Radiation Safety Bill

Government Bill

Explanatory note

General policy statement

The Radiation Safety Bill will repeal and replace the Radiation Protection Act 1965.

The Bill will provide an enhanced legislative framework for radiation safety that responds effectively to the range of technological, scientific, and organisational changes that have occurred over the last 5 decades while the current Act has been in force. As well as addressing both existing and emerging risks relating to radiation safety and security, the Bill will enable ratification of key relevant international instruments.

The overarching aim of the Bill is to protect the health and safety of people and to protect the environment from the harmful effects of ionising radiation while recognising the many potential benefits of radiation use in providing health services and for applications in industry and research.

Irradiating apparatus (eg, X-ray machines) and radioactive material that is both naturally occurring (eg, uranium) and artificially manufactured (eg, cobalt 60) are controlled by the framework. However, because of the ubiquitous nature of radiation, very low levels of radioactivity are not covered by the Bill.

Further, non-ionising radiation such as that produced by electromagnetic fields (eg, cellphone towers, Wi-Fi, microwave ovens, ultravio-

let tanning machines, power lines) fall outside the Bill's framework. Non-ionising radiation will continue to be regulated under relevant health, safety, environmental, or consumer legislation.

The Bill sets out a range of fundamental requirements with which any person dealing with a radiation source must comply. The fundamental requirements are based on the established international principles of radiation safety, which are justification, optimisation, and limitation. Accordingly, the fundamental requirements stipulate that radiation use occurs only where the expected benefit outweighs the risks, that exposures must be kept as low as reasonably achievable, and that prescribed dose limits must not be exceeded. The fundamental requirements also stipulate that all reasonable steps to ensure safety must be taken and the likelihood of an emergency must be minimised through planning and preventing unauthorised access to radiation sources. Safe transportation and disposal of radiation sources are also covered.

Appropriate authorisations are the key mechanism to protect the health and safety of people and to protect the environment by requiring that no person may manufacture, possess, control, use, import, export, perform a service in relation to, or deal with a radiation source without an authorisation. There is a range of authorisations appropriate for effective regulation of radiation, such as licences, approvals, and consents. The Bill provides for the granting of authorisations, with conditions if appropriate, as well as penalties to reinforce compliance. Holders of authorisations are accountable through associated duties such as compliance with radiation safety plans and emergency response preparedness.

Enactment of the Bill will complete New Zealand's domestic implementation of the International Convention for the Suppression of Acts of Nuclear Terrorism and the Amendment to the Convention on the Physical Protection of Nuclear Material. The Bill assists in implementing those conventions by enhancing a physical protection regime for nuclear material. Other obligations under the conventions, such as those relating to mutual legal assistance and the establishment of new criminal offences, have already been implemented through amendments to the Terrorism Suppression Act 2002 and the Mutual Assistance in Criminal Matters Act 1992.

By overhauling New Zealand's current outdated framework for the safe and secure use of nuclear materials, the Bill will also have a

bearing on other international treaties with nuclear safety, security, or non-proliferation dimensions to which New Zealand is already party. These include New Zealand's nuclear safeguards agreements with the International Atomic Energy Agency.

New Zealand is strongly committed to the international campaign against terrorism, and full compliance with the international counter-terrorism instruments is important for our reputation, especially for our calls in the region for compliance by Pacific Island countries and south-east Asian partners.

Among other provisions of the Bill that will enable ratification of those international instruments, the Bill introduces provisions to allow for international monitoring of compliance by inspectors from international agencies.

Nothing in the Bill affects or derogates from the New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act 1987 and the Nuclear-Test-Ban Act 1999. The provisions of the Bill will apply in conjunction with the provisions of the Atomic Energy Act 1945.

Departmental disclosure statement

The Ministry of Health is required to prepare a disclosure statement to assist with the scrutiny of the Bill. The disclosure statement provides access to information about the policy development of the Bill and identifies any significant or unusual legislative features of the Bill.

A copy of the statement can be found at http://legislation.govt.nz/disclosure.aspx?type=bill&subtype=government&year=2014&no=003.

Regulatory impact statement

The Ministry of Health produced a regulatory impact statement in September 2004 to help inform the main policy decisions taken by the Government relating to the contents of the Bill.

A copy of this regulatory impact statement can be found at—

- www.health.govt.nz/about-ministry/legislation-and-regulation/regulatory-impact-statements/proposed-changes-radiation-protection-legislation
- http://www.treasury.govt.nz/publications/informationreleases/ris

Clause by clause analysis

Clause 1 provides for the Title.

Clause 2 provides that the Bill comes into force on a date determined by Order in Council. To the extent that it is not earlier brought into force, the Bill comes into force 1 year after the date that it receives Royal assent. The Ministry of Health advises that the delayed commencement of the Bill is necessary to afford sufficient time for regulations that are required for the operation of the Bill to be prepared and to transition the existing licensing regime to the new authorisations under the Bill.

Part 1
Preliminary matters and regulation of activities that involve radiation source

Subpart 1—Preliminary matters

Clause 3 provides that the purposes of the Bill are to—

- establish a framework to protect the health and safety of people and protect the environment from the harmful effects of ionising radiation while allowing for the safe and beneficial use of ionising radiation; and
- enable New Zealand to meet its international obligations relating to radiation protection, radiation safety and security, and nuclear non-proliferation.

Clause 4 provides for the application of the Bill. The Bill applies to any radioactive material listed in the first column of *Schedule 2* that exceeds the applicable activity concentration levels or activity levels specified in that schedule.

The Bill also applies to any irradiating apparatus. Irradiating apparatus means any device capable of generating ionising radiation but does not include any device specified in regulations made under the Bill.

Clause 5 defines terms used in the Bill. Key terms include calibration service, nuclear material, radiation ancillary service, radiation danger, and radioactive material.

Clause 6 provides that the Bill binds the Crown.

Clause 7 provides for the relationship of the Bill with the New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act

1987, the Nuclear-Test-Ban Act 1999, and the Atomic Energy Act 1945.

Clause 8 requires that every person who deals with a radiation source must ensure that people and the environment are protected now and in the future from the adverse effects of the radiation source by complying with the fundamental requirements set out in *clauses 9 to 13.*

Clauses 9 to 13 relate to the fundamental requirements that apply to every person who deals with a radiation source. A person who deals with a radiation source must—

- ensure that, as a result of dealing with the radiation source, the expected benefits to people and society outweigh the risk of harm to people and the environment (*clause 9(1)*); and
- ensure that the magnitude of individual doses of ionising radiation to which a person may be exposed, the number of people subject to exposure, and the likelihood of exposure to ionising radiation are as low as is reasonably achievable, taking into account economic, social, and environmental factors (*clause 9(2)*); and
- ensure that any radiation exposure that results from a planned operation or activity does not exceed the applicable dose limits set out in *Schedule 3* (*clause 9(3)*); and
- not use a radiation source unless it is fit for its intended purpose (*clause 10(1)*); and
- take all reasonable steps to—
    - ensure the safe placement and containment of the radiation source while it is stored or used; and
    - minimise the likelihood of any accident, incident, or emergency that is caused wholly or partly by, or involves, the radiation source; and
    - plan for action to be taken to respond to, and mitigate the consequences of, any accident, incident, or emergency, or any loss of or unauthorised removal of the radiation source (*clause 10(2)*); and
- provide for the security of the radiation source (*clause 11*); and
- ensure that the radiation source is disposed of safely (*clause 12*); and

- transport, store, or dispose of a radiation source only as permitted by the Bill or regulations (*clause 13*).

Subpart 2—Activities that require authorisation

This subpart establishes how activities involving radioactive material or irradiating apparatus are regulated by the Bill. The organising framework (*see clause 14*) is that a person must not do any of the following activities without the relevant authorisation, unless the Bill or regulations provide otherwise:

- manufacture, possess, or control a radiation source (the relevant authorisation is a source licence):
- use a radiation source (the relevant authorisation is a use licence):
- import or export radioactive material (the relevant authorisation is a consent):
- perform a radiation ancillary service (the relevant authorisation is an approval).

Clause 15 requires applications for authorisations to be made to the Director for Radiation Safety (the **Director**). The application must contain information as prescribed by regulations and be accompanied by the prescribed fee.

Clause 16 provides that a source licence is not required to transport a radiation source or, if certain conditions apply, for the temporary custody of the radiation source by a person other than the licence holder.

Clause 17 provides that a use licence is not required for the performance of prescribed activities or in prescribed situations, or where the use of the radiation source is covered by a source licence.

Clause 18 states that a source licence authorises a person to manage and control a radiation source regardless of whether the person owns or has physical possession of the radiation source. A source licence may authorise a person to manufacture a radiation source or have possession of a radiation source.

Clause 19 enables the Director to require an applicant for a source licence to submit a radiation safety plan. The radiation safety plan must demonstrate how the applicant will comply with the fundamen-

tal requirements and the requirements of the Bill and regulations. Before submitting a plan, the applicant must consult agencies that have a role in, or are likely to be affected by, the plan.

Clause 20 sets out the criteria for granting a source licence. Those criteria include the requirement that the Director be satisfied that the applicant is a suitable person and the activity for which the licence is sought does not present a significant risk to the health or safety of people or to the environment. The Director may impose conditions on a source licence as the Director considers appropriate. If the application relates to nuclear material, the Director must not grant the licence unless—

- the applicant has provided sufficient assurance that the material will be protected appropriately during international transport; and
- the Minister approves, or the Minister has authorised the Director under *clause 81* to approve, the licence.

