required to do so by the council, notify the fire commissioner of the address of any place approved by the council under this section.

U 67 Radiation warning sign to be displayed

(1) A person who stores radioactive material in any place shall cause to be displayed on or close to that place a radiation warning sign—

(a) conforming with schedule 6, figure 4; and

(b) complying with the requirements specified in that schedule for that figure.

(2) A person who contravenes this section commits an offence.

Maximum penalty: 50 penalty units.

68 Disposal of radioactive material

(1) A person shall not—

(a) abandon radioactive material; or

(b) dispose of radioactive material, otherwise than by way of sale authorised by a licence granted under part 3, except in accordance with a permit granted by the council under this section.

Maximum penalty: 100 penalty units.

(2) An application to the council for the grant of a permit to dispose of radioactive material shall—

(a) be in writing, signed by the applicant; and

(b) contain particulars of—

(i) the name, physical and chemical form and quantity of the radioactive material; and

(ii) the proposed method of disposal; and

(iii) the proposed place of disposal; and

(c) be lodged with the chairperson.

(3) If, on an application in accordance with subsection (2), the council is satisfied—

(a) that the disposal of the radioactive material to which the application relates by the proposed method and at the proposed place is not likely to endanger the safety of the public; and

(b) the proposed method of disposal of that material is reasonable, having regard to any alternative methods of disposal reasonably available for the disposal of radioactive material of that kind and the cost of such alternative methods of disposal;

the council shall grant a permit authorising the applicant to dispose of the quantity of the radioactive material specified in the permit by the method and at the place specified in the permit.

Part 7 Miscellaneous

69 Fluoroscope not to be used in fitting footwear

Notwithstanding anything in this Act, a person shall not install or use a fluoroscope for the purpose of assisting in the fitting, or in the checking of the fitting, of footwear.

Maximum penalty: 10 penalty units.

U 71 Evidentiary certificates

If, in a prosecution for an offence against this Act, it is necessary to prove—

(a) the quantity of an absorbed dose; or

(b) the name or physical or chemical form of a radioactive material; or

(c) the activity of a radioactive material; or

(d) the quantity of a dose equivalent;

a certificate purporting to be signed by the chairperson stating any such measurement or other fact is evidence of the matters so certified and of the facts on which they are based.

72 Appeals

Application may be made to the administrative appeals tribunal for review of a decision of the council—

(a) under section 6 (2) to make, or to refuse to make, a declaration that material or apparatus does not give rise to a radiation hazard; or

(b) under section 6 (5) to revoke a declaration that material or apparatus does not give rise to a radiation hazard; or

(c) under section 29 (1) to grant, or to refuse to grant, a licence; or

(d) under section 29 (1) to grant a licence subject to conditions; or

(e) under section 29 (1) to grant a licence for a period of less than 5 years; or

(f) under section 30 (3) to vary a condition specified in a licence; or

(g) under section 31 (2) to renew a licence for a period of less than 5 years; or

(h) under section 32 (1) to cancel a licence; or

(i) under section 48 (5) to register, or to refuse to register, any irradiating apparatus; or

(j) under section 48 (5) to register any irradiating apparatus for a period of less than 5 years; or

(k) under section 50 (2) to renew the registration for a period of less than 5 years; or

(l) under section 51 (1) (a) to approve, or to refuse to approve, an alteration or modification of a registered irradiating apparatus; or

(m) under section 51 (1) (b) to approve, or to refuse to approve, an alteration in the location, installation or shielding of any registered irradiating apparatus; or

(n) under section 52 (1) to cancel the registration of an irradiating apparatus; or

(o) under section 54 (1) to make, or to refuse to make, a declaration that material is exempt material; or

(p) under section 54 (6) to revoke a declaration that material is exempt material; or

(q) under section 66 (1) to approve, or to refuse to approve, a place (other than licensed premises) for the purpose of storing radioactive material; or

(r) under section 68 (3) to grant, or to refuse to grant, a permit to dispose of radioactive material.

73 Notification of decisions

(1) If the council makes a decision—

(a) under section 6 (2) to make a declaration that material or apparatus does not give rise to a radiation hazard; or

(b) under section 29 (1) to grant a licence; or

(c) under section 29 (1) to grant a licence subject to conditions; or

(d) under section 30 (3) to vary a condition specified in a licence; or

(e) under section 48 (5) to register any irradiating apparatus; or

(f) under section 51 (1) (a) to approve an alteration or modification of any registered irradiating apparatus; or

(g) under section 51 (1) (b) to approve an alteration in the location, installation or shielding of any registered irradiating apparatus; or

(h) under section 54 (1) to make a declaration that material is exempt material; or

(i) under section 66 (1) to approve a place (other than licensed premises) for the purpose of storing radioactive material; or

(j) under section 68 (3) to grant a permit to dispose of radioactive material;

the council must prepare a notice containing particulars of the decision.

(2) If the council makes a decision—

(a) under section 6 (2) to refuse to make a declaration that material or apparatus does not give rise to a radiation hazard; or

(b) under section 6 (5) to revoke a declaration that material or apparatus does not give rise to a radiation hazard; or

(c) under section 29 (1) to refuse to grant a licence; or

(d) under section 29 (1) to grant a licence subject to conditions; or

(e) under section 29 (1) to grant a licence for a period of less than 5 years; or

(f) under section 30 (3) to vary a condition specified in a licence; or

(g) under section 31 (2) to renew a licence for a period of less than 5 years; or

(h) under section 32 (1) to cancel a licence; or

(i) under section 48 (5) to refuse to register any irradiating apparatus; or

(j) under section 48 (5) to register any irradiating apparatus for a period of less than 5 years; or

(k) under section 50 (2) to renew the registration for a period of less than 5 years; or

(l) under section 51 (1) (a) to refuse to approve an alteration or modification of any registered irradiating apparatus; or

(m) under section 51 (1) (b) to refuse to approve an alteration in the location, installation or shielding of any registered irradiating apparatus; or

(n) under section 52 (1) to cancel the registration of any irradiating apparatus; or

(o) under section 54 (1) to refuse to make a declaration that material is exempt material; or

(p) under section 54 (6) to revoke a declaration that material is exempt material; or

(q) under section 66 (1) to refuse to approve a place (other than licensed premises) for the purpose of storing radioactive material; or

(r) under section 68 (3) to refuse to grant a permit to dispose of radioactive material;

the council shall cause notice of the decision to be given to a person whose interests are affected by the decision.

(3) A notice under subsection (1) or (2) shall be in accordance with the requirements of the code of practice in force under of the *Administrative Appeals Tribunal Act 1989*, section 25B (1).

(4) A notice under subsection (1) is a notifiable instrument.

Note A notifiable instrument must be notified under the *Legislation Act 2001*.

75 Transitional

(1) If, at the commencement of this section, a person had in possession radioactive material or irradiating apparatus, that person does not commit an offence against section 26 by reason of the possession of the material or apparatus if—

(a) the period of 14 days after that commencement has not expired; or

(b) the person has made application for a licence authorising possession of the material or apparatus and he or she has not been given notice that the council has refused to grant the licence.

(2) If, at the commencement of this section, a person had in possession irradiating apparatus, that person does not commit an offence against section 26 or 47 in respect of the use of that apparatus if—

(a) the period of 14 days after that commencement has not expired; or

(b) the person has made application for a licence authorising the use of the apparatus and has made application for registration of the apparatus and has not been given notice that the council has refused to grant the licence or register the apparatus.

(3) A person who, at the commencement of this section, was using a place for the storage of radioactive material does not commit an offence against section 66 in respect of the use of that place for the storage of radioactive material if—

(a) the period of 14 days after that commencement has not expired; or

(b) the person has made application for approval of the place under section 66 and has not been given notice that the council has refused to grant the approval.

76 Service of documents

A notice or instrument that is required by this Act to be given to a person may be given—

(a) by delivering it personally or by leaving it with a person apparently over the age of 16 years at the last-known place of residence or business of the person to whom the notice or instrument is required to be given; or

(b) by sending it by post addressed to him or her at his or her last-known place of residence or business.

77 Determination of fees

(1) The Minister may, in writing, determine fees for this Act.

Note The *Legislation Act 2001* contains provisions about the making of determinations and regulations relating to fees (see pt 6.3).

(2) A determination is a disallowable instrument.

Note A disallowable instrument must be notified, and presented to the Legislative Assembly, under the *Legislation Act 2001*.

78 Regulation-making power

The Executive may make regulations for this Act.

Note Regulations must be notified, and presented to the Legislative Assembly, under the *Legislation Act 2001*.

Schedule 1 Maximum permissible concentration for radioactive material in air and water

(see s 5)

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
H-3 (sol.)	2 x 105	4 x 107
H-3 (sub.)	7 x 107	..
Be-7 (sol.)	2 x 105	2 x 107
Be-7 (insol.)	4 x 104	2 x 107
C-14 (sol.)	1 x 105	1 x 107
C-14 (sub.)	2 x 106	
F-18 (sol.)	2 x 105	1 x 107
F-18 (insol.)	1 x 105	6 x 106
Na-22 (sol.)	7 x 103	5 x 105
Na-22 (insol.)	3 x 102	4 x 105
Na-24 (sol.)	4 x 104	2 x 106
Na-24 (insol.)	4 x 103	4 x 105
Si-31 (sol.)	2 x 105	1 x 107
Si-31 (insol.)	4 x 104	2 x 106
P-32 (sol.)	3 x 103	2 x 105
P-32 (insol.)	3 x 103	2 x 105
S-35 (sol.)	1 x 104	7 x 105
S-35 (insol.)	1 x 104	4 x 106
Cl-36 (sol.)	1 x 104	1 x 106
Cl-36 (insol.)	7 x 102	7 x 105
Cl-38 (sol.)	1 x 105	5 x 106

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Cl-38 (insol.)	7 x 104	5 x 106
A-37 (sub.)	2 x 108	..
A-41 (sub.)	7 x 104	
K-42 (sol.)	7 x 104	4 x 106
K-42 (insol.)	4 x 103	2 x 105
Ca-45 (sol.)	1 x 103	1 x 105
Ca-45 (insol.)	4 x 103	2 x 106
Ca-47 (sol.)	7 x 103	6 x 105
Ca-47 (insol.)	7 x 103	4 x 105
Sc-46 (sol.)	7 x 103	5 x 105
Sc-46 (insol.)	7 x 102	5 x 105
Sc-47 (sol.)	2 x 104	1 x 106
Sc-47 (insol.)	2 x 104	1 x 106
Sc-48 (sol.)	7 x 103	4 x 105
Sc-48 (insol.)	4 x 103	4 x 105
5-48 (sol.)	7 x 103	4 x 105
5-48 (insol.)	2 x 103	4 x 105
Cr-51 (sol.)	4 x 105	2 x 107
Cr-51 (insol.)	7 x 104	2 x 107
Mn-52 (sol.)	7 x 103	4 x 105
Mn-52 (insol.)	4 x 103	4 x 105
Mn-54 (sol.)	1 x 104	1 x 106
Mn-54 (insol.)	1 x 103	1 x 106
Mn-56 (sol.)	3 x 104	1 x 106
Mn-56 (insol.)	2 x 104	1 x 106
Fe-55 (sol.)	3 x 104	1 x 107
Fe-55 (insol.)	4 x 104	2 x 107