Clause 21 prescribes the duties of a holder of a source licence, which, among other things, require the holder to—

- ensure that the radiation source is properly maintained and stored:
- ensure that there are appropriate security arrangements for the radiation source:
- take appropriate action if an incident has occurred that has resulted in an unintended loss or release of radiation, or an overexposure of a person to radiation.

Clause 22 relates to use licences. Only a natural person can apply for a use licence. The use of a radiation source under the licence includes—

- the use of radiation emitting from the radiation source:
- causing the radiation source to emit radiation:
- if the radiation source is radioactive material, administering, injecting, or implanting the material into a person, animal, plant, or thing.

A person may use a radiation source without holding a use licence if acting under the direct supervision of the licence holder or a person authorised by regulations to perform a prescribed activity.

Clause 23 provides criteria for the granting of a use licence and enables the Director to impose conditions on the licence that the Director considers appropriate. If the material to which the licence relates is nuclear material, the Director must not grant the licence unless the Minister approves, or the Minister has authorised the Director under *clause 81* to approve, the licence.

Clause 24 requires holders of a use licence and persons who use a radiation source under direct supervision to comply with the Bill, regulations, and the conditions of the use licence.

Clause 25 enables the Director to grant a consent to import or export radioactive material in accordance with criteria set out in *clause 25(1)*. The Director may impose conditions or restrictions on a consent that the Director considers appropriate. The Director may restrict the type and quantity of radioactive material that may be imported or exported or the date by which it is imported or exported. If the material is nuclear material, the Director must not grant the consent unless—

- the Director has received appropriate assurances that the material will be protected during international transport at the level specified in Annex I of the Convention on the Physical Protection of Nuclear Material); and
- the Minister approves, or the Minister has authorised the Director under *clause 81* to approve, the consent.

Clause 26 specifies the duties of consent holders.

Clauses 27 and 28 provide for radiation ancillary services. A radiation ancillary service means—

- a personal dosimetry service; or
- a calibration service; or
- any other service that directly or indirectly supports or is supported by a radiation source and is prescribed by regulations.

Clauses 29, 30, and 31 provide for the expiry, suspension, variation, cancellation, and renewal of an authorisation.

Clause 32 enables the Director to require further information from an applicant for an authorisation. An application lapses if a person fails to provide the requested information within 1 year after the request is made.

Subpart 3—Register of controlled radiation sources

Clause 33 requires the Director to keep a register of controlled radiation sources. A controlled radiation source means—

- any irradiating apparatus:
- any sealed radioactive material:
- any nuclear material (whether sealed or unsealed):
- any unsealed radioactive material of a kind that regulations require to be registered.

Clause 34 requires the holder of a source licence to register the controlled radiation source (to which the licence applies) with the Director as soon as practicable after the licence is granted. The licence holder must comply with any prescribed requirements relating to registration and must, among other things, notify the Director of any change in the location of the radiation source.

Clause 35 describes the information relating to a controlled radiation source that must be included in the register.

Clause 36 enables the Director to keep the register in any manner the Director thinks fit, including by means of a device or facility that allows information to be recorded, shared, or accessed electronically.

Clause 37 enables an approved person (the Director-General, an enforcement officer, the chief executive of the New Zealand Fire Service, or a person approved by the Director) to conduct a search of the register—

- for a purpose that relates to the purpose of the register; or
- to prevent or lessen a serious and imminent threat to the health or safety of people or to the environment; or
- to avoid prejudice to the maintenance of the law (including the prevention, detection, investigation, prosecution, and punishment of offences); or
- for a purpose authorised by the Privacy Commissioner under section 54(1) of the Privacy Act 1993; or
- where it is necessary to plan for responses to any emergency.

Clause 38 requires a holder of an authorisation to keep records that contain sufficient information to enable the Director to ascertain whether the person is complying with the Bill, regulations, the authorisation, and any radiation safety plan. *Clause 38(2) and (3)*

states requirements for records relating to radioactive material. The holder of the authorisation must make the records available to the Director on request. The Director may, for the purposes of the Bill, disclose information made available under this provision to the Ministry of Foreign Affairs and Trade or to an agency inside or outside New Zealand.

Subpart 4—Enforcement

Clause 39 provides for the appointment by the Director of temporary or permanent enforcement officers to perform the functions and duties, and exercise the powers, of enforcement officers conferred by the Bill or delegated by the Director.

Clause 40 allows an enforcement officer to, at any reasonable time, enter and inspect any place (other than a private dwelling)—

- to monitor compliance with the Bill, regulations, or New Zealand's international obligations referred to in *clause 3(b)*:
- to investigate and report on complaints made to the Director.

An enforcement officer may also enter and inspect any place (other than a private dwelling)—

- in which the officer reasonably believes a radiation source is located or is used for providing radiation services; and
- that the officer reasonably suspects is used to commit an offence against the Bill or contains a threat to the health or safety of the public or to the environment.

An enforcement officer must not enter a private dwelling except with the consent of the occupier or owner or pursuant to a warrant under section 98 of the Search and Surveillance Act 2012.

Clause 41 prescribes the powers of enforcement officers when inspecting a place under *clause 40*. Those powers include the power to—

- inspect any item reasonably believed to be a radiation source:
- record, by any means, any thing, process, or situation reasonably believed to involve a radiation source:
- take possession of and remove any equipment or device inspected:
- take possession of and remove any radiation source.

Clause 41(3) sets out the requirements that apply when an enforcement officer has removed any thing from the place being inspected.

Clause 42 requires an enforcement officer to notify the appropriate territorial authority if, while inspecting a place under *clause 40*, the officer believes that a building or sitework does not comply with the Building Act 2004.

Clause 43 requires any person working in, or who appears to be in charge of, a place that is being inspected by an enforcement officer to answer any question that the officer may reasonably ask for the purpose of the inspection (*see clause 43(2)*).

Clause 44 confers on enforcement officers the power to request any information about any radiation source from—

- the holder of an authorisation or any person acting under that person's supervision; or
- a person who is exempted by regulations from the requirement to hold a use licence or any person acting under that person's supervision; or
- any person who the officer reasonably believes possesses or uses a radiation source.

Clause 45 provides for the appointment of international inspectors by the Director for the purpose of enabling New Zealand to meet its international obligations relating to radiation protection, radiation safety and security, and nuclear non-proliferation. Only a person who has been designated by the International Atomic Energy Agency (the **IAEA**) as an inspector may be appointed under this clause.

Clause 46 requires that an international inspector must be accompanied by an enforcement officer and must produce his or her identification on request.

Clause 47 enables an enforcement officer to issue compliance orders to—

- any person who the officer believes is not complying with the Bill, regulations, or any condition of an authorisation; or
- any person who the officer reasonably believes has done or omitted to do anything that involves a radiation source and that has caused or is likely to cause significant adverse effects on the health or safety of people or on the environment.

Clause 48 provides for the form, content, and service of a compliance order.

Clause 49 enables the Director to seize a radiation source to prevent or mitigate any immediate risk to the health or safety of people or to the environment or immediate risk posed by the safety or security of the radiation source. The Director may also seize a radiation source that the Director has reasonable cause to suspect is—

- in the possession of a person without an authorisation; or
- evidence of an offence under the Bill or the Terrorism Suppression Act 2002.

A radiation source may be seized by the Director or a Customs officer if the source is being, or is to be, exported without consent or has been imported without consent.

Clause 49 also enables the Director to recover the costs of seizing, storing, or disposing of a radiation source that has been seized. The Director may take steps to remedy any adverse effects or damage associated with the radiation source, including remediation of a site associated with the radiation source. The costs of any remediation work may be recovered by the Director.

Clause 50 provides that the Director may return any material seized under *clause 49* if—

- the material belongs to another State or to a national or resident of that State, or was stolen or unlawfully obtained from that State; and
- the return of the material is consistent with New Zealand's international obligations; and
- the Director is satisfied with any arrangements for the recovery of all or some of the costs of the return.

Part 2
Appeals, emergencies, offences, and other matters

Subpart 1—Appeals

Clause 51 provides that an affected person may appeal to the District Court against a decision of the Director to—

- grant an authorisation:
- impose conditions or a particular condition on an authorisation:

- decline an authorisation:
- suspend, vary, or cancel an authorisation:
- issue a compliance order.

Clause 52 provides that the District Court may, instead of determining the appeal, refer the matter to the Director for reconsideration. The court may direct the Director to reconsider, either generally or in relation to a specified aspect, the whole or any part of the decision.

Clause 53 states that the decision of the Director that is being appealed continues to have effect unless the District Court orders otherwise.

Clause 54 relates to the procedure of an appeal to the District Court. The decision of the District Court on an appeal is final, except as provided in *clause 55*.

Clause 55 provides that a party to an appeal to the District Court may appeal to the High Court against a determination of law arising in the appeal.

Subpart 2—Emergencies

Clause 56 defines emergency management powers, enforcement officer, non-invasive radioactivity testing, non-invasive testing, and on site for the purposes of *subpart 2*. The definition of enforcement officer includes an enforcement officer within the meaning of section 135 of the Hazardous Substances and New Organisms Act 1996.

Clause 57 enables the Director to declare a radiation emergency over an area if—

- the Director has reasonable grounds to believe there is a radiation danger; and
- the emergency is not being managed under the Civil Defence Emergency Management Act 2002, under the Fire Service Act 1975, or by the Police.

Clause 58 enables an enforcement officer to declare a radiation emergency on site (the place where there is an actual or imminent danger to the health or safety of people or to the environment resulting from possible exposure to radiation).

Clause 59 provides that an enforcement officer within the meaning of section 135 of the Hazardous Substances and New Organisms Act 1996 may exercise powers that the officer may exercise during an

emergency within Part 9 of that Act. (This is an addition to the powers conferred under this subpart.)

Clause 60 provides for the powers that an enforcement officer may exercise during a radiation emergency or during a state of emergency (under the Civil Defence Emergency Management Act 2002) in which there is believed to be a radiation danger. Those powers include—

- the power to enter a place at any time without a warrant and without complying with *clause 40*:
- the power to require a person to undergo non-invasive radiation testing if the officer has reasonable cause to believe that the person has been exposed to radiation and may pose a risk to the health or safety of any person or to the environment:
- any power set out in *clause 40 or 49*:
- a power to direct a person to stop an activity that may be contributing to the emergency:
- a power to requisition property for use in the emergency:
- a power to destroy property or anything else in order to prevent or limit the extent of the emergency.

The powers conferred on an enforcement officer may be exercised within or outside the declared radiation emergency area or the area where the radiation danger is located. The enforcement officer may exercise those powers only to the extent that they are reasonably necessary to eliminate or reduce the extent of the damage caused by the radiation danger.

Clause 61 provides for the payment of compensation for the loss of or damage to any property that is requisitioned for use in a radiation emergency or destroyed to prevent or limit the extent of the emergency. Compensation is not payable to any person who caused, or contributed substantially to, the emergency that brought about the requisition or destruction.

Clause 62 prevents legal proceedings being brought against an enforcement officer or a person acting at an enforcement officer's request in respect of any action taken by the person in good faith and with reasonable care.

Clause 63 requires the Director to ensure that a radiation response plan is prepared for events that involve radiation safety.

Clause 64 requires the Director to contribute to emergency management strategies and emergency management plans under other Acts to the extent that those strategies or plans relate to radiation safety.

Subpart 3—Offences

This subpart contains offence provisions relating to—

- contravening a fundamental requirement (*clause 65*):
- carrying out an activity without the required authorisation (*clause 66*):
- providing false or misleading information in an application for an authorisation or in a radiation safety plan (*clause 67*):
- failing to comply with specified duties that relate to an authorisation (*clause 68*):
- failing to register a source licence (*clause 69*):
- failing to keep appropriate records and make them available to the Director (*clause 70*):
- refusing entry to an enforcement officer who has requested entry under *clause 40* (*clause 71*):
- failing to answer questions by an enforcement officer or providing a false or misleading answer to the officer (*clause 72*):
- obstructing an enforcement officer (*clause 73*):
- failing to comply with any instructions of an enforcement officer during an emergency (*clause 74*):
- failing to comply with a compliance order (*clause 75*).

The offences specified in *clauses 65 to 70 and 73 to 75* are strict liability offences. *Clause 76* provides that a defendant in a prosecution for an offence against any of those provisions has a defence if he or she can prove that—

- the commission of the offence was due to the act or omission of another person, an accident, or some other cause outside the defendant's control; and
- the defendant took all reasonable steps to avoid the commission of the offence or similar offences.

Clause 77 provides for the liability of a body corporate, principal, or individual in respect of an offence against the Bill.

Clause 78 enables the court to order a person to mitigate or remedy, or pay the costs of mitigating or remedying, any adverse effects on people or the environment caused by the person.

Subpart 4—Director for Radiation Safety

Clause 79 requires the Director-General to appoint a Director for Radiation Safety.

Clause 80 states that the functions, duties, and powers of the Director are those conferred or imposed by the Bill or any other enactment. In performing those functions or duties, or exercising those powers, the Director—

- must act independently of, but is accountable to, the Director-General:
- is subject to general policy directions given by the Minister that affect radiation safety and that are not inconsistent with the Bill or regulations.

Clause 81 enables the Minister to authorise the Director to approve authorisations that relate to a specified type or quantity of nuclear material. In *subpart 2 of Part 1*, the Director may not grant an authorisation relating to nuclear material without the Minister's approval unless the Minister has authorised the Director to approve an authorisation or class of authorisation that relates to a specified type or quantity of nuclear material.

Clause 82 allows the Director to delegate his or her functions, duties, or powers other than the general power to delegate or a power granted under *clause 81*.

Subpart 5—Radiation Safety Advisory Council

Clause 83 establishes the Radiation Safety Advisory Council (the **Council**), which is the same organisation that, immediately before the commencement of the Bill, was known as the Radiation Protection Advisory Council.

Clause 84 sets out the functions of the Council, which include providing advice to the Director and the Minister on general matters relating to or affecting radiation safety and standards relating to radiation safety, and providing advice as requested on any matter relating

to radiation safety referred to it by the Minister, the Director, or the Director-General.

Clause 85 allows the Council to appoint advisory or technical committees as it thinks fit to provide advice to the Council.

Clause 86 allows the Council to regulate its procedure subject to the Bill or regulations.

Clause 87 enables the Council to consult any person or body it considers appropriate.

Clause 88 requires the Council to deliver an annual report to the Minister. The Minister must present a copy of the report to the House of Representatives.

Subpart 6—Codes of practice and regulations

Clause 89 enables the Director to issue codes of practice for the purpose of implementing any fundamental requirement or provision of the Bill. Compliance with a code of practice is evidence of compliance with the fundamental requirement or provision to which the code relates.

The effect of *clause 90* is that each code of practice must—

- state the date on which it comes to force; and
- state the fundamental requirement or provision of the Bill to which it relates; and
- be consistent with the Bill and regulations.

Clause 91 requires the Director to ensure that each code of practice is publicly available on an Internet site maintained by, or on behalf of, the Director.

Clause 92 provides that the Director may amend or revoke a code of practice at any time.

Clause 93 enables the making of regulations for the purposes listed in *subclause (1)(1) to (28)*. Those purposes include, by way of example,—

- prescribing situations or classes of situations in which a use licence is not required:
- prescribing requirements for radiation safety plans:
- granting or enabling the Director to grant exemptions from any provision in *subpart 2 or 3 of Part 1* in specified situations:

- prescribing fees payable in respect of any application for an authorisation.

Clause 94 enables regulations to be made, on the recommendation of the Minister, to amend *Schedule 2 or 3*. Before making any such recommendation, the Minister must—

- undertake consultation with persons or organisations that have an interest in, or represent those likely to be substantially affected by, the proposed amendment; and
- be satisfied that the proposed amendment is necessary in order to comply with any applicable requirements, guidelines, or standards of the IAEA, or is consistent with those requirements, guidelines, or standards; and
- be satisfied that the proposed amendment is necessary for the purpose of protecting the health or safety of people or protecting the environment from the harmful effects of ionising radiation.

Subpart 7—Other matters

Clause 95 provides that transitional, savings, and related provisions set out in *Schedule 1* have effect according to their terms.

Clause 96 repeals the Radiation Protection Act 1965.

Clause 97 revokes the Radiation Protection Act Commencement Order 1973, the Radiation Protection (Appeals) Regulations 1974, and the Radiation Protection Regulations 1982.

Clause 98 amends the Terrorism Suppression Act 2002. The principal amendments relate to sections 13C and 13E(1) of that Act. Section 13C contains offences relating to nuclear material and is amended to the effect that a person who, without lawful authority, carries, sends, transports, or otherwise moves nuclear material into or out of New Zealand commits an offence. Section 13E(1)(d), which provides that it is an offence to unlawfully and intentionally demand radioactive material by threat, is expanded to include demands for any radioactive device or nuclear facility.

Clause 99 provides for consequential amendments to enactments set out in *Schedule 5*.

Schedule 1 sets out transitional, savings, and related provisions.

Schedule 2 contains a list of radioactive material with associated activity concentration levels and activity levels. The Bill applies to any radioactive material listed in the first column of *Schedule 2* that exceeds the applicable activity concentration levels and activity levels specified in that schedule.

Schedule 3 sets out the dose limits for ionising radiation.

Schedule 4 relates to the Radiation Safety Advisory Council and provides for matters relevant to the operation of the council.

Schedule 5 contains consequential amendments to enactments.

Hon Jonathan Coleman

Radiation Safety Bill

Government Bill

Contents

The Parliament of New Zealand enacts as follows:

1 Title

This Act is the Radiation Safety Act **2014**.

2 Commencement

(1) This Act comes into force on a date appointed by the Governor-General by Order in Council.

(2) For the purpose of **subsection (1)**, 1 or more orders may be made appointing different dates for different provisions and for different purposes.

(3) To the extent that it is not previously brought into force under **subsection (1)**, the rest of this Act comes into force on the date that is 1 year after the date on which this Act receives the Royal assent.

Part 1
Preliminary matters and regulation of activities that involve radiation source

Subpart 1—Preliminary matters

3 Purposes

The purposes of this Act are to—

(a) establish a framework to protect the health and safety of people and protect the environment from the harmful effects of ionising radiation while allowing for the safe and beneficial use of ionising radiation; and

(b) enable New Zealand to meet its international obligations relating to radiation protection, radiation safety and security, and nuclear non-proliferation, including (but not limited to) its obligations under—

(i) the Convention on the Physical Protection of Nuclear Material; and

(ii) the International Convention for the Suppression of Acts of Nuclear Terrorism; and

(iii) the Agreement between New Zealand and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons; and

(iv) the Protocols to the agreement described in **subparagraph (iii)**.