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Fe-59 (sol.)	4 x 103	7 x 105
Fe-59 (insol.)	2 x 103	6 x 105
Co-57 (sol.)	1 x 105	6 x 106
Co-57 (insol.)	7 x 103	5 x 106
Co-58m (sol.)	7 x 105	4 x 107
Co-58m (insol.)	3 x 105	2 x 107
Co-58 (sol.)	3 x 104	1 x 106
Co-58 (insol.)	2 x 103	1 x 106
Co-60 (sol.)	1 x 104	6 x 105
Co-60 (insol.)	3 x 102	4 x 105
Ni-59 (sol).	2 x 104	2 x 106
Ni-59 (insol.)	3 x 104	2 x 107
Ni-63 (sol.)	2 x 103	4 x 105
Ni-63 (insol.)	1 x 104	9 x 106
Ni-65 (sol.)	3 x 104	1 x 106
Ni-65 (insol.)	2 x 104	1 x 106
Cu-64 (sol.)	7 x 104	4 x 106
Cu-64 (insol.)	4 x 104	2 x 106
Zn-65 (sol.)	4 x 103	1 x 106
Zn-65 (insol.)	2 x 103	2 x 106
Zn-69m (sol.)	1 x 104	9 x 105
Zn-69m (insol.)	1 x 104	7 x 105
Zn-69 (sol.)	3 x 105	2 x 107
Zn-69 (insol.)	3 x 105	2 x 107
Ga-72 (sol.)	7 x 103	5 x 105
Ga-72 (insol.)	7 x 103	5 x 105
Ge-71 (sol.)	4 x 105	2 x 107

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Ge-71 (insol.)	2 x 105	2 x 107
As-73 (sol.)	7 x 104	6 x 106
As-73 (insol.)	1 x 104	6 x 106
As-74 (sol.)	1 x 104	6 x 105
As-74 (insol.)	4 x 103	6 x 105
As-76 (sol.)	4 x 103	2 x 105
As-76 (insol.)	4 x 103	2 x 105
As-77 (sol.)	2 x 104	1 x 106
As-77 (insol.)	1 x 104	1 x 106
Se-75 (sol.)	4 x 104	4 x 106
Se-75 (insol.)	4 x 103	4 x 106
Br-82 (sol.)	4 x 104	4 x 106
Br-82 (insol.)	7 x 103	5 x 105
Kr-85m (sub.)	2 x 105	..
Kr-85 (sub.)	4 x 105	..
Kr-87 (sub.)	4 x 104	..
Rb-86 (sol.)	1 x 104	9 x 105
Rb-86 (insol.)	3 x 103	2 x 105
Rb-87 (sol.)	2 x 104	1 x 106
Rb-87 (insol.)	3 x 103	2 x 106
Sr-85m (sol.)	1 x 106	9 x 107
Sr-85m (insol.)	1 x 106	9 x 107
Sr-85 (sol.)	7 x 103	1 x 106
Sr-85 (insol.)	4 x 103	2 x 106
Sr-89 (sol.)	1 x 103	1 x 105
Sr-89 (insol.)	1 x 103	4 x 105
Sr-90 (sol.)	10	1 x 103

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Sr-90 (insol.)	2 x 102	5 x 105
Sr-91 (sol.)	1 x 104	9 x 105
Sr-91 (insol.)	1 x 104	6 x 105
Sr-92 (sol.)	1 x 104	9 x 105
Sr-92 (insol.)	1 x 104	7 x 105
Y-90 (sol.)	4 x 103	2 x 105
Y-90 (insol.)	4 x 103	2 x 105
Y-91m (sol.)	7 x 105	4 x 107
Y-91m (insol.)	7 x 105	4 x 107
Y-91 (sol.)	1 x 103	4 x 105
Y-91 (insol.)	1 x 103	4 x 105
Y-92 (sol.)	1 x 104	7 x 105
Y-92 (insol.)	1 x 104	7 x 105
Y-93 (sol.)	7 x 103	4 x 105
Y-93 (insol.)	4 x 103	4 x 105
Zr-93 (sol.)	4 x 103	1 x 107
Zr-93 (insol.)	1 x 104	1 x 107
Zr-95 (sol.)	4 x 103	7 x 105
Zr-95 (insol.)	1 x 103	7 x 105
Zr-97 (sol.)	4 x 103	2 x 105
Zr-97 (insol.)	3 x 103	2 x 105
Nb-93m (sol.)	4 x 103	5 x 106
Nb-93m (insol.)	7 x 103	5 x 106
Nb-95 (sol.)	2 x 104	1 x 106
Nb-95 (insol.)	4 x 103	1 x 106
Nb-97 (sol.)	2 x 105	1 x 107
Nb-97 (insol.)	2 x 105	1 x 107

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Mo-99 (sol.)	3 x 104	2 x 106
Mo-99 (insol.)	7 x 103	5 x 105
Tc-96m (sol.)	3 x 106	1 x 108
Tc-96m (insol.)	1 x 106	1 x 108
Tc-96 (sol.)	2 x 104	1 x 106
Tc-96 (insol.)	7 x 103	6 x 105
Tc-97m (sol.)	7 x 104	5 x 106
Tc-97m (insol.)	7 x 103	2 x 106
Tc-97 (sol.)	4 x 105	2 x 107
Tc-97 (insol.)	1 x 104	1 x 107
Tc-99m (sol.)	1 x 106	7 x 107
Tc-99m (insol.)	4 x 105	4 x 107
Tc-99 (sol.)	7 x 104	4 x 106
Tc-99 (insol.)	2 x 103	2 x 106
Ru-97 (sol.)	7 x 104	5 x 106
Ru-97 (insol.)	7 x 104	4 x 106
Ru-103 (sol.)	2 x 104	1 x 106
Ru-103 (insol.)	3 x 103	1 x 106
Ru-105 (sol.)	3 x 104	1 x 106
Ru-105 (insol.)	2 x 104	1 x 106
Ru-106 (sol.)	3 x 103	1 x 105
Ru-106 (insol.)	2 x 102	1 x 105
Rh-103m (sol.)	3 x 106	1 x 108
Rh-103m (insol.)	2 x 106	1 x 108
Rh-105 (sol.)	3 x 104	1 x 106
Rh-105 (insol.)	2 x 104	1 x 106
Pd-103 (sol.)	4 x 104	4 x 106

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Pd-103 (insol.)	3 x 104	4 x 106
Pd-109 (sol.)	2 x 104	1 x 106
Pd-109 (insol.)	1 x 104	9 x 105
Ag-105 (sol.)	2 x 104	1 x 106
Ag-105 (insol.)	3 x 103	1 x 106
Ag-110m (sol.)	7 x 103	4 x 105
Ag-110m (insol.)	4 x 102	4 x 105
Ag-111 (sol.)	1 x 104	5 x 105
Ag-111 (insol.)	7 x 103	5 x 105
Cd-109 (sol.)	2 x 103	2 x 106
Cd-109 (insol.)	3 x 103	2 x 106
Cd-115m (sol.)	1 x 103	4 x 105
Cd-115m (insol.)	1 x 103	4 x 105
Cd-115 (sol.)	7 x 103	4 x 105
Cd-115 (insol.)	7 x 103	5 x 105
In-113m (sol.)	3 x 105	1 x 107
In-l13m (insol.)	3 x 105	1 x 107
In-l14m (sol.)	4 x 103	2 x 105
In-l14m (insol.)	7 x 102	2 x 105
In-115m (sol.)	7 x 104	5 x 106
In-115m (insol.)	7 x 104	5 x 106
In-115 (sol.)	7 x 103	1 x 106
In-115 (insol.)	1 x 103	1 x 106
Sn-113 (sol.)	1 x 104	1 x 106
Sn-l13 (insol.)	2 x 103	1 x 106
Sn-125 (sol.)	4 x 103	2 x 105
Sn-125 (insol.)	3 x 103	2 x 105

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Sb-122 (sol.)	7 x 103	4 x 105
Sb-122 (insol.)	4 x 103	4 x 105
Sb-124 (sol.)	7 x 103	2 x 105
Sb-124 (insol.)	7 x 102	2 x 105
Sb-125 (sol.)	2 x 104	1 x 106
Sb-125 (insol.)	1 x 103	1 x 106
Te-125m (sol.)	1 x 104	2 x 106
Te-125m (insol.)	4 x 103	1 x 106
Te-127m (sol.)	4 x 103	7 x 105
Te-127m (insol.)	1 x 103	6 x 105
Te-127 (sol.)	7 x 104	4 x 106
Te-127 (insol.)	3 x 104	2 x 106
Te-129m (sol.)	3 x 103	4 x 105
Te-129m (insol.)	1 x 103	2 x 105
Te-129 (sol.)	2 x 105	1 x 107
Te-129 (insol.)	1 x 105	1 x 107
Te-131m (sol.)	1 x 104	7 x 105
Te-131m (insol.)	7 x 103	5 x 105
Te-132 (sol.)	7 x 103	4 x 105
Te-132 (insol.)	4 x 103	2 x 105
I-125 (sol.)	2 x 102	1 x 104
I-125 (insol.)	7 x 103	1 x 107
I-126 (sol.)	3 x 102	2 x 104
I-126 (insol.)	1 x 104	1 x 106
I-129 (sol.)	70	5 x 103
I-129 (insol.)	3 x 103	2 x 106
I-131 (sol.)	3 x 102	2 x 104

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
I-131 (insol.)	1 x 104	7 x 105
I-132 (sol.)	7 x 103	7 x 105
I-132 (insol.)	3 x 104	2 x 106
I-133 (sol.)	1 x 103	9 x 104
I-133 (insol.)	7 x 103	5 x 105
I-134 (sol.)	2 x 104	1 x 106
I-134 (insol.)	1 x 105	7 x 106
I-135 (sol.)	4 x 103	2 x 105
I-135 (insol.)	1 x 104	9 x 105
Xe-131m (sub.)	7 x 105	..
Xe-133 (sub.)	4 x 105	..
Xe-135 (sub.)	1 x 105	..
Cs-131 (sol.)	4 x 105	2 x 107
Cs-131 (insol.)	1 x 105	1 x 107
Cs-134m (sol.)	1 x 106	7 x 107
Cs-134m (insol.)	2 x 105	1 x 107
Cs-134 (sol.)	1 x 103	1 x 105
Cs-134 (insol.)	4 x 102	5 x 105
Cs-135 (sol.)	2 x 104	1 x 106
Cs-135 (insol.)	3 x 103	2 x 106
Cs-136 (sol.)	1 x 104	1 x 106
Cs-136 (insol.)	7 x 103	7 x 105
Cs-137 (sol.)	2 x 103	2 x 105
Cs-137 (insol.)	4 x 102	5 x 105
Ba-131 (sol.)	4 x 104	2 x 106
Ba-131 (insol.)	1 x 104	2 x 106
Ba-140 (sol.)	4 x 103	4 x 105