4 Application

This Act applies to—

(a) any radioactive material listed in the first column of **Schedule 2** if the radioactive material—

(i) has a radioactivity concentration that exceeds the acceptable activity concentration level for that material (as listed in the second column of **Schedule 2**); and

(ii) has a radioactivity that exceeds the acceptable activity level for that material (as listed in the third column of **Schedule 2**); and

(b) any irradiating apparatus.

Compare: SR 1982/72 r 5

5 Interpretation

(1) In this Act, unless the context otherwise requires,—

authorisation means—

(a) a source licence:

(b) a use licence:

(c) an approval:

(d) a consent

calibration service means a service that calibrates instruments used to measure ionising radiation and radioactivity

code of practice means a code of practice issued under **section 89**

conditions includes any restrictions

consent means a consent granted under **section 25**

controlled radiation source has the meaning given in **section 33(2)**

Convention on Physical Protection of Nuclear Material means the Convention on the Physical Protection of Nuclear Material done at New York and Vienna on 3 March 1980

Council means the Radiation Safety Advisory Council established by **section 83**

Customs officer and **Customs controlled area** have the meanings given to those terms by the Customs and Excise Act 1996

deal with, in relation to a radiation source, means—

(a) to manufacture, possess, control, use, export, import, sell, or supply a radiation source; or

(b) to carry out any other activity or practice involving the radiation source

Director means the Director for Radiation Safety appointed under **section 79**

Director-General means the chief executive of the department of State or agency that, with the authority of the Prime Minister, is for the time being responsible for the administration of this Act

document means any record of information and includes—

(a) anything on which there is writing or any image; and

(b) anything on which there are marks, figures, symbols, or perforations that have a meaning for people qualified to interpret them; and

(c) anything from which sounds, images, or writing can be reproduced, with or without the aid of anything else

effective dose means the tissue-weighted sum of equivalent doses in all specified tissues and organs of the body

enforcement officer means a person appointed by the Director under **section 39**

equivalent dose means the radiation-weighted dose in a tissue or organ of the body

export means to transport, send, or cause to be transported or sent from a point inside New Zealand to a point outside New Zealand

fundamental requirements means the fundamental requirements set out in **sections 9 to 13**

IAEA means the International Atomic Energy Agency

import means bring or cause to be brought into New Zealand in any manner from a point outside New Zealand

ionising radiation means radiation capable of producing ion pairs in biological material

irradiating apparatus—

(a) means any device capable of generating ionising radiation; but

(b) does not include any apparatus specified in regulations

Minister means the Minister of the Crown who, under the authority of a warrant or with the authority of the Prime Minister, is for the time being responsible for the administration of this Act

Ministry means the department of State that, with the authority of the Prime Minister, is for the time being responsible for the administration of this Act

nuclear material means any source material or any special fissionable material

occupier, in relation to a place, includes a person who is present at or in the place and who is in apparent control of the place

personal dosimetry service means a service that measures and records the radiation doses received by people exposed to ionising radiation

place includes—

(a) any dwelling, premises, vehicle, ship, craft, or aircraft; and

(b) a building or a structure; and

(c) part of a place

possess includes store

radiation means ionising radiation in the form of particles or waves that are emitted from a radioactive material or an irradiating apparatus, or both

radiation ancillary service means—

(a) a personal dosimetry service; or

(b) a calibration service; or

(c) any other service that directly or indirectly supports or is supported by the radiation source and is prescribed by regulations

radiation danger means actual or imminent danger to—

(a) the health or safety of people as a result of their exposure to radiation; or

(b) the environment as a result of its exposure to radiation

radiation safety plan means a plan submitted under **section 19**

radiation source means radioactive material to which this Act applies or an irradiating apparatus

radioactive material means any material that spontaneously emits ionising radiation, including any naturally occurring radioactive material or any nuclear material

regulations means regulations made under this Act

sealed radioactive material means radioactive material that is—

(a) permanently sealed in a capsule; or

(b) closely bonded and in solid form

seize includes secure against interference

sell includes—

(a) supply or otherwise deal in or dispose of, whether by way of sale, barter, loan, or gift; and

(b) receive for sale, expose for sale, have in possession for sale, or send or deliver for sale; and

(c) offer or attempt to sell; and

(d) cause or allow to be sold

source licence means a licence described in **section 18**

transport—

(a) means the deliberate physical movement of a radiation source (other than that forming part of the means of propulsion) from one place to another; and

(b) includes the temporary storage of the radiation source in transit, as well as carriage; but

(c) does not include the movement of the radiation source from one place to another within a specified site

unsealed radioactive material means radioactive material that is not a sealed radioactive material

use licence means a licence granted under **section 23**.

(2) For the purpose of the definition of nuclear material in **subsection (1)**,—

source material means—

(a) uranium containing a mixture of isotopes occurring in nature, uranium depleted in the isotope 235, or thorium; and

(b) any material described in **paragraph (a)** that is in the form of metal, alloy, chemical compound, or concentrate; and

(c) any material prescribed under **section 93(1)(4)**

special fissionable material means—

(a) plutonium-239, uranium-233, or uranium enriched in the isotopes 235 or 233 or both; or

(b) any combination of the material described in **paragraph (a)**; or

(c) any material prescribed under **section 93(1)(4)**.

6 Act binds the Crown

This Act binds the Crown.

7 Relationship with specified enactments

(1) Nothing in this Act affects or limits the application of—

(a) the New Zealand Nuclear Free Zone, Disarmament, and Arms Control Act 1987; or

(b) the Nuclear-Test-Ban Act 1999; or

(c) the Atomic Energy Act 1945; or

(d) any regulations made under an Act referred to in **paragraphs (a) to (c)**.

(2) In the event of any inconsistency between the provisions of an Act specified in **subsection (1)** and the provisions of this Act, the provisions of the Act specified in **subsection (1)** prevail.

(3) In the event of any inconsistency between the provisions of any regulations made under an Act specified in **subsection (1)** and any regulations made under this Act, the provisions of the regulations made under the Act specified in **subsection (1)** prevail.

(4) To avoid doubt, if any radioactive material to which this Act applies is also a substance to which the Atomic Energy Act 1945 applies, this Act applies to that material regardless of whether a consent has been obtained under the Atomic Energy Act 1945 for that material.

Fundamental requirements

8 Duty to comply with fundamental requirements

(1) Every person who deals with a radiation source must ensure that people and the environment are protected now and in the future from the adverse effects of the radiation source by complying with the fundamental requirements set out in **sections 9 to 13**.

(2) In **sections 10 to 13**, **unauthorised** means unauthorised by or under any enactment.

9 Protecting people from radiation

(1) A person who deals with a radiation source must ensure that as a result of dealing with the radiation source, the expected benefits to people and society outweigh the risk of harm to people and the environment.

(2) A person who deals with a radiation source must ensure that the magnitude of individual doses of ionising radiation to which a person may be exposed, the number of people subject to exposure, and the likelihood of exposures to ionising radiation are as low as is reasonably achievable, taking into account economic, social, and environmental factors.

(3) A person who deals with a radiation source must ensure that any ionising radiation exposure that results from a planned operation or activity does not exceed the applicable dose limits set out in **Schedule 3**.

10 Safety of radiation sources

(1) No person may deal with a radiation source unless it is fit for its intended purpose.

(2) A person who deals with a radiation source must take all reasonable steps to—

- (a) ensure the safe placement and containment of the radiation source while it is stored or used; and
- (b) minimise the likelihood of any accident, incident, or emergency that is caused wholly or partly by, or involves, the radiation source; and
- (c) plan for action to be taken to respond to and mitigate the consequences of—
  - (i) any accident, incident, or emergency; or
  - (ii) any loss of or unauthorised removal of the radiation source.

11 Security of radiation source

Every person who deals with a radiation source must prevent—

- (a) unauthorised access to the radiation source or to the place where the radiation source is stored or used:
- (b) the loss or theft of the radiation source:
- (c) sabotage of the radiation source:
- (d) the unauthorised transfer or unauthorised removal of the radiation source:
- (e) any unauthorised act through the use of the radiation source.

12 Safe disposal of radiation source

Every person who disposes of a radiation source must do so safely.

13 Transport, storage, and disposal of radiation source

No person may transport, store, or dispose of a radiation source except as permitted by this Act or regulations.

Subpart 2—Activities that require authorisation

General provisions

14 Activities that require authorisation under this Act

No person may, unless this Act or regulations provide otherwise,—

(a) manufacture, possess, or control a radiation source without a source licence:

(b) use a radiation source without a use licence:

(c) import or export radioactive material without a consent:

(d) perform a radiation ancillary service without an approval.

15 Applications for authorisations must be made to Director

An application for a source licence, use licence, consent, or approval must—

(a) be made to the Director; and

(b) contain the prescribed information; and

(c) be accompanied by the prescribed fee.

16 Situations where source licence not required

Despite **section 14(a)**, a source licence is not required for—

(a) the transport of a radiation source:

(b) the temporary custody of a radiation source by a person other than the holder of the source licence if—

(i) the management and control of the radiation source is subject to the direction of the holder of the source licence; and

(ii) the temporary custody is not inconsistent with any term or condition of the source licence.