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Ba-140 (insol.)	1 x 103	2 x 105
La-140 (sol.)	7 x 103	2 x 105
La-140 (insol.)	4 x 103	2 x 105
Ce-141 (sol.)	1 x 104	1 x 106
Ce-141 (insol.)	7 x 103	1 x 106
Ce-143 (sol.)	1 x 104	5 x 105
Ce-143 (insol.)	7 x 103	5 x 105
Ce-144 (sol.)	4 x 102	1 x 105
Ce-144 (insol.)	2 x 102	1 x 105
Pr-142 (sol.)	7 x 103	4 x 105
Pr-142 (insol.)	7 x 103	4 x 105
Pr-143 (sol.)	1 x 104	6 x 105
Pr-143 (insol.)	7 x 103	6 x 105
Nd-144 (sol.)	3	9 x 105
Nd-144 (insol.)	10	1 x 106
Nd-147 (sol.)	1 x 104	7 x 105
Nd-147 (insol.)	7 x 103	7 x 105
Nd-149 (sol.)	7 x 104	4 x 106
Nd-149 (insol.)	4 x 104	4 x 106
Pm-147 (sol.)	2 x 103	2 x 106
Pm-147 (insol.)	4 x 103	2 x 106
Pm-149 (sol.)	1 x 104	5 x 105
Pm-149 (insol.)	7 x 103	5 x 105
Sm-147 (sol.)	3	7 x 105
Sm-147 (insol.)	10	9 x 105
Sm-151 (sol.)	2 x 103	5 x 106
Sm-151 (insol.)	4 x 103	5 x 106

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Sm-153 (sol.)	2 x 104	1 x 106
Sm-153 (insol.)	1 x 104	1 x 106
Eu-152 (9.2 hr) (sol.)	1 x 104	7 x 105
Eu-152 (9.2 hr) (insol.)	1 x 104	7 x 105
Eu-152 (13 y) (sol.)	4 x 102	1 x 106
Eu-152 (13 y) (insol.)	7 x 102	1 x 106
Eu-154 (sol.)	1 x 102	2 x 105
Eu-154 (insol.)	3 x 102	2 x 105
Eu-155 (sol.)	3 x 103	2 x 106
Eu-155 (insol.)	3 x 103	2 x 106
Gd-153 (sol.)	7 x 103	2 x 106
Gd-153 (insol.)	3 x 103	2 x 106
Gd-159 (sol.)	2 x 104	1 x 106
Gd-159 (insol.)	1 x 104	1 x 106
Tb-160 (sol.)	4 x 103	5 x 105
Tb-160 (insol.)	1 x 103	5 x 105
Dy-165 (sol.)	1 x 105	5 x 106
Dy-165 (insol.)	7 x 104	5 x 106
Dy-166 (sol.)	7 x 103	5 x 105
Dy-166 (insol.)	7 x 103	5 x 105
Ho-166 (sol.)	7 x 103	4 x 105
Ho-166 (insol.)	7 x 103	4 x 105
Er-169 (sol.)	2 x 104	1 x 106
Er-169 (insol.)	1 x 104	1 x 106
Er-171 (sol.)	3 x 104	1 x 106
Er-171 (insol.)	2 x 104	1 x 106
Tm-170 (sol.)	1 x 103	6 x 105

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Tm-170 (insol.)	1 x 103	6 x 105
Tm-171 (sol.)	4 x 103	6 x 106
Tm-171 (insol.)	7 x 103	6 x 106
Yb-175 (sol.)	2 x 104	1 x 106
Yb-175 (insol.)	2 x 104	1 x 106
Lu-177 (sol.)	2 x 104	1 x 106
Lu-177 (insol.)	2 x 104	1 x 106
Hf-181 (sol.)	1 x 103	9 x 106
Hf-181 (insol.)	3 x 103	9 x 106
Ta-182 (sol.)	1 x 103	5 x 105
Ta-182 (insol.)	7 x 102	5 x 105
W-181 (sol.)	7 x 104	5 x 106
W-181 (insol.)	4 x 103	4 x 106
W-185 (sol.)	3 x 104	1 x 106
W-185 (insol.)	4 x 103	1 x 106
W-187 (sol.)	1 x 104	9 x 105
W-187 (insol.)	1 x 104	7 x 105
Re-183 (sol.)	1 x 105	7 x 106
Re-183 (insol.)	7 x 103	4 x 106
Re-186 (sol.)	2 x 104	1 x 106
Re-186 (insol.)	7 x 103	6 x 105
Re-187 (sol.)	3 x 105	4 x 107
Re-187 (insol.)	2 x 104	2 x 107
Re-188 (sol.)	1 x 104	7 x 105
Re-188 (insol.)	7 x 103	4 x 105
Os-185 (sol.)	2 x 104	9 x 105
Os-185 (insol.)	2 x 103	9 x 105

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Os-191m (sol.)	7 x 105	4 x 107
Os-191m (insol.)	3 x 105	2 x 107
Os-191 (sol.)	4 x 104	2 x 106
Os-191 (insol.)	1 x 104	2 x 106
Os-193 (sol.)	1 x 104	7 x 105
Os-193 (insol.)	1 x 104	6 x 105
Ir-190 (sol.)	4 x 104	2 x 106
Ir-190 (insol.)	1 x 104	2 x 106
Ir-192 (sol.)	4 x 103	5 x 105
Ir-192 (insol.)	1 x 103	5 x 105
Ir-194 (sol.)	7 x 103	4 x 105
Ir-194 (insol.)	7 x 103	4 x 105
Pt-191 (sol.)	3 x 104	1 x 106
Pt-191 (insol.)	2 x 104	1 x 106
Pt-193m (sol.)	3 x 105	1 x 107
Pt-193m (insol.)	2 x 105	1 x 107
Pt-193 (sol.)	4 x 104	1 x 107
Pt-193 (insol.)	1 x 104	2 x 107
Pt-197m (sol.)	2 x 105	1 x 107
Pt-197m (insol.)	2 x 105	1 x 107
Pt-197 (sol.)	3 x 104	1 x 106
Pt-197 (insol.)	2 x 104	1 x 106
Au-196 (sol.)	4 x 104	2 x 106
Au-196 (insol.)	2 x 104	1 x 106
Au-198 (sol.)	1 x 104	6 x 105
Au-198 (insol.)	7 x 103	6 x 105
Au-199 (sol.)	4 x 104	2 x 106

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Au-199 (insol.)	3 x 104	2 x 106
Hg-197m (sol.)	3 x 104	2 x 106
Hg-197m (insol.)	3 x 104	2 x 106
Hg-197 (sol.)	4 x 104	4 x 106
Hg-197 (insol.)	1 x 105	6 x 106
Hg-203 (sol.)	3 x 103	2 x 105
Hg-203 (insol.)	4 x 103	1 x 106
Tl-200 (sol.)	1 x 105	5 x 106
Tl-200 (insol.)	4 x 104	2 x 106
Tl-201 (sol.)	7 x 104	4 x 106
Tl-201 (insol.)	3 x 104	2 x 106
Tl-202 (sol.)	3 x 104	1 x 106
Tl-202 (insol.)	7 x 103	9 x 105
Tl-204 (sol.)	2 x 104	1 x 106
Tl-204 (insol.)	1 x 103	7 x 105
Pb-203 (sol.)	1 x 105	5 x 106
Pb-203 (insol.)	7 x 104	5 x 106
Pb-210 (sol.)	4	1 x 103
Pb-210 (insol.)	7	2 x 106
Pb-212 (sol.)	7 x 102	2 x 105
Pb-212 (insol.)	7 x 102	2 x 105
Bi-206 (sol.)	7 x 103	5 x 105
Bi-206 (insol.)	4 x 103	5 x 105
Bi-207 (sol.)	7 x 103	7 x 105
Bi-207 (insol.)	4 x 102	7 x 105
Bi-210 (sol.)	2 x 102	5 x 105
Bi-210 (insol.)	2 x 102	5 x 105

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Bi-212 (sol.)	4 x 103	5 x 106
Bi-212 (insol.)	7 x 103	5 x 106
Po-210 (sol.)	20	9 x 103
Po-210 (insol.)	7	4 x 105
At-211 (sol.)	3 x 102	2 x 104
At-211 (insol.)	1 x 103	9 x 105
Rn-220	1 x 104	..
Rn-222	1 x 103	..
Ra-223 (sol.)	70	9 x 103
Ra-223 (insol.)	7	5 x 104
Ra-224 (sol.)	2 x 102	2 x 104
Ra-224 (insol.)	30	6 x 104
Ra-226 (sol.)	1	1 x 102
Ra-226 (insol.)	7 x 103	4 x 105
Ra-228 (sol.)	3	4 x 102
Ra-228 (insol.)	1	4 x 105
Ac-227 (sol.)	7 x 102	2 x 104
Ac-227 (insol.)	1	4 x 106
Ac-228 (sol.)	3 x 103	1 x 106
Ac-228 (insol.)	7 x 102	1 x 106
Th-227 (sol.)	10	2 x 105
Th-227 (insol.)	7	2 x 105
Th-228 (sol.)	3 x 10-1	9 x 104
Th-228 (insol.)	2 x 10-1	1 x 105
Th-230 (sol.)	7 x 10-2	2 x 104
Th-230 (insol.)	4 x 10-1	4 x 105
Th-231 (sol.)	4 x 104	2 x 106

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Th-231 (insol.)	4 x 104	2 x 106
Th-232 (sol.)	7 x 10-2	2 x 104
Th-232 (insol.)	4 x 10-1	5 x 105
Th-234 (sol.)	2 x 103	2 x 105
Th-234 (insol.)	1 x 103	2 x 105
Th-nat (sol.)	7 x 10-2	1 x 104
Th-nat (insol.)	1 x 10-1	1 x 105
Pa-230 (sol.)	70	2 x 106
Pa-230 (insol.)	30	2 x 106
Pa-231 (sol.)	4 x 10-2	1 x 104
Pa-231 (insol.)	4	4 x 105
Pa-233 (sol.)	2 x 104	1 x 106
Pa-233 (insol.)	7 x 103	1 x 106
U-230 (sol.)	10	6 x 104
U-230 (insol.)	4	6 x 104
U-232 (sol.)	4	4 x 105
U-232 (insol.)	1	4 x 105
U-233 (sol.)	20	4 x 105
U-233 (insol.)	4	4 x 105
U-234 (sol.)	20	4 x 105
U-234 (insol.)	4	4 x 105
U-235 (sol.)	20	4 x 105
U-235 (insol.)	4	4 x 105
U-236 (sol.)	20	4 x 105
U-236 (insol.)	4	4 x 105
U-238 (sol.)	3	5 x 105
U-238 (insol.)	4	5 x 105