17 Situations where use licence not required

Despite **section 14(b)**, a use licence is not required—

(a) for the performance of any prescribed activity by a person authorised by regulations; or

(b) in any situation or class of situation prescribed by regulations; or

(c) where the use of the radiation source is authorised by a source licence under **section 18(2)**.

Source licences

18 Source licence

(1) A source licence—

(a) authorises a person to manage and control a radiation source regardless of whether the person owns or has physical possession of the radiation source; and

(b) may authorise a person to—

(i) manufacture a radiation source; or

(ii) have possession of a radiation source.

(2) A source licence that authorises a person to have possession of a radiation source may authorise activities involving passive or limited use of the radiation source, such as the observation of the radiation source to obtain information.

19 Radiation safety plan

(1) The Director may require an applicant for a source licence or renewal of that licence to submit a radiation safety plan to the Director.

(2) A requirement by the Director to submit a plan must be in writing and state the matters that the plan must address.

(3) The plan must demonstrate how the applicant intends to comply with—

(a) the fundamental requirements that apply to the radiation source to which the application relates; and

(b) the requirements of this Act and the regulations.

(4) The plan must—

(a) identify any risks of adverse effects on people or the environment that may be caused by—

(i) the radiation source; or

(ii) the proposed use of the radiation source; or
(iii) the proposed location of the radiation source; and

(b) identify any risks involved in transporting the radiation source; and

(c) identify mechanisms to—
(i) prevent risks of the kinds described in **paragraphs (a) and (b)** from arising; and
(ii) reduce and eliminate those risks if they do arise; and

(d) if required by the Director, set out the steps that the applicant will take to—
(i) reduce the likelihood of an accident, incident, or emergency that is caused by or involves the radiation source; and
(ii) mitigate any adverse effects of any such accident, incident, or emergency; and

(e) address any matter that the Director considers should be addressed (for example, how the radiation source is to be transported and how and where the radiation source is to be used or stored); and

(f) be in the prescribed form (if any).

(5) Before submitting the plan, the applicant must consult any agency that has a role in, or is likely to be affected by, the plan.

(6) The Director may approve the plan only if satisfied that the plan complies with the requirements of this section.

20 When Director may grant source licence

(1) The Director may grant a source licence if—

(a) the Director is satisfied that—
(i) the applicant is a suitable person to hold a source licence; and
(ii) the activity proposed in relation to the radiation source does not present a significant risk to the health or safety of people or to the environment; and

(b) the Director has approved any radiation safety plan submitted by the applicant; and

(c) the Director considers that granting the source licence is appropriate and justified.

(2) The Director may impose conditions on a source licence that the Director considers appropriate.

(3) Conditions on a source licence may, without limitation, relate to—

- (a) the type of radiation source that the person is authorised to manufacture, possess, or control:
- (b) the permitted uses of the radiation source:
- (c) the place (or places) at which the radiation source may be held or stored:
- (d) the transport of the radiation source:
- (e) information that must be disclosed to other agencies regarding the radiation source.

(4) If the source licence relates to nuclear material, the Director must not grant the licence unless—

- (a) the Director has received, to his or her satisfaction, assurances from the applicant that the material will be protected during international transport at the levels specified in Annex I of the Convention on Physical Protection of Nuclear Material; and
- (b) either—
  - (i) the Minister approves the licence; or
  - (ii) the Director is authorised under **section 81** to approve the licence.

21 Duties of holders of source licence

(1) The holder of a source licence is responsible at all times for the management and control of the radiation source, including the transport of the radiation source.

(2) The holder of a source licence—

- (a) must ensure that the radiation source is properly maintained and stored; and
- (b) must ensure that appropriate security arrangements are in place to avoid accidental or malicious use of the radiation source; and
- (c) must not abandon the radiation source; and
- (d) must dispose of the radiation source only in accordance with regulations; and
- (e) must comply with the requirements of the radiation safety plan (if any); and

(f) must comply with this Act, regulations, and any conditions of the licence.

(3) If the holder of a source licence believes that an incident has occurred that has resulted in unintended loss or release of radiation, or overexposure of a person to radiation, the holder must—

(a) notify the Director as soon as practicable; and

(b) take steps to mitigate the effects of the incident, including, as appropriate, limiting access to the affected area; and

(c) provide appropriate clothing; and

(d) ensure that any person who has been exposed to radiation has a medical examination and is provided with appropriate information; and

(e) comply with any other steps as required by the Director or prescribed by regulations (if any).

Use licences

22 Use licence

(1) A use licence may authorise the licence holder to use any radiation source, a specified radiation source, or a radiation source of a specified class.

(2) Only a natural person may apply for a use licence.

(3) The use of a radiation source includes—

(a) the use of radiation emitting from the radiation source:

(b) causing the radiation source to emit radiation:

(c) if the radiation source is radioactive material, administering, injecting, or implanting the material into a person, animal, plant, or thing.

(4) A natural person who does not hold a use licence for a specified radiation source may, despite **section 14(b)**, use the radiation source if the person is acting under the direct supervision of—

(a) the person who holds the use licence for the radiation source; or

(b) a person who is authorised by regulations to perform a prescribed activity.

23 Grant of use licence

(1) The Director may grant a use licence if satisfied that—

(a) the proposed use of the radiation source does not present a significant risk to the health or safety of people or to the environment; and

(b) the proposed use of the radiation source is appropriate and justified; and

(c) the applicant has the appropriate training, qualifications, and experience; and

(d) the applicant is a suitable person to hold the licence.

(2) The Director may grant a use licence subject to any conditions that the Director considers appropriate.

(3) Conditions on a use licence may, without limitation, restrict—

(a) the type of radiation source that may be used; and

(b) the uses of the radiation source, including any practices that may be carried out that involve the radiation source; and

(c) the places at which the radiation source may be used.

(4) If the use licence relates to nuclear material, the Director must not grant the licence unless—

(a) the Minister approves the licence; or

(b) the Director is authorised under **section 81** to approve the licence.

24 Duties of holders of use licences and persons under direct supervision

The following people must comply with this Act, regulations, and the conditions of a use licence:

(a) the holder of the licence; and

(b) any person who uses the radiation source (to which the licence applies) under the direct supervision of—

(i) the holder of the licence; or

(ii) a person who is authorised by regulations to perform a prescribed activity.

Consents

25 Grant of consent to import or export radioactive material

(1) The Director may grant a consent to import or export radioactive material if the Director is satisfied that—

(a) the applicant is a suitable person to hold the consent; and

(b) the proposed import or export does not present a significant risk to the health or safety of people or to the environment; and

(c) the proposed import or export is appropriate and justified; and

(d) the proposed import or export is consistent with the purposes of this Act.

(2) The Director may grant the consent subject to any conditions that the Director considers appropriate.

(3) Conditions on a consent may, without limitation, include—

(a) restrictions on the type and quantity of radioactive material that may be imported or exported; and

(b) restrictions relating to the date by which the importation or exportation must take place.

(4) If the consent relates to nuclear material, the Director must not grant the consent unless—

(a) the Director has received, to his or her satisfaction, assurances from the applicant that the material will be protected during international transport at the levels specified in Annex I of the Convention on the Physical Protection of Nuclear Material; and

(b) either—

(i) the Minister approves the consent; or

(ii) the Director is authorised under **section 81** to approve the consent.

26 Duties of consent holders

(1) A consent holder must—

(a) ensure that appropriate security arrangements are in place to prevent or avoid accidental or malicious use of the radiation source; and

(b) comply with this Act, regulations, and any conditions of the consent.

(2) If the consent holder believes that an incident has occurred that has resulted in unintended loss or release of radiation, or overexposure of a person to radiation, the holder must—

(a) notify the Director as soon as practicable; and

(b) take steps to mitigate the effects of the incident, including, as appropriate, limiting access to the affected area; and

(c) provide appropriate clothing; and

(d) ensure that any person who has been exposed to radiation has a medical examination and is provided with appropriate information; and

(e) comply with any other steps required by the Director or prescribed by regulations (if any).

Approvals

27 No person may perform radiation ancillary services without approval

A person must not perform a radiation ancillary service unless—

(a) the person has been granted an approval under **section 28** to perform the service; and

(b) the person complies with the conditions, if any, of that approval.

28 Grant of approval

(1) The Director may grant an approval to a person to perform a radiation ancillary service if he or she is satisfied that—

(a) the applicant is a suitable person to hold the approval; and

(b) the proposed radiation ancillary service does not present a significant risk to the health or safety of people or to the environment.

(2) The Director may grant an approval subject to any conditions that the Director considers appropriate.

Further provisions relating to all authorisations

29 When authorisation expires

(1) The Director must determine the period for which an authorisation is in force, which must not exceed the maximum period prescribed by regulations (if any) for an authorisation or class of authorisation.

(2) The authorisation expires on the expiry date specified by the Director unless—

(a) it is earlier renewed, suspended, or cancelled; or

(b) **section 31(6)** applies.

30 Suspension, variation, or cancellation of authorisation

(1) The Director may suspend, vary, or cancel an authorisation if he or she believes on reasonable grounds that there is evidence of 1 or more of the following:

(a) the holder of the authorisation has failed to comply with a fundamental requirement:

(b) the authorisation was obtained improperly:

(c) the holder of the authorisation has contravened a condition of the authorisation:

(d) if the authorisation is a source licence, the holder of the authorisation has failed to comply with a requirement of the radiation safety plan (if any):

(e) the holder of the authorisation has been convicted of an offence against this Act:

(f) there would be a risk to the health or safety of people or to the environment if the authorisation were not suspended, varied, or cancelled:

(g) there would be a risk to the security of the radiation source if the authorisation were not suspended, varied, or cancelled:

(h) the holder of the authorisation has ceased to hold a qualification, or meet other criteria, that formed the basis on which the authorisation was granted:

(i) the holder of the authorisation has persistently or repeatedly compromised radiation safety:

(j) the holder of the authorisation has ceased working under the authorisation:

(k) the holder of the authorisation has failed to register a controlled radiation source in accordance with **section 34**.

(2) The Director may vary an authorisation at the request of the holder.

(3) The Director must cancel an authorisation at the request of the holder.

31 Application to renew authorisation

(1) An application to renew an authorisation must—

(a) be made to the Director; and

(b) comply with any prescribed requirements; and

(c) be accompanied by the prescribed fee.

(2) The Director may, subject to **subsection (5)**, renew an authorisation if the Director is satisfied that—

(a) the reasons for granting the original authorisation still apply; or

(b) there are other reasons that—

(i) justify the renewal of the authorisation; and

(ii) comply with the provisions of this Act that apply to the granting of the authorisation.

(3) The applicant, in the case of a source licence, must comply with a requirement to submit a radiation safety plan under **section 19**.

(4) Subject to **subsection (5)**, if a radiation safety plan was required with the authorisation for which a renewal is sought,—

(a) the applicant must apply for the renewal of the approval for that plan; and

(b) the Director may—

(i) approve the plan if the reasons for approving the original plan still apply; or

(ii) approve the plan for different reasons if satisfied that the plan complies with the requirements of **section 19**.

(5) If the authorisation for which a renewal is sought relates to nuclear material, the Director must not renew the authorisation without the Minister's approval, unless the Director is authorised under **section 81** to approve the authorisation.

(6) An authorisation remains in force until an application for its renewal has been determined, but only if the Director receives, before the authorisation expires,—

(a) the application for renewal; and

(b) the prescribed fee; and

(c) all necessary supporting information.

32 Director may require further information

(1) If the Director considers that an applicant for an authorisation or a renewal of an authorisation is able to provide further relevant information, the Director may, by written notice to the applicant given not later than 10 working days after receipt of the application, request that the applicant provide the information specified in the notice.

(2) If the applicant fails to comply with the request within 1 year after the date of the request, the application lapses and a new application will need to be made in relation to the same matter.

Compare: 1996 No 30 s 52

Subpart 3—Register of controlled radiation sources

33 Director must keep register of controlled radiation sources

(1) The Director must keep a register of all controlled radiation sources.

(2) In this Act, a **controlled radiation source** means—

(a) any irradiating apparatus:

(b) any sealed radioactive material:

(c) any nuclear material (whether sealed or unsealed):

(d) any unsealed radioactive material of a kind that regulations require to be registered.

(3) The purpose of the register is—

(a) to help the Director to ascertain and monitor the location of controlled radiation sources; and

(b) to facilitate the exercise of the compliance, assessment, and enforcement functions and powers of the Director; and

(c) to support emergency preparedness and responses.

34 Person who holds authorisation for controlled radiation source must register source

The holder of a source licence must,—

(a) as soon as practicable after the source licence is granted, register the controlled radiation source (to which the licence applies) with the Director; and

(b) comply with requirements for registration that are prescribed in regulations, (if any); and

(c) after registration of the radiation source, notify the Director as soon as possible—

(i) of any change in the location of the radiation source; and

(ii) of any change in the possession of the radiation source; and

(iii) as to whether the radiation source has been disposed of or removed from New Zealand's jurisdiction; and

(iv) of any other matter prescribed by regulations for the purpose of this section.

35 Information that must be on register

(1) The register must include the following information for each controlled radiation source:

(a) a description of the radiation source:

(b) changes in the location of the radiation source as notified under **section 34(c)(i)**:

(c) the name and contact address of the person who holds the relevant authorisation and the owner of the radiation source:

(d) the nature of the authorisation, and the date that the authorisation was granted and, if applicable, renewed or varied:

(e) any other information that may be required by the Director or by regulations.

(2) The Director may include in the register any other information in respect of the controlled radiation source that the Director considers relevant.

36 Form of register

(1) The register may be kept in any manner that the Director thinks fit, including, either wholly or partly, by means of a device or facility that—

(a) records or shares information electronically or by other means; and

(b) permits the recorded information to be readily inspected or reproduced in a usable form; and

(c) permits the recorded information to be accessed by electronic means, including (without limitation) by means of remote logon access.

(2) The Director may, as he or she thinks fit, remove any information on the register to update the register or to ensure that the information on the register is accurate.

37 Search of register by approved persons

(1) A search of the register may be carried out by an approved person—

(a) for a purpose specified in **section 33(3)(a) to (c)**; or

(b) if it is necessary to prevent or lessen a serious and imminent threat to the health or safety of people or to the environment; or

(c) if it is necessary to avoid prejudice to the maintenance of the law (including the prevention, detection, investigation, prosecution, and punishment of offences); or

(d) for a purpose authorised by the Privacy Commissioner under section 54(1) of the Privacy Act 1993; or

(e) if the information from the search is needed to plan for responses to any emergency.

(2) In this section, **approved person** means—

(a) the Director-General; or

(b) an enforcement officer; or

(c) the chief executive of the New Zealand Fire Service; or

(d) a person approved by the Director.

Records

38 Duty to keep records and make them available

(1) A person who is granted an authorisation must keep records that contain sufficient information to enable the Director to ascertain whether the person is complying with—

(a) the requirements of this Act; and

(b) regulations; and

(c) the conditions (if any) of the person's authorisation; and

(d) the requirements of any radiation safety plan.

(2) Without limiting **subsection (1)**, the records kept must include details of—

(a) the steps taken to ensure compliance with the matters described in **subsection (1)**; and

(b) any analysis undertaken or management or emergency management plans prepared by the person to assist him or her in complying with his or her duties under this Act; and

(c) the monitoring of steps taken to ensure compliance with any of the matters described in **subsection (1)**; and

(d) any complaints relating to the activity to which the authorisation relates that are received from any person, and the actions taken in relation to those complaints.

(3) If a person is granted an authorisation in relation to radioactive material, he or she must also keep, in sufficient detail, records of—

(a) the nature and quantity of any radioactive material that is held; and

(b) the nature and quantity of any radioactive material that is imported, exported, or proposed to be imported or exported, and the dates and times (including expected dates and times) of each export or import of radioactive material; and

(c) the place where the radioactive material is held; and

(d) the site plans of the place where the radioactive material is held, except where it is held in a Customs controlled area; and

(e) any radioactive waste associated with the radioactive material (regardless of whether the radioactive material is held, imported, or exported).

(4) The person who holds the authorisation must ensure that the records are made available to the Director when requested.

(5) The Director may, for the purposes of this Act, disclose any information obtained or made available under this section to—

(a) the Ministry of Foreign Affairs and Trade; and

(b) any agency inside or outside New Zealand.

Compare: 1956 No 65 s 69ZD

Subpart 4—Enforcement

Enforcement officers

39 Appointment of enforcement officers

(1) Temporary or permanent enforcement officers may be appointed—

(a) to perform the functions and duties, and exercise the powers, of enforcement officers conferred by this Act; or

(b) to perform particular functions or duties, or exercise particular powers, whether conferred on enforcement officers by this Act or delegated by the Director.

(2) Before appointing a person as an enforcement officer, the Director must be satisfied that the person is qualified to perform the functions and duties and exercise the powers to which the appointment relates.

(3) The Director may impose conditions on the appointment of an enforcement officer.

(4) The Director must issue a warrant of appointment to every person appointed as an enforcement officer.

(5) A warrant of appointment must—

(a) specify the functions, duties, and powers of the holder; and

(b) be in the prescribed form; and

(c) bear the photograph and signature of the holder; and

(d) contain any other particulars that may be prescribed.

(6) A warrant of appointment is, in the absence of evidence to the contrary, sufficient proof that the holder of the warrant may perform the functions and duties, and exercise the powers, conferred on an enforcement officer.

(7) A person who ceases to be an enforcement officer must return the person's warrant of appointment.

40 Power to inspect places

(1) An enforcement officer may, subject to **subsection (3)**, at any reasonable time enter and inspect any place for the purpose of—

- (a) monitoring compliance with this Act and regulations; or
- (b) monitoring compliance with New Zealand's international obligations referred to in **section 3(b)**; or
- (c) investigating and reporting on any complaints made to the Director in respect of any matter to which this Act applies.

(2) An enforcement officer may, subject to **subsection (3)**, at any time enter and inspect—

- (a) any place in which the officer reasonably believes a radiation source is located or is used for providing radiation services; and
- (b) any place that the officer reasonably suspects—
  - (i) has been, is being, or will be used in the commission of an offence against this Act; or
  - (ii) contains a threat to the health or safety of the people or to the environment.

(3) An enforcement officer must not enter a private dwelling except with the consent of an occupier or owner of that dwelling or pursuant to a warrant issued under section 98 of the Search and Surveillance Act 2012.