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
U-nat (sol.)	3	2 x 105
U-nat (insol.)	2	2 x 105
Np-237 (sol.)	1 x 10-1	4 x 104
Np 237 (insol.)	4	4 x 105
Np-239 (sol.)	3 x 104	1 x 106
Np-239 (insol.)	3 x 104	1 x 106
Pu-238 (sol.)	7 x10-2	6 x 104
Pu-238 (insol.)	1	4 x 105
Pu-239 (sol.)	7 x10-2	6 x 104
Pu-239 (insol.)	1	4 x 105
Pu-240 (sol.)	7 x 10-2	6 x 104
Pu-240 (insol.)	1	4 x 105
Pu-241 (sol.)	3	2 x 106
Pu-241 (insol.)	1 x 103	1 x 107
Pu-242 (sol.)	7 x 10-2	6 x 104
Pu-242 (insol.)	1	4 x 105
Am-241 (sol.)	2 x 10-1	5 x 104
Am-241 (insol.)	4	4 x 105
Am-243 (sol.)	2 x 10-1	5 x 104
Am-243 (insol.)	4	4 x 105
Cm-242 (sol.)	4	2 x 105
Cm-242 (insol.)	7	2 x 105
Cm-243 (sol.)	2 x 10-1	6 x 104
Cm-243 (insol.)	4	2 x 105
Cm-244 (sol.)	3 x 10-1	9 x 104
Cm-244 (insol.)	4	4 x 105
Cm-245 (sol.)	2 x 10-1	5 x 104

column 1 radioactive material	column 2 Becquerels per cubic metre of air	column 3 Becquerels per cubic metre of potable water
Cm-245 (insol.)	4	4 x 105
Cm-246 (sol.)	2 x 10-1	5 x 104
Cm-246 (insol.)	4	4 x 105
Bk-249 (sol.)	30	7 x 106
Bk-249 (insol.)	4 x 103	7 x 106
Cf-249 (sol.)	7 x 10-2	5 x 104
Cf-249 (insol.)	4	2 x 105
Cf-250 (sol.)	2 x 10-1	1 x 105
Cf-250 (insol.)	4	4 x 105
Cf-252 (sol.)	2 x 10-1	9 x 104
Cf-252 (insol.)	1	9 x 104

U Schedule 2 Quality factors

(see s 5)

column 1 type of radiation		column 2 quality factor
1	X-rays; gamma rays; electrons	1
2	Thermal neutrons	2.3
3	Neutrons; protons; singly charged particles of rest mass greater than 1 atomic mass unit of unknown energy	10
4	Alpha particles and multiply charged particles (and particles of unknown charge) of unknown energy	20

U Schedule 3 Maximum activity of exempt radionuclides

(see s 6)

Note 1 The figures immediately following the name of an element in this schedule refer to the atomic mass number of the radionuclide.

Note 2 In this schedule:

m means the metastable state.

column 1 item	column 2	column 3
1	Ac-227, Am-241, Am-243, Cf-249, Cf-250, Cf-252, Cm-242, Cm-243, Cm-244, Cm-245, Cm-246, Np-237, Pa-231, Pb-210, Po-210, Pu-238, Pu-239, Pu-240, Pu-241, Pu-242, Ra-223, Ra-226, Ra-228, Th-227, Th-228, Th-230, U-230, U-232, U-233, U-234.	4 kilobecquerels
2	Ac-228, At-211, Ba-140, Bl-207, Bi-210, Bk-249, Ca-45, Ce-144, C1-36, Co-56, Co-60, Cs-134, Cs-137, Eu-152, Eu-154, Ge-68, Hf-181, I-125, I-126, I-131, I-133, In-114m, Ir-192, Mn-54, Na-22, Pa-230, Pb-212, Ra-224, Ru-106, Sb-124, Sb-125, Sc-46, Sr-89, Sr-90, Ta-182, Tb-160, Te-127m, Te-129m, Th-234, Tl-204, Tm-170, U-236, Y-91, Zr-95.	40 kilobecquerels

column 1 item	column 2	column 3
3	Ag-105, Ag-l10m, Ag-l11, Ar-41, As-73, As-74, As-76, As-77, Au-193, Au-196, Au-198, Au-199, Ba-131, Ba-133, Be-7, Bi-206, Bi-212, Br-77, Br-82, C-14, Ca-47, Cd-109, Cd-115m, Cd-l15, Ce-139, Ce-141, Ce-143, C1-38, Co-57, Co-58, Cr-51, Cs-129, Cs-131, Cs-136, Cu-64, Cu-67, Dy-165, Dy-166, Er-169, Er-171, Eu-152m, Eu-155, F-18, Fe-52, Fe-55, Fe-59, Ga-67, Ga-72, Gd-153, Gd-159, Hg-179m, Hg-197, Hg-203, Ho-166, I-123, I-132, I-134, I-135, In-111, In-115m, Ir-190, Ir-194, K-42, K-43, Kr-85m, Kr-87, La-140, Lu-177, Mg-28, Mn-52, Mn-56, Mo-99, Na-24, Nb-93m, Nb-95, Nd-147, Nd-149, Ni-63, Ni-65, Np-239, Os-185 Os-l91, Os-193, P-32, Pa-233, Pd-103, Pd-109, Pm-147, Pm-149, Pr-142, Pr-143, Pt-191, Pt-197, Rb-81, Rb-86, Re-186, Re-188, Rh-105, Rn-222, Ru-97, Ru-103, Ru-105, S-35, Sb-122, Sc-47, Sc-48, Se-75, Si-31, Sm-151, Sm-153, Sn-113, Sn-119m, Sn-125, Sr-85, Sr-91, Sr-92, Tc-96, Tc-97m, Tc-97, Tc-99, Te-125m, Te-127, Te-129, Te-131m, Te-132, Th-231, T1-200, T1-201, T1-202, Tm-171, 5-48, W-181, W-185, W-187, Xe-127, Xe-135, Y-87, Y-90, Y-92, Y-93, Yb-169, Yb-175, Zn-65, Zn-69m, Zr-97.	400 kilobecquerels
4	Ar-37, C-ll, Co-58m, Cs-134m, Cs-135, Ga-68, Ge-71, H-3, I-129, In-113m, Kr-85, N-13, Nb-97, Ni-59, Os-191m, Pt-193m, Pt-197m, Rb-87, Rb (natural), Re-187, Re (natural), Rh-103m, Sm-147, Sr-85m, Sr-87m, Tc-96m, Tc-99m, Th-232, Th (natural), U-235, U-238, U (natural), U (enriched), U (depleted), Xe-131m, Xe-133, Y-91m, Zn-69, Zr-93.	4 megabecquerels

U Schedule 4 Maximum levels of radioactive materials in packages

(see s 56)

column 1 name of element and atomic number	 symbol of radionuclide	column 2 (terabecquerels)	column 3 (terabecquerels)
Actinium (89)	^{227}Ac	40	0.00001
	^{228}Ac	0.4	0.2
Silver (47)	^{105}Ag	1	1
	^{110m}Ag	0.3	0.3
	^{111}Ag	4	4
Americium (95)	^{241}Am	0.1	0.0001
	^{243}Am	0.1	0.0001
Argon (18)	^{37}Ar (compressed or uncompressed)	40	40
	^{41}Ar (uncompressed	0.7	0.7
	^{41}Ar (compressed)	0.04	0.04
Arsenic (33)	^{73}As	40	30
	^{74}As	0.7	0.7
	^{76}As	0.4	0.4
	^{77}As	10	10
Astatine (85)	^{211}At	7	1
Gold (79)	^{193}Au	7	7
	^{196}Au	1	1
	^{198}Au	1	1
	^{199}Au	7	7
Barium (56)	^{131}Ba	1	1
	^{133}Ba	1	1
	^{140}Ba	0.7	0.7
Beryllium (4)	^{7}Be	10	10

column 1 name of element and atomic number	symbol of radionuclide	column 2 (terabecquerels)	column 3 (terabecquerels)
Bismuth (83)	^{206}Bi	0.2	0.2
	^{207}Bi	0.4	0.4
	^{210}Bi (RaE)	4	0.5
	^{212}Bi	0.2	0.2
Berkelium (97)	^{249}Bk	40	0.04
Bromine (35)	^{77}Br	3	3
	^{82}Br	0.2	0.2
Carbon (6)	^{11}C	0.7	0.7
	^{14}C	40	40
Calcium (20)	^{45}Ca	40	20
	^{47}Ca	0.7	0.7
Cadmium (48)	^{109}Cd	40	0.5
	^{115m}Cd	1	1
	^{115}Cd	3	3
Cerium (58)	^{139}Ce	4	4
	^{141}Ce	10	10
	^{143}Ce	2	2
	^{144}Ce	0.4	0.3
Californium (98)	^{249}Cf	0.1	0.0001
	^{250}Cf	0.3	0.0003
	^{252}Cf	0.07	0.004
Chlorine (17)	^{36}Cl	10	4
	^{38}Cl	0.4	0.4
Curium (96)	^{242}Cm	4	0.4
	^{243}Cm	0.1	0.0001
	^{244}Cm	0.2	0.0002
	^{245}Cm	0.1	0.0001
	^{246}Cm	0.1	0.0001
Cobalt (27)	^{56}Co	0.2	0.2
	^{57}Co	3	3
	^{58m}Co	40	40
	^{58}Co	0.7	0.7
	^{60}Co	0.3	0.3
Chromium (24)	^{51}Cr	20	20

column 1 name of element and atomic number	symbol of radionuclide	column 2 (terabecquerels)	column 3 (terabecquerels)
Caesium (55)	^{129}Cs	1	1
	^{131}Cs	40	40
	^{134m}Cs	40	40
	^{134}Cs	0.4	0.4
	^{135}Cs	40	20
	^{136}Cs	0.3	0.3
	^{137}Cs	1	1
Copper (29)	^{64}Cu	3	3
	^{67}Cu	7	7
Dysprosium (66)	^{165}Dy	4	4
	^{166}Dy	40	10
Erbium (68)	^{169}Er	40	40
	^{171}Er	2	50
Europium (63)	^{152m}Eu	1	1
	^{152}Eu	0.7	0.4
	^{154}Eu	0.4	0.3
	^{155}Eu	10	1
Fluorine (9)	^{18}F	0.7	0.7
Iron (26)	^{52}Fe	0.2	0.2
	^{55}Fe	40	30
	^{59}Fe	0.4	0.4
Gallium (31)	^{67}Ga	4	4
	^{68}Ga	0.7	0.7
	^{72}Ga	0.3	0.3
Gadolimium (64)	^{153}Gd	7	3
	^{159}Gd	10	10
Germanium (32)	^{68}Ge	0.7	0.7
	^{71}Ge	40	40
Hydrogen (1) see T-Triti	^{3}H		
Hafnium (72)	^{181}Hf	1	1
Mercury (80)	^{197}Hg	7	7
	^{203}Hg	3	3
Holmium (67)	^{166}Ho	1	1

column 1 name of element and atomic number	symbol of radionuclide	column 2 (terabecquerels)	column 3 (terabecquerels)
Iodine (53)	^{123}I	2	2
	^{125}I	40	1
	^{126}I	1	0.4
	^{129}I	40	0.1
	^{131}I	1	1
	^{132}I	0.3	0.3
	^{133}I	1	1
	^{134}I	0.3	0.3
	^{135}I	0.4	0.4
Indium (49)	^{111}In	1	1
	^{113m}In	2	2
	^{114m}In	1	1
	^{115m}In	4	4
Iridium (77)	^{190}Ir	0.4	0.4
	^{192}Ir	0.7	0.7
	^{194}Ir	0.4	0.4
Potassium (19)	^{42}K	0.4	0.4
	^{43}K	0.7	0.7
Krypton (36)	^{85m}Kr (uncompressed)	4	4
	^{85}Kr (compressed)	0.1	0.1
	^{85}Kr (uncompressed)	40	40
	^{85}Kr (compressed)	0.2	0.2
	^{87}Kr (uncompressed)	0.7	0.7
	^{87}Kr (compressed)	0.02	0.02
Lanthanum (57)	^{140}La	1	1
Lutetium (71)	^{177}Lu	10	10
Magnesium (12)	^{28}Mg	0.2	0.2
Manganese (25)	^{52}Mn	0.2	0.2
	^{54}Mn	0.7	0.7
	^{56}Mn	0.2	0.2
Molybdenum (42)	^{99}Mo	4	4
Nitrogen (7)	^{13}N	0.7	0.7
Sodium (11)	^{22}Na	0.3	0.3
	^{24}Na	0.2	0.2

column 1 name of element and atomic number	symbol of radionuclide	column 2 (terabecquerels)	column 3 (terabecquerels)
Niobium (41)	^{93m}Nb	40	40
	^{95}Nb	0.7	0.7
	^{97}Nb	0.7	0.7
Neodymium (60)	^{147}Nd	4	4
	^{149}Nd	1	1
Nickel (28)	^{59}Ni	40	40
	^{63}Ni	40	30
	^{65}Ni	0.4	0.4
Neptunium (93)	^{237}Np	0.1	0.0001
	^{239}Np	7	7
Osmium (76)	^{185}Os	0.7	0.7
	^{191}Os	20	20
	^{191m}Os	7	7
	^{193}Os	4	4
Phosphorus (15)	^{32}P	1	1
Protactinium (91)	^{230}Pa	0.7	0.04
	^{231}Pa	0.03	0.00003
	^{233}Pa	4	4
Lead (82)	^{210}Pb	4	0.0004
	^{212}Pb	0.2	0.2
Palladium (46)	^{103}Pd	40	40
	^{109}Pd	4	4
Promethium (61)	^{147}Pm	40	40
	^{149}Pm	4	4
Polonium (84)	^{210}Po	10	0.01
Praseodymium (59)	^{142}Pr	0.4	0.4
	^{143}Pr	10	10
Platinum (78)	^{191}Pt	4	4
	^{193m}Pt	7	7
	^{197m}Pt	10	10
	^{197}Pt	10	10

column 1 name of element and atomic number	symbol of radionuclide	column 2 (terabecquerels)	column 3 (terabecquerels)
Plutonium (94)	^{238}Pu	0.1	0.0001
	^{239}Pu	0.1	0.0001
	^{240}Pu	0.1	0.0001
	^{241}Pu	40	40
	^{242}Pu	0.1	0.0001
Radium (88)	^{223}Ra	2	0.01
	^{224}Ra	0.2	0.03
	^{226}Ra	0.4	0.01
	^{228}Ra	0.4	0.02
Rubidium (37)	^{81}Rb	1	1
	^{86}Rb	1	1
	^{87}Rb	Unlimited	Unlimited
	Rb (natural)	Unlimited	Unlimited
Rhenium (75)	^{186}Re	4	4
	^{187}Re	Unlimited	Unlimited
	^{188}Re	0.4	0.4
	Re (natural)	Unlimited	Unlimited
Rhodium (45)	^{103m}Rh	40	40
	^{105}Rh	7	7
Radon (86)	^{222}Rn	0.4	0.4
Ruthenium (44)	^{97}Ru	3	3
	^{103}Ru	1	1
	^{105}Ru	0.7	0.7
	^{106}Ru	0.4	0.2
Sulphur (16)	^{35}S	40	40
Antimony (51)	^{122}Sb	1	1
	^{124}Sb	0.2	0.2
	^{125}Sb	1	1
Scandium (21)	^{46}Sc	0.3	0.3
	^{47}Sc	7	7
	^{48}Sc	0.2	0.2
Selenium (34)	^{75}Se	1	1
Silicon (14)	^{31}Si	4	4

column 1 name of element and atomic number	symbol of radionuclide	column 2 (terabecquerels)	column 3 (terabecquerels)
Samarium (62)	^{147}Sm	Unlimited	Unlimited
	^{151}Sm	40	2
	^{153}Sm	10	
Tin (50)	^{113}Sn	2	2
	^{119}Sn	4	4
	^{125}Sn	0.4	0.4
Strontium (38)	^{85m}Sr	3	3
	^{85}Sr	1	1
	^{87m}Sr	2	2
	^{89}Sr	4	3
	^{90}Sr	0.4	0.04
	^{91}Sr	0.4	0.4
	^{92}Sr	0.4	0.4
Tritium (1)	T (uncompressed)	40	40
	T (compressed)	40	40
	T (activated luminous paint)	40	40
	T (absorbed on solid carrier)	40	40
	T (tritiated water)	40	40
	T (other forms)	0.7	0.7
Tantalum (73)	^{182}Ta	0.7	0.7
Terbium (65)	^{160}Tb	0.7	0.7
Technetium (43)	^{96m}Tc	40	40
	^{96}Tc	0.2	0.2
	^{97m}Tc	40	20
	^{97}Tc	40	40
	^{99m}Tc	4	4
	^{99}Tc	40	10

column 1 name of element and atomic number	symbol of radionuclide	column 2 (terabecquerels)	column 3 (terabecquerels)
Tellerium (52)	^{125m}Te	40	10
	^{127m}Te	10	4
	^{127}Te	10	10
	^{129m}Te	1	1
	^{129}Te	4	4
	^{131m}Te	0.4	0.4
	^{132}Te	0.3	0.3
Thorium (90)	^{127}Th	4	0.004
	^{228}Th	0.2	0.0002
	^{230}Th	0.01	0.0001
	^{231}Th	40	40
	^{232}Th	Unlimited	Unlimited
	^{234}Th	0.4	0.4
	Th (natural)	Unlimited	Unlimited
Thallium (81)	^{200}Tl	0.7	0.7
	^{201}Tl	7	7
	^{202}Tl	1	1
	^{204}Tl	10	10
Thulium (69)	^{170}Tm	10	4
	^{171}Tm	40	4
Uranium (92)	^{230}U	4	0.004
	^{232}U	0.1	0.0001
	^{233}U	0.4	0.0004
	^{234}U	0.4	0.0004
	^{235}U	4	0.001
	^{236}U	7	0.0004
	^{238}U	Unlimited	Unlimited
	U (natural)	Unlimited	Unlimited
	U (enriched) less than 20%;	Unlimited	Unlimited
	20% or greater	0.4	0.0004
	U (depleted)	Unlimited	Unlimited
Vanadium (23)	^{48}V	0.2	0.2

column 1 name of element and atomic number	symbol of radionuclide	column 2 (terabecquerels)	column 3 (terabecquerels)
Tungsten (74)	^{181}W	7	7
	^{185}W	40	40
	^{187}W	1	1
Xenon (54)	^{127}Xe (uncompressed)	3	3
	^{127}Xe (compressed)	0.2	0.2
	^{131m}Xe (compressed)		0.4
	^{131m}Xe (uncompressed)		4
	^{133}Xe (uncompressed)		40
	^{133}Xe (compressed)		0.2
	^{135}Xe (uncompressed)		3
	^{135}Xe (compressed)		0.07
Yttrium (39)	^{87}Y	0.7	0.7
	^{90}Y	0.4	0.4
	^{91m}Y	1	1
	^{91}Y	1	1
	^{92}Y	0.4	0.4
	^{93}Y	0.4	0.4
Ytterbium (70)	^{169}Yb	3	3
	^{175}Yb	10	10
Zinc (30)	^{62}Zn	1	1
	^{69m}Zn	1	1
	^{69}Zn	10	10
Zirconium (40)	^{93}Zr	40	0.1
	^{95}Zr	0.7	0.7
	^{97}Zr	0.7	0.7

U Schedule 5 Distances of packages from members of public etc

(see s 57)

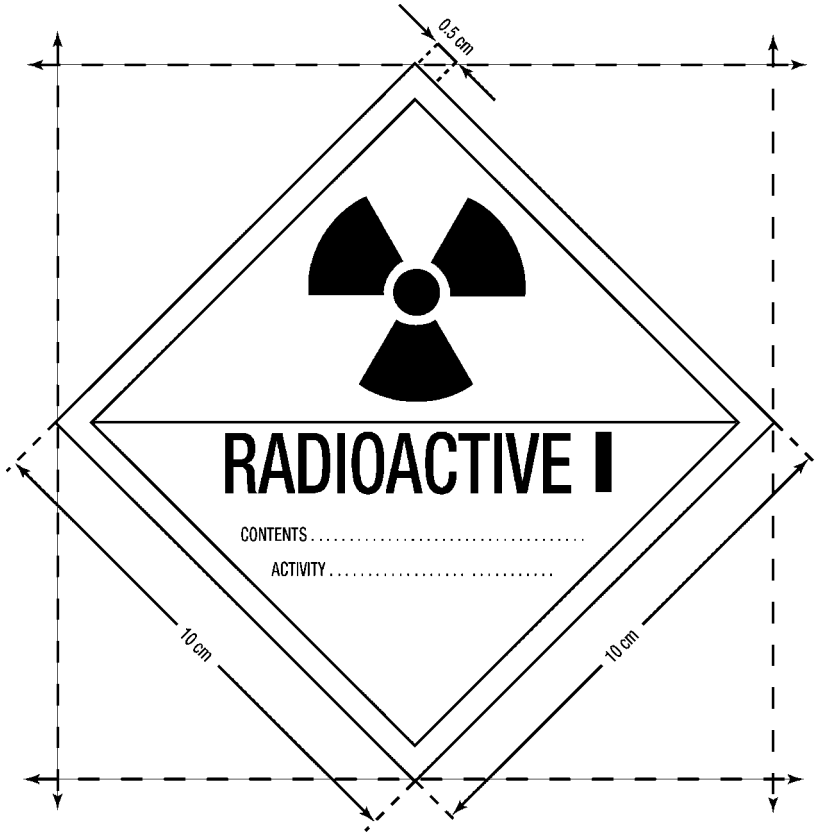
column 1 **range of transport indexes**	**column 2** **distance from members of public etc** **(metres)**
Up to 2	1.0
Over 2 but not over 4	1.5
Over 4 but not over 8	2.0
Over 8 but not over 12	2.5
Over 12 but not over 20	3.5
Over 20 but not over 30	4.0
Over 30 but not over 40	4.5
Over 40 but not over 50	5.0

U Schedule 6 Labels

(see ss 59, 64 and 67)

Figure 1

Category 1 packages: Label



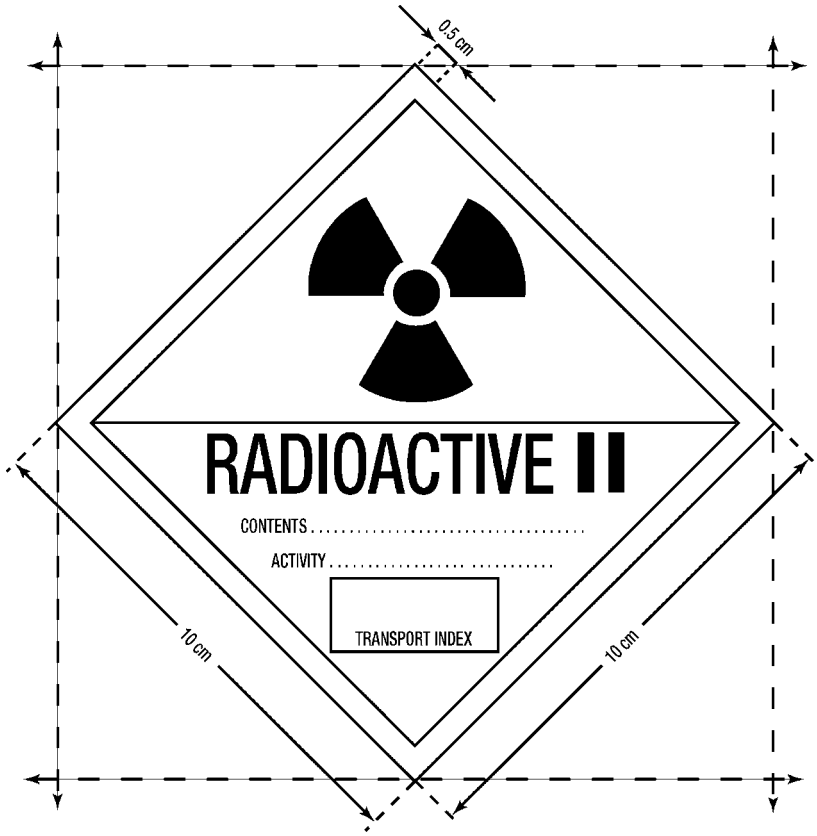
Note 1 The background of the label is to be white.