(4) A person to whom a request for entry is made by an enforcement officer under **subsection (1) or (2)** must comply with that request on the production of the enforcement officer's warrant of appointment.

(5) An enforcement officer may, when inspecting any place for the purpose in **subsection (1)(b)**, be accompanied by an international inspector.

41 Powers of enforcement officers when inspecting places

(1) An enforcement officer has, when inspecting any place under **section 40**, the power to—

(a) inspect any item reasonably believed to be a radiation source (an **item**):

(b) take samples or measurements of any thing reasonably believed to involve a radiation source:

(c) record, by any means, any thing, process, or situation reasonably believed to involve a radiation source:

(d) check the functioning and calibration of instruments and measuring equipment associated with the item:

(e) install and use equipment required for the measurement, surveillance, calibration, or containment of the item:

(f) take possession of and remove any equipment or device inspected:

(g) take possession of and remove any radiation source:

(h) inspect any document that is found in the place and that is believed on reasonable grounds to relate to a radiation source (whether in the place or elsewhere):

(i) take or make copies of, or copies of extracts from, any document inspected and, for that purpose,—

(i) take possession of and remove the document from the place for any reasonable period:

(ii) in the case of a document stored otherwise than on paper, take any reasonable steps to reproduce, in usable form, any or all of the information in it.

(2) Any person at the place must comply with a request made by an enforcement officer for the purpose of facilitating the exercise of any power under **subsection (1)**.

(3) If an enforcement officer has taken any thing in accordance with **subsection (1)(f), (g), or (i)**,—

(a) the officer must, within 5 working days after taking the thing, give the occupier of the place written notice of the thing taken, the reason for taking the thing, and where the thing will be kept; or

(b) the officer must, within 20 working days after taking the thing, give the person in charge of the place written notice that states—

(i) whether the thing will be returned or destroyed; and

(ii) either—

(A) the time and date of the return of the thing to the place; or

(B) the results of the analysis of the thing and why it is being destroyed.

(4) An enforcement officer exercising powers under this section may be accompanied by—

(a) any constable or international inspector; and

(b) any assistants necessary in the circumstances.

42 Compliance with Building Act 2004

(1) If, while inspecting a place under **section 40**, an enforcement officer considers that any building or sitework does not comply with the Building Act 2004, the enforcement officer must by written notice give to the appropriate territorial authority details of how the building or sitework is considered not to comply.

(2) In this section, **building**, **sitework**, and **territorial authority** have the meanings given to them by section 7 of the Building Act 2004.

43 Requirement to answer questions

(1) In this section, an **applicable person** means any person who appears to be in charge of, to be employed in, or to be undertaking any work in, or to have undertaken any work in, the place concerned (or any part of it).

(2) When inspecting any place under **section 40**, an enforcement officer may require an applicable person to answer any question that the officer may reasonably ask for the purpose of—

(a) monitoring compliance with this Act and regulations; or

(b) monitoring compliance with New Zealand's international obligations referred to in **section 3(b)**; or

(c) ascertaining whether the place concerned—

(i) is where a radiation source is located; or

(ii) is used to provide a radiation ancillary service; or

(iii) has been, is being, or will be used in the commission of an offence against this Act; or

(iv) contains a threat to the health or safety of people or to the environment.

44 General power to request information

(1) An enforcement officer may request in writing any information about any radiation source from—

(a) any person who holds an authorisation under this Act or any person acting under that person's supervision; or

(b) any person who is exempted by regulations from the requirement to hold a use licence or any person acting under that person's supervision; or

(c) any person who the officer reasonably believes possesses or uses a radiation source.

(2) A person to whom the request is made must comply with the request within 10 working days after receiving it.

International inspectors

45 Appointment of international inspectors

(1) For the purpose set out in **section 3(b)**, the Director may appoint an international inspector for a period specified by the Director.

(2) The Director must not appoint a person under **subsection (1)** unless the Director is satisfied that the person has been designated by the IAEA as an inspector.

(3) The Director must issue a certificate identifying the international inspector.

46 International inspector must be accompanied by enforcement officer

(1) An international inspector must be accompanied by an enforcement officer during the period specified by the Director under **section 45(1)**.

(2) An international inspector must produce his or her identification certificate on request.

Compliance orders

47 Compliance orders

(1) An enforcement officer may issue a compliance order to a person if—

(a) the officer believes the person is not complying with the Act, regulations, or any condition of an authorisation; or

(b) the officer believes on reasonable grounds that—

(i) the person has done or omitted to do anything that involves a radiation source; and

(ii) the act or omission has caused or is likely to cause significant adverse effects on the health or safety of people or on the environment.

(2) A compliance order made under this section—

(a) may require the person to cease anything being done, or prohibit the person from commencing anything to be done, by or on behalf of that person that the enforcement officer believes—

(i) contravenes or is likely to contravene this Act, regulations, or any condition of an authorisation; or

(ii) relates to any radiation source and has, or is likely to have, an adverse effect on the health or safety of people or on the environment; or

(iii) relates to any radiation source and has, or is likely to have, an adverse effect on the safety or security of the radiation source; or

(b) may require the person to do something that the enforcement officer believes is—

(i) necessary to ensure that the person complies with this Act, regulations, or any conditions of an authorisation; or

(ii) necessary to avoid, remedy, or mitigate any actual or likely adverse effects on people or the environment caused by or on behalf of the person that result from any breach of this Act, regulations, or any condition of an authorisation.

(3) A compliance order may be made subject to any conditions that the enforcement officer considers reasonable in the circumstances.

(4) The person to whom the compliance order is issued must—

(a) comply with the order within the time specified in the order; and

(b) pay all the costs and expenses of complying with the order, unless the order directs otherwise.

48 Form, content, and service of compliance order

(1) A compliance order must contain—

(a) the name of the person to whom it is addressed; and

(b) the reasons for the order; and

(c) the actions required to be taken or ceased or not undertaken; and

(d) the period within which the actions must be taken or cease (which must be a period that is reasonable in the circumstances); and

(e) the consequences of not obeying the order; and

(f) the name and address of the person who served the order; and

(g) any other information required by regulations.

(2) A compliance order must be served in the manner prescribed in regulations.

Seizure of radiation source

49 Seizure, storage, and disposal of radiation source

(1) The Director may at any time seize a radiation source in order to prevent or mitigate any immediate risk—

(a) to the health or safety of people or to the environment; or

(b) posed by the safety or security of the radiation source.

(2) The Director may at any time seize a radiation source that the Director has reasonable cause to suspect—

(a) is in the possession of a person who does not hold an authorisation for the radiation source; or

(b) is evidence of the commission of an offence under this Act or the Terrorism Suppression Act 2002.

(3) The Director or any Customs officer may at any time seize a radiation source that—

(a) is being, or is to be, exported without consent under this Act; or

(b) has been imported without consent under this Act.

(4) The Director must—

(a) store the radiation source seized under this section safely and securely in order to minimise any risk to people and the environment; and

(b) ensure that the storage of the radiation source complies with regulations (if any); and

(c) take steps to render the radiation source harmless.

(5) The Director—

(a) may store or dispose of the radiation source seized under this section in any manner that the Director considers appropriate in the circumstances; but

(b) if the radiation source is seized under **subsection (2)(b)**, the Director may dispose of it only after the completion of any proceedings that relate to the radiation source.

(6) The costs of seizing, storing, or disposing of a radiation source under this section may be recovered from—

(a) any person who, in failing to comply with a provision of this Act, caused or was likely to have caused the immediate risk referred to in **subsection (1)**; or

(b) the person described in **subsection (2)(a)**; or

(c) the person who committed the offence under this Act or the Terrorism Suppression Act 2002.

(7) The Director may,—

(a) in any manner that he or she considers appropriate, take steps to remedy any adverse effects or damage associated with the radiation source, including remediation of a site associated with the source (**remediation**); and

(b) recover the costs of any remediation from a person referred to in **subsection (6)**.

50 Director may return seized material

The Director may return material seized under **section 49(1)** to another State if—

(a) the material—

(i) belongs to that State; or

(ii) belongs to a national or resident of that State; or

(iii) was stolen or unlawfully obtained from that State; and

(b) the return of the material is consistent with New Zealand's international obligations; and
(c) the Director is satisfied with the arrangements, if any, for the recovery of all or some of the costs of the return.

Part 2
Appeals, emergencies, offences, and other matters

Subpart 1—Appeals

51 Appeal against Director's decision may be made to District Court

(1) A person affected by any of the following decisions of the Director may appeal against the decision to the District Court:
(a) a decision to grant an authorisation:
(b) a decision to impose conditions or a particular condition on an authorisation:
(c) a decision to decline an authorisation:
(d) a decision to suspend, vary, or cancel an authorisation:
(e) a decision to issue a compliance order.

(2) The appeal—
(a) must be brought to the District Court by way of notice of appeal in accordance with the rules of court; and
(b) must be lodged within 20 working days after notice of the decision is communicated to the appellant, or within any further time that a District Court Judge allows on application made before or after the period expires.

52 District Court may refer matter back for reconsideration

(1) Instead of determining an appeal under **section 51**, the District Court may direct the Director to reconsider, either generally or in respect of any specified aspect, the whole or any part of the decision.

(2) In giving a direction under **subsection (1)**, the court—
(a) must state its reasons for the direction; and
(b) may, as it thinks just, give any other directions in relation to the matter referred back for reconsideration.