Note 2 The trefoil symbol and words are to be black.

Note 3 The single stripe is to be red.

Figure 2

Category 2 packages: Label



Notes 1 The background of the upper half of the label is to be yellow.

Notes 2 The background of the lower half of the label is to be white.

Notes 3 The trefoil symbol and words are to be black.

Notes 4 The 2 stripes are to be red.

Figure 3

Category 3 packages: Label

Notes 1 The background of the upper half of the label is to be yellow.

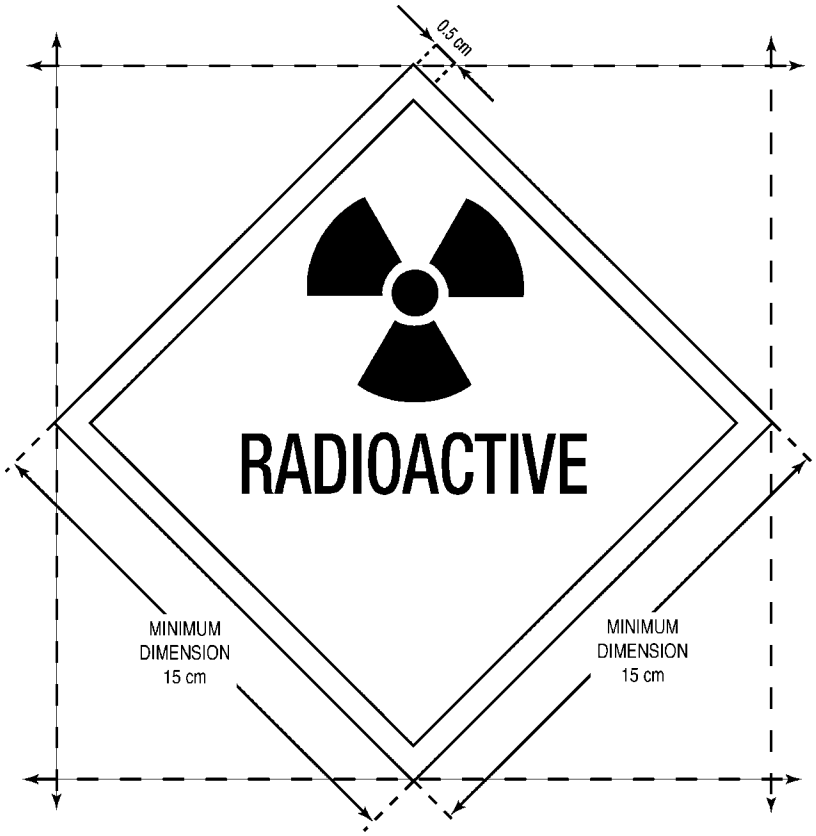
Notes 2 The background of the lower half of the label is to be white.

Notes 3 The trefoil symbol and words are to be black.

Notes 4 The 3 stripes are to be red.

Figure 4

Radiation warning signs



Note The overall shape of the sign may be diamond, rectangular or square, as indicated by the dashed lines. The dimensions given are minimum dimensions: where larger dimentions are used, the relative proportions must be maintained.

Endnotes

1 About the endnotes

Amending and modifying laws are annotated in the legislation history and the amendment history. Current modifications are not included in the republished law but are set out in the endnotes.

Not all editorial amendments made under the *Legislation Act 2001*, part 11.3 are annotated in the amendment history. Full details of any amendments can be obtained from the Parliamentary Counsel's Office.

Uncommenced amending laws are listed in the legislation history and the amendment history. These details are underlined. Uncommenced provisions and amendments are not included in the republished law but are set out in the last endnotes.

If all the provisions of the law have been renumbered, a table of renumbered provisions gives details of previous and current numbering.

The endnotes also include a table of earlier republications.

If the republished law includes penalties, current information about penalty unit values appears on the republication inside front cover.

2 Abbreviation key

am = amended
amdt = amendment
ch = chapter
cl = clause
def = definition
dict = dictionary
disallowed = disallowed by the Legislative Assembly
div = division
exp = expires/expired
Gaz = Gazette
hdg = heading
ins = inserted/added
LA = Legislation Act 2001
LR = legislation register
LRA = Legislation (Republication) Act 1996
mod = modified / modification
num = numbered
No = number
o = order
om = omitted/repealed
ord = ordinance
orig = original
p = page
par = paragraph
pres = present
prev = previous
(prev...) = previously
prov = provision
pt = part
r = rule/subrule
reg = regulation/subregulation
renum = renumbered
reloc = relocated
R[X] = Republication No
s = section/subsection
sch = schedule
sdiv = subdivision
sub = substituted
SL = Subordinate Law
underlining = whole or part not commenced

3 Legislation history

The *Radiation Act 1983* was originally the *Radiation Ordinance 1983*. It became an ACT Act on self-government (11 May 1989).

Before 11 May 1989, ordinances commenced on their notification day unless otherwise stated (see *Seat of Government (Administration) Act 1910* (Cwlth), s 12).

After 11 May 1989 and before 10 November 1999, Acts commenced on their notification day unless otherwise stated (see *Australian Capital Territory (Self-Government) Act 1988* (Cwlth) s 25).

Legislation before self-government

Radiation Act 1983 No 58
notified 16 December 1983
s 1, s 2 commenced 16 Dec 1983 (s 2 (1))
s 3 and pt 3 commenced 1 September 1986 (s 2 (2) and Cwlth Gaz 1986 No S426)
ss 4-6 and pt 2 commenced 2 April 1984 (s 2 (2) and Cwlth Gaz 1984 No G11)
remainder commenced 1 August 1985 (s 2 (2) and Cwlth Gaz 1985 No S273)

as amended by

Radiation (Amendment) Ordinance 1986 No 50
notified 29 August 1986
commenced 29 August 1986

Community and Health Service (Consequential Provisions) Ordinance 1988 No 29 sch
notified 30 June 1988
commenced 2 July 1988

Self-Government (Consequential Amendments) Ordinance 1989 No 38 sch 1
notified 10 May 1989 (Cwlth Gaz 1989 No S164)
s 1, s 2 commenced 10 May 1989 (s 2 (1))
sch 1 commenced 11 May 1989 (s 2 (2) and see Cwlth Gaz 1989 No S164)

Remuneration (Miscellaneous Amendments) Ordinance 1989 No 50 sch
notified 10 May 1989 (Cwlth Gaz 1989 No S160)
commenced 10 May 1989

Legislation after self-government

Health Services (Consequential Provisions) Act 1990 No 63 sch 1
notified 28 Dec 1990 (Gaz 1993 No S102)
s 1, s 2 commenced 28 Dec 1990 (s 2 (1))
sch 1 commenced 1 January 1991 (s 2 (2) and see Gaz 1991 No S4)

Statute Law Revision (Miscellaneous Provisions) Act 1992 No 23 sch 1
notified 4 June 1992 (Gaz 1992 No S71)
commenced 4 June 1992

Health (Consequential Provisions) Act 1993 No 14 sch 1
notified 1 March 1993 (Gaz 1993 No S23)
commenced 1 March 1993 (s 2)

Radiation (Amendment) Act 1993 No 32
notified 1 June 1993 (Gaz 1993 No S89)
commenced 1 June 1993 (s 2)

Acts Revision (Position of Crown) Act 1993 No 44 sch 2
notified 27 August 1993 (Gaz 1993 No S165)
commenced 27 August 1993 (s 2)

Administrative Appeals (Consequential Amendments) Act 1994 No 60 sch 1
notified 11 October 1994 (Gaz 1994 No S197)
s 1, s 2 commenced 11 October 1994 (2 (1))
sch 1 commenced 14 November 1994 (s 2 (2) and see Gaz 1994 No S250)

Statutory Offices (Miscellaneous Provisions) Act 1994 No 97 sch pt 1
notified 15 December 1994 (Gaz 1994 No S280)
s 1, s 2 commenced 15 December 1994 (s 2 (1))
sch pt 1 commenced 15 December 1994 (s 2 (2) and Gaz 1994 No S293)

Remuneration Tribunal (Consequential Amendments) Act 1997 No 41 sch 1

notified 19 September 1997 (Gaz No S264)
s 1, s 2 commenced 19 September 1997 (s 2 (1))
sch 1 commenced 23 September 1997 (s 2 (2) and Gaz 1997 No S280)

Statute Law Revision (Penalties) Act 1998 No 54 sch

notified 27 November 1998 (Gaz 1998 No S207)
s 1, s 2 commenced 27 November 1998 (s 2 (1))
sch commenced 9 December 1998 (s 2 (2) and Gaz 1998 No 49)

Legislation (Consequential Amendments) Act 2001 No 44 pt 320

notified 26 July 2001 (Gaz 2001 No 30)
s 1, s 2 commenced 26 July 2001 (IA s 10B)
pt 320 commenced 12 September 2001 (s 2 and Gaz 2001 No S65)

Statute Law Amendment Act 2001 (No 2) 2001 No 56 pt 1.6

notified 5 September 2001 (Gaz 2001 No S65)
s 1, s 2 commenced 5 September 2001 (IA s 10B)
amdts 1.48-1.78 awaiting commencement

4 Amendment history

Commencement

s 2 om 2001 No 44 amdt 1.3526

Repeal

s 3 om 2001 No 44 amdt 1.3526

Act binds Crown

s 4 om 1993 No 44 sch 2

Interpretation for Act

s 5 am 2001 No 56 amdt 1.58, amdt 1.59
def ***absorbed dose*** sub 2001 No 56 amdt 1.48
def ***approved code of practice*** ins 2001 No 56 amdt 1.49
def ***board*** ins 1990 No 63 sch 1
om 1993 No 14 sch 1
def ***chairperson*** am 1993 No 32 s 11
def ***deputy chairperson*** am 1993 No 32 s 11
def ***determined fee*** ins 1993 No 14 sch 1
om 2001 No 44 amdt 1.3527
def ***dose equivalent*** om 2001 No 56 amdt 1.50
def ***dose equivalent limit*** om 2001 No 56 amdt 1.50
def ***effective dose*** ins 2001 No 56 amdt 1.51
def ***effective dose limit*** ins 2001 No 56 amdt 1.51
def ***equivalent dose*** ins 2001 No 56 amdt 1.51

def ***equivalent dose limit*** ins 2001 No 56 amdt 1.51
def ***exempt material*** ins 2001 No 56 amdt 1.52
def ***exposure*** ins 2001 No 56 amdt 1.52
def ***general manager*** ins 1988 No 29
om 1990 No 63 sch 1
def ***identity card*** ins 1994 No 97 sch pt 1
def ***inspector*** sub 1994 No 97 sch pt 1
def ***irradiating apparatus*** am 2001 No 56 amdt 1.53
def ***member*** am 1993 No 32 s 11
def ***package*** om 2001 No 56 amdt 1.54
def ***quality factor*** om 2001 No 56 amdt 1.54
def ***radiation hazard*** am 2001 No 56 amdt 1.55
def ***radiation worker*** am 1993 No 32; 2001 No 56 amdt 1.56
def ***service*** ins 1988 No 29 sch 1
om 1990 No 63 sch 1
def ***transport index*** om 2001 No 56 amdt 1.57
def ***tribunal*** ins 1989 No 38 sch 1
om 1994 No 60 sch 1

Exemptions
s 6 am 1993 No 32 s 11

The radiation council
div 2.1 hdg renum R4 LA (see 2001 No 56 amdt 1.78)

Membership of council
s 8 am 1988 No 29; 1990 No 63 sch 1; 1993 No 14 sch 1; 1993 No 32 s 4, sch

Chairperson and deputy chairperson of council
s 9 am 1988 No 29; 1990 No 63 sch 1; 1993 No 14 sch 1; 1993 No 32 s 11, sch

Resignation
s 10 am 1993 No 32 s 11, sch

Termination of appointment
s 11 am 1993 No 32 sch

Acting members
s 12 am 1992 No 23 sch 1; 1993 No 32 s 11

Meetings
s 13 am 1993 No 32 s 11

Protection of members
s 14 am 1993 No 32 s 11

Report to Minister
s 15A ins 1993 No 32 s 5

Disclosure of pecuniary interest
s 16 am 1993 No 32 s 11

Remuneration and allowances
s 16A ins 1986 No 50 sch
sub 1989 No 50 sch
om 1997 No 41 sch 1

Inspectors
div 2.2 hdg renum R4 LA (see 2001 No 56 amdt 1.78)

Inspectors
s 18 am 1993 No 32 s 11
sub 1994 No 97 sch pt 1

Identity cards
s 18A ins 1994 No 97 sch pt 1
am 1998 No 54 sch

Powers of inspectors in relation to licensed premises
s 19 am 1988 No 29; 1990 No 63 sch 1; 1993 No 14 sch 1; 1993 No 32 s 11, sch; 1994 No 97 sch pt 1

Powers of entry and seizure
s 20 am 1993 No 32 s 11

Search warrants
s 21 am 1993 No 32 s 11, sch

Searches in emergencies
s 22 am 1993 No 32 sch; 1994 No 97 sch pt 1

Consent to entry
s 23 am 1993 No 32 s 11, sch

Obstruction of inspector
s 24 am 1993 No 32 s 11; 1998 No 54 sch

Exemptions
s 25 am 1986 No 50; 2001 No 56 amdt 1.60

Certain activities prohibited except in accordance with licence
s 26 am 1993 No 32 sch; 1998 No 54 sch; R4 LA

Effect of licence
s 27 am 1993 No 32 sch

Application for licence
s 28 am 1988 No 29; 1990 No 63 sch 1; 1993 No 14 sch 1; 1993 No 32 s 11; 2001 No 44 amdt 1.3528, amdt 1.3529

Grant of licence
s 29 am 1993 No 32 s 11; 2001 No 44 amdt 1.3530, amdt 1.3531

Duration of licence
s 31 am 1988 No 29; 1990 No 63 sch 1; 1993 No 14 sch 1; 1993 No 32 s 6; 2001 No 44 amdt 1.3532

Cancellation of licence
s 32 am 1993 No 32 s 11

Records to be kept
s 33 am 1993 No 32 s 11; 1998 No 54 sch; R4 LA; 2001 No 56 amdt 1.61, amdt 1.62

Duties of licensees in relation to radioactive material etc
s 34 am 1993 No 32 s 11, sch; 1998 No 54 sch

Other duties of licensees
s 35 am 1993 No 32 s 11, sch; 1998 No 54 sch

Measurement of ionising radiation on premises
s 36 am 1998 No 54 sch

Maximum doses of radiation
s 37 am 1998 No 54 sch; 2001 No 56 amdt 1.63

Excessive doses to be reported
s 38 am 1993 No 32 s 11, sch; 1998 No 54 sch; R4 LA; 2001 No 56 amdt 1.64

Duties of radiation safety officer
s 39 am 1986 No 50; 1993 No 32 s 11, sch; 1998 No 54; pars renum R4 LA; 2001 No 56 amdts 1.65-1.67

Radiation workers to observe safety procedures
s 40 am 1993 No 32 s 11, sch; 1998 No 54 sch

Use of measuring instruments etc
s 41 am 1993 No 32 s 11, sch; 1998 No 54 sch; 2001 No 56 amdt 1.67

Medical examinations
s 42 am 199 No 32 sch; 1998 No 54 sch

People receiving dose exceeding effective dose limit or equivalent dose limit not to do certain work
s 43 hdg sub 2001 No 56 amdt 1.68
s 43 am 1993 No 32 sch; 1998 No 54 sch; R4 LA; 2001 No 56 amdt 1.69

Direction by council
s 44 am 1993 No 32 sch; 1998 No 54 sch; R4 LA

Radiation workers to provide information on previous employment
s 45 am 1993 No 32 s 11, sch; 1998 No 54 sch

Matters to be considered in calculating dose
s 46 am 1986 No 50; 1993 No 32 sch
om 2001 No 56 amdt 1.70

Irradiating apparatus to be registered
s 47 am 1993 No 32 sch; 1998 No 54 sch; R4 LA

Registration of apparatus
s 48 am 1988 No 29; 1990 No 63 sch 1; 1993 No 14 sch 1; 1993 No 32 s 11; 1998 No 54 sch; 2001 No 44 amdt 1.3533, amdt 1.3534; R4 LA

Certificate to be issued and displayed
s 49 am 1998 No 54 sch; R4 LA

Duration of registration
s 50 am 1988 No 29; 1990 No 63 sch 1; 1993 No 14 sch 1; 1993 No 32 s 7; 2001 No 44 amdt 1.3535

Apparatus not to be altered or modified
s 51 am 1998 No 54 sch; R4 LA

Cancellation of registration
s 52 am 1993 No 32 s 11; 1998 No 54 sch; R4 LA

Transport of radioactive material
pt 5 hdg sub 2001 No 56 amdt 1.71

Meaning of *exempt material*
s 53 sub 2001 No 56 amdt 1.71

Exempt material
s 54 am 1993 No 32 s 11; 1998 No 54 sch
sub 2001 No 56 amdt 1.71

Transport of radioactive material must be in accordance with conditions
s 55 am 1998 No 54 sch
sub 2001 No 56 amdt 1.71

Transport of radioactive material
s 56 am 1993 No 32 s 11; 1998 No 54 sch
sub 2001 No 56 amdt 1.71

Code of practice about transport of radioactive material
s 57 am 1993 No 32 s 11, sch; 1998 No 54 sch
sub 2001 No 56 amdt 1.71

Groups of packages
s 58 am 1993 No 32 s 11; 1998 No 54 sch
om 2001 No 56 amdt 1.71

Labelling of packages
s 59 am 1998 No 54 sch
om 2001 No 56 amdt 1.71

Information to be affixed to packages
s 60 am 1998 No 54 sch
om 2001 No 56 amdt 1.71

Packages not to be altered
s 61 am 1998 No 54 sch
om 2001 No 56 amdt 1.71

Packages to be secured during transportation
s 62 am 1998 No 54 sch
om 2001 No 56 amdt 1.71

Leaking packages not to be used
s 63 am 1993 No 32 s 11, sch; 1998 No 54 sch
om 2001 No 56 amdt 1.71

Vehicles to carry warning signs
s 64 am 1998 No 54 sch
om 2001 No 56 amdt 1.71

Passengers not to ride in certain vehicles
s 65 am 1998 No 54 sch
om 2001 No 56 amdt 1.71

Storage of radioactive materials
s 66 am No 32 1993 s 11; 1998 No 54 sch; R4 LA

Radiation warning sign to be displayed
s 67 am 1998 No 54 sch; 2001 No 56 amdt 1.72

Disposal of radioactive material
s 68 am 1993 No 32 s 11, sch; 1998 No 54 sch

Fluoroscope not to be used in fitting footwear
s 69 am 1998 No 54 sch

Indictable offences may be dealt with summarily
s 70 om 1998 No 54 sch

Evidentiary certificates
s 71 am 1993 No 32 s 11; 2001 No 56 amdt 1.73

Appeals
s 72 am 1989 No 38 sch 1; 1993 No 32 s 8
sub 1994 No 60 sch 1
pars renum R4 LA

Notification of decisions
s 73 am 1989 No 38 sch 1; 1993 No 32 s 9
sub 1994 No 60 sch 1
am 2001 No 44 amdt 1.3536, amdt 1.3537; pars renum R4 LA

Annual report
s 74 am 1989 No 38 sch 1
om 1992 No 23 sch 1

Transitional
s 75 am 1993 No 32 s 11, sch

Service of documents
s 76 am 1993 No 32 s 11, sch

Determination of fees
s 77 sub 2001 No 44 amdt 1.3538

Regulation-making power
s 78 om 1989 No 38 sch 1
ins 2001 No 44 amdt 1.3539

Regulations
s 79 am 1989 No 38 sch 1
om 2001 No 44 amdt 1.3539

Quality factors
sch 2 am 1993 No 32 sch
om 2001 No 56 amdt 1.74

Maximum activity of exempt radionuclides
sch 3 renum sch 2 2001 No 56 amdt 1.75

Maximum levels of radioactive materials in packages
sch 4 om 2001 No 56 amdt 1.76

Distances of packages from members of public etc
sch 5 om 2001 No 56 amdt 1.76

Labels
sch 6 om 2001 No 56 amdt 1.77

5 Earlier republications

Some earlier republications were not numbered. The number in column 1 refers to the publication order.

Since 12 September 2001 every authorised republication has been published in electronic pdf format on the ACT legislation register. A selection of authorised republications have also been published in printed format. These republications are marked with an asterisk (*) in column 1. Except for the footer, electronic and printed versions of an authorised republication are identical.

Republication No	Amendments to	Republication date
1	Act 1990 No 63	30 November 1991
2	Act 1993 No 14	1 June 1993
3	Act 1994 No 97	28 February 1995

6 Uncommenced amendments

The following amendments have not been included in this republication because they were uncommenced at the republication date:

Statute Law Amendment Act 2001, No 56, pt 1.6

[1.48] Section 5 (1), definition of *absorbed dose*

substitute

absorbed dose means the energy absorbed per unit mass by matter from ionising radiation that impinges on it.

Note See the Recommendations for limiting exposure to ionising radiation (1995) (Guidance note [NOHSC: 3022 (1995)]) (the ***recommendations***), annex B.

NOHSC means the National Occupational Health and Safety Commission established by the *National Occupational Health and Safety Commission Act 1985* (Cwlth), s 6.

The recommendations were developed by an expert committee advising standing committees of both the National Health and Medical Research Council (the ***council***) and the NOHSC. The council adopted the recommendations on 7 June 1995. The NOHSC endorsed the recommendations as a NOHSC guidance note.

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment updates the definition to bring it into line with the technical language of the recommendations.

[1.49] Section 5 (1), new definition of *approved code of practice*

insert

approved code of practice means a code of practice approved under section 57 (Code of practice about transport of radioactive material).

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment inserts a new definition as a result of new part 5 (inserted by a later amendment in this part).

[1.50] Section 5 (1), definitions of *dose equivalent* and *dose equivalent limit*

omit

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment omits definitions that are no longer necessary because of the insertion of the new definitions of ***effective dose*** and ***effective dose limit*** by the next amendment. The existing dose limits have been superseded by lower dose limits that are contained in the recommendations, schedule A (Dose limits), and the Act is being brought into line with these national guidelines.

[1.51] Section 5 (1), new definitions of *effective dose*, *effective dose limit*, *equivalent dose* and *equivalent dose limit*

insert

effective dose means a measure of dose that takes into account both the type of radiation involved and the radiological sensitivities of the organs and tissues irradiated.

Note See the recommendations, annex B.

effective dose limit means the limit for an effective dose prescribed under the regulations.

equivalent dose means a measure of dose in organs and tissues that takes into account the type of radiation involved.

Note See the recommendations, annex B.

equivalent dose limit means the limit for an equivalent dose prescribed under the regulations.

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment inserts a new definition of ***effective dose*** to replace the existing definition of ***dose equivalent***. An effective dose is the same as dose equivalent and is the sum of equivalent doses.

Dose equivalent limit is replaced by ***effective dose limit***. Regulations to be made under the *Radiation Act 1983* will contain the limits.

New definitions of ***equivalent dose*** and ***equivalent dose limit*** are included. This is because the recommendations, schedule A (Dose limits) use both effective dose and equivalent dose to set dose limits.

Regulations to be made under the *Radiation Act 1983* will contain the limits.

[1.52] Section 5 (1), new definitions of *exempt material* and *exposure*

insert

exempt material, for part 5 (Transport of radioactive material)—see section 53.

exposure means the circumstances of being exposed to radiation.

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment inserts the signpost definition of exempt material as a result of new part 5 (inserted by a later amendment in this part).

A new definition of ***exposure*** is inserted, as the term is used in the Act.

[1.53] Section 5 (1), definition of *irradiating apparatus*

omit

dose equivalent

substitute

effective dose

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on definition changes.

[1.54] Section 5 (1), definitions of *package* and *quality factor*

omit

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

The definition of ***package*** is being omitted because it is no longer necessary because of the changes to part 5 (made by a later amendment in this part).

The definition of ***quality factor*** is being omitted because it only relates to the definition of dose equivalent. That definition is being omitted by an earlier amendment in this part.

[1.55] Section 5 (1), definition of *radiation hazard*

omit

or dose equivalent limits

substitute

, effective dose limits or equivalent dose limits

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on definition changes.

[1.56] Section 5 (1), definition of *radiation worker*, paragraphs (a) and (b)

substitute

(a) in the course of transport; and

(b) in accordance with an approved code of practice.

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on new part 5 (inserted by a later amendment in this part).

[1.57] Section 5 (1), definition of *transport index*

omit

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This definition is being omitted because it is no longer necessary because of the changes to part 5 (made by a later amendment in this part).

[1.58] Section 5 (1)

omit

(1) In

substitute

In

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on the omission of section 5 (2).

[1.59] Section 5 (2)

omit

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment omits definitions of category 1, category 2 and category 3 packages that are no longer necessary because of the changes to part 5 made by a later amendment in this part.

[1.60] Section 25 (2) (c)

omit

transportation of that material in accordance with the provisions of Part 5

substitute

transport of that material under part 5

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on the changes to part 5 made by a later amendment in this part.

[1.61] Section 33 (2) (d)

omit

dose

substitute

effective dose or equivalent dose

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on definition changes.

[1.62] Section 33 (2) (e)

substitute

(e) all facts known to the licensee or person relating to any accidental exposure of a radiation worker to ionising radiation.

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment clarifies the paragraph by changing a reference to a term that is not defined (dose) to a defined term (exposure).

[1.63] Section 37 (1) (a)

omit

dose equivalent limit

substitute

effective dose limit or equivalent dose limit

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on definition changes.

[1.64] Section 38

omit

a dose equivalent

substitute

an effective dose

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on definition changes.

[1.65] Section 39 (1) (e)

omit

dose equivalent limit

substitute

effective dose limit or equivalent dose limit

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on definition changes.

[1.66] Section 39 (1) (o)

omit

and dose equivalents

substitute

, effective doses and equivalent doses

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on definition changes.

[1.67] Sections 39 (1) (p) and 42 (1)

omit

dose equivalent limit

substitute

effective dose limit or equivalent dose limit

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on definition changes.

[1.68] Section 43, heading

substitute

43 People receiving dose exceeding effective dose limit or equivalent dose limit not to do certain work

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on definition changes.

[1.69] Section 43 (1)

omit

dose equivalent limit

substitute

effective dose limit or equivalent dose limit

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on definition changes.

[1.70] Section 46

omit

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment omits a section that is no longer necessary. Regulations to be made under the *Radiation Act 1983* will deal with the matter contained in section 46.

[1.71] Part 5

substitute

Part 5 Transport of radioactive material

53 Meaning of *exempt material*

In this part:

exempt material means radioactive material declared by the council to be exempt material under section 54.

54 Exempt material

(1) On application by a person with radioactive material, the council may, in writing, declare the material to be exempt material for this part if it is satisfied that—

(a) the material will not cause a radiation hazard during transport; or

(b) the material will not cause a radiation hazard during transport if conditions imposed by the council under subsection (2) are complied with.

Note Power given under an Act to make a statutory instrument (including a declaration) includes power to amend or repeal the instrument (see *Legislation Act 2001*, s 46 (1)).

(2) A declaration may be subject to conditions about the transport of the material that the council considers appropriate.

(3) A declaration must be signed by the chairperson.

55 Transport of radioactive material must be in accordance with conditions

If a declaration under section 54 about radioactive material is subject to conditions, a person must not transport the radioactive material except in accordance with the conditions.

Maximum penalty: 50 penalty units, imprisonment for 6 months or both.

56 Transport of radioactive material

A person must not transport radioactive material unless—

(a) it is transported in accordance with an approved code of practice; or

(b) it is exempt material.

Maximum penalty: 50 penalty units, imprisonment for 6 months or both.

57 Code of practice about transport of radioactive material

(1) The Minister may, in writing, approve a code of practice about the transport of radioactive material.

Note Power given under an Act to make a statutory instrument (including a code of practice) includes power to amend or repeal the instrument (see *Legislation Act 2001*, s 46 (1)).

(2) An approved code of practice is a disallowable instrument.

Note 1 A disallowable instrument must be notified, and presented to the Legislative Assembly, under the *Legislation Act 2001*.

Note 2 An amendment or repeal of an approved code of practice is also a disallowable instrument (see *Legislation Act 2001*, s 46 (2)).

(3) An approved code of practice may consist of any code, standard, rule, specification or provision relating to the transport of radioactive material and may apply, adopt or incorporate a law or instrument, or a provision of a law or instrument, as in force from time to time.

Note 1 A statutory instrument may also apply, adopt or incorporate (with or without change) a law or instrument (or a provision of a law or instrument) as in force at a particular time (see *Legislation Act 2001*, s 47 (1)).

Note 2 If a statutory instrument applies, adopts or incorporates a law or instrument (or a provision of a law or instrument), the law, instrument or provision may be taken to be a notifiable instrument that must be notified under the *Legislation Act 2001* (see s 47 (2)-(6)).

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment replaces part 5 with a new part 5. These amendments are to bring the ACT into line with the rest of Australia. Existing part 5 sets out in detail how radioactive material must be transported in the ACT. The provisions of the existing part are based on a predecessor to the new Code of Practice for the Safe Transport of Radioactive Substances (Cwlth) (the ***Cwlth code***). The predecessor code is out of date. This amendment gives the ACT the flexibility to adopt the Cwlth code, or any other relevant instrument as the approved code, to allow for future developments in this area for the protection of the public.

New section 57 (3) means that the approved code of practice may apply, adopt or incorporate a law or instrument, or a provision of a law or instrument, as in force from time to time. This means that the instrument approved as the approved code of practice can be picked up as it applies from time to time. This will allow the ACT to pick up the latest edition. However, each amendment of the code must be notified under the *Legislation Act 2001*.

New section 54 sets out the radioactive material that is exempt from the application of new part 5, and new section 55 remakes an offence (contained in existing section 54 (3) and (4)) for noncompliance with a condition of an exemption.

New section 56 provides that a person commits an offence if the person transports radioactive material (unless the material is exempt material) other than in accordance with new part 5. This section remakes an offence that was contained in existing section 55.

[1.72] Section 67 (1) (a)

omit

Schedule 6, figure 4

substitute

the figure prescribed under the regulations

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on the relocation of figure 4 to the regulations to be made under the *Radiation Act 1983*.

[1.73] Section 71 (d)

omit

a dose equivalent

substitute

an effective dose or equivalent dose

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment is consequential on definition changes.

[1.74] Schedule 2

omit

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

Schedule 2 is omitted because the definition of ***quality factor*** (to which schedule 2 relates) is omitted by an earlier amendment.

[1.75] Schedule 3

renumber as schedule 2

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment renumbers the schedule.

[1.76] Schedules 4 and 5

omit

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

Schedules 4 and 5 are omitted because the provisions of part 5 to which they relate are being omitted by an earlier amendment in this part.

[1.77] Schedule 6

omit

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment omits schedule 6. Figures 1 to 3 are the labels for category 1 to 3 packages that are no longer needed because of the changes to part 5 made by an earlier amendment in this part, and figure 4 is being relocated to the regulations to be made under the *Radiation Act 1983*.

[1.78] Divisions—renumbering

renumber divisions when Act next republished under Legislation Act 2001

(Commencement: on a day fixed by the Minister by notice in the Gazette.)

Explanatory note

This amendment provides for the renumbering of the divisions of the *Radiation Act 1983* on its next republication.