(3) The Director—

(a) must reconsider the matter; and
(b) in doing so, must—
  (i) take the court's reasons into account; and
  (ii) give effect to the court's directions.

Compare: 2003 No 48 s 111

53 Decision to have effect pending determination of appeal

A decision of the Director against which an appeal is lodged continues in force unless the District Court orders otherwise.

54 Procedure on appeal

(1) An appeal under this Part must be heard as soon as is reasonably practicable after it is lodged.

(2) An appeal under this Part is by way of rehearing.

(3) On hearing the appeal, the District Court—
  (a) may confirm, reverse, or modify the decision appealed against; and
  (b) may make any other decision that the Director could have made.

(4) The court must not review—
  (a) any part of a decision not appealed against; or
  (b) any decision not appealed against.

(5) Except as provided in **section 55**, the decision of the District Court on an appeal is final.

55 Appeal on question of law to High Court

(1) A party to an appeal to the District Court under **section 51** may appeal to the High Court against any determination of law arising in the appeal.

(2) The appeal must be heard and determined in accordance with the High Court Rules.

Subpart 2—Emergencies

56 Interpretation

In this subpart, unless the context otherwise requires,—

emergency management powers in relation to the Police, means any powers conferred on the Police under any enact-

ment that relates to the functions of the Police described in section 9(h) of the Policing Act 2008

enforcement officer means—

(a) an enforcement officer within the meaning of **section 5(1)**; or

(b) an enforcement officer within the meaning of section 135 of the Hazardous Substances and New Organisms Act 1996

non-invasive radioactivity testing means the non-invasive testing of a person for the purpose of determining whether the person is so contaminated that the person has become a source of radiation

non-invasive testing means the testing of a person by visual inspection, screening devices, or other means that do not involve physical contact, except where the physical contact is minor or transitory in nature

on site means at the place where there is an actual or imminent danger to the health or safety of people or to the environment resulting from possible exposure to radiation.

57 Declaration of radiation emergency

(1) The Director may declare a radiation emergency if—

(a) the Director has reasonable grounds to believe there is a radiation danger; and

(b) a state of emergency is not in force under the Civil Defence Emergency Management Act 2002; and

(c) the radiation danger is not being dealt with under the Fire Service Act 1975; and

(d) the Police are not exercising any emergency management powers in response to the radiation danger.

(2) Despite **subsection (1)**,—

(a) **subsection (1)(c)** does not apply if the fire officer in control of the emergency and an enforcement officer jointly decide that the provision does not apply:

(b) **subsection (1)(d)** does not apply if the member of the Police in control of the emergency and an enforcement officer jointly decide that the provision does not apply.

(3) The Director must specify the area to which the declaration of a radiation emergency applies.

(4) A declaration of a radiation emergency—

(a) comes into force at the time and date on which the declaration is made; and

(b) expires, subject to **subsection (5)**, at the end of 10 days; and

(c) may, subject to **subsection (5)**, be extended by the Director for a further 10 days; and

(d) may be terminated before its expiry by the Director at a time and date specified by the Director.

(5) A declaration of a radiation emergency that is not made in writing expires 48 hours after the declaration is made unless the Director confirms the declaration in writing within those 48 hours.

(6) If a declaration of emergency under the Hazardous Substances and New Organisms Act 1996 is in force at the same time as a declaration under this section is in force, the declaration under this section overrides the declaration under that Act.

(7) A declaration of a radiation emergency under this section has effect over the area specified under **subsection (3)**.

(8) Despite **subsections (4) and (5)**, a declaration of a radiation emergency under this section ceases when a state of emergency is declared under the Civil Defence Emergency Management Act 2002.

58 On-site declaration of radiation emergency

(1) An enforcement officer may declare a radiation emergency on site if—

(a) the officer has reasonable grounds to believe there is a radiation danger; and

(b) a state of emergency is not in force under the Civil Defence Emergency Management Act 2002; and

(c) the radiation danger is not being dealt with under the Fire Service Act 1975; and

(d) the Police are not exercising any emergency management powers in response to the radiation danger.

(2) Despite **subsection (1)**,—

(a) **subsection (1)(c)** does not apply if the fire officer in control of the emergency and an enforcement officer jointly decide that the provision does not apply:

(b) **subsection (1)(d)** does not apply if the member of the Police in control of the emergency and an enforcement officer jointly decide that the provision does not apply.

(3) The enforcement officer must declare the radiation emergency by—

(a) identifying himself or herself to any people in the vicinity; and

(b) stating his or her authority to exercise emergency powers; and

(c) announcing the nature of the emergency and specifying the area to which the declaration applies.

(4) The enforcement officer must as soon as is reasonably practicable notify the Director that a radiation emergency has been declared under this section.

(5) The declaration of a radiation emergency under this section ceases on the earliest of the following times:

(a) 48 hours after the time of declaration:

(b) when a state of emergency is declared under the Civil Defence Emergency Management Act 2002:

(c) when the radiation emergency is managed under the Fire Service Act 1975:

(d) when the Police exercise their emergency management powers in response to the emergency.

(6) Despite **subsection (5)**, a declaration of a radiation emergency may be extended by the Director for a period of up to 10 days.

(7) If a declaration of emergency under the Hazardous Substances and New Organisms Act 1996 is in force at the same time as a declaration under this section is in force, the declaration under this section overrides the declaration under that Act.

(8) A declaration of a radiation emergency under this section has effect over the area announced under **subsection (3)**.

59 Effect of declaration on enforcement officers under other enactments

(1) As long as a declaration of a radiation emergency under **section 57** or **58** is in force, an enforcement officer within the meaning of section 135 of the Hazardous Substances and New Organisms Act 1996 may (in addition to any powers conferred under this subpart) exercise in respect of the radiation emergency any power under that Act that the officer may exercise during an emergency within the meaning of Part 9 of that Act.

(2) **Subsection (1)** does not limit the exercise by the enforcement officer of any other power that the officer may exercise under the Hazardous Substances and New Organisms Act 1996.

60 Emergency powers

(1) An enforcement officer may, while a radiation emergency is in force or while **subsection (2)** applies, do 1 or more of the following:

- (a) enter a place at any time—
  - (i) without a warrant; and
  - (ii) without complying with **section 40**:
- (b) require a person to undergo non-invasive radioactivity testing if the officer has reasonable cause to believe that the person—
  - (i) has been exposed to radiation; and
  - (ii) may pose a risk to the health or safety of any person or to the environment:
- (c) exercise 1 or more of the powers set out in **section 40**:
- (d) exercise 1 or more of the powers set out in **section 49**:
- (e) direct a person to stop an activity that may be contributing to the radiation danger:
- (f) request, either orally or in writing, a person to take action to prevent or limit the extent of the radiation danger:
- (g) direct a person to leave a place that is in the vicinity of the radiation danger:
- (h) direct a person to refrain from entering the vicinity of the radiation danger:
- (i) requisition property for use in responding to the radiation danger:

(j) destroy property or anything else in order to prevent or limit the extent of the radiation danger:

(k) secure the site for up to 24 hours after the radiation danger or state of emergency has ceased.

(2) This subsection applies if—

(a) a state of emergency is in force under the Civil Defence Emergency Management Act 2002; and

(b) the Director of Civil Defence Emergency Management or a Controller (within the meaning of the Civil Defence Emergency Management Act 2002)—

(i) has reasonable grounds to believe that a radiation danger has arisen as part of the emergency; and

(ii) has requested that an enforcement officer respond to or assist in responding to the radiation danger.

(3) An enforcement officer may exercise the powers conferred by **subsection (1)**—

(a) within or outside the declared radiation emergency area or the area in which the radiation danger is located; and

(b) only to the extent that those powers are reasonably necessary to eliminate or reduce the extent of the damage caused by the radiation danger.

(4) If an enforcement officer enters private property pursuant to the powers conferred by **subsection (1)**, he or she must advise the occupier of the property as soon as practicable.

(5) Every person who is required by an enforcement officer, under **subsection (1),** to take any action, or not to take any action, must comply with that requirement.

(6) In **subsection (1)(e)**, **person** includes the New Zealand Defence Force or New Zealand Fire Service.

Compare: 1996 No 30 s 137

61 Compensation for property requisitioned or destroyed

(1) If an enforcement officer or a person acting at the officer's request under **section 60(1)(i)** requisitions property from a person for use in responding to an emergency or destroys property in order to prevent or limit the extent of the emergency under **section 60(1)(j)**, reasonable compensation for any loss or damage caused by the requisition or destruction of the prop-

erty must, at the written request of a person with an interest in the property, be paid,—

(a) if the enforcement officer is a member of the Police, out of money appropriated by Parliament for the purpose; or

(b) if the enforcement officer was appointed under **section 39**, by the Director; or

(c) in any other case, by the organisation whose chief executive appointed the enforcement officer.

(2) Compensation is not payable under this section to any person who caused, or contributed substantially to, the emergency that brought about the requisition or destruction.

(3) A court of competent jurisdiction must determine any dispute about any 1 or more of the following:

(a) a person's entitlement to compensation under this section:

(b) the amount of compensation:

(c) the liability of the Crown, or any other person or organisation, to pay compensation.

Compare: 1996 No 30 s 138

62 Protection of enforcement officers and people assisting

No action or proceedings may be brought against an enforcement officer or a person acting at an enforcement officer's request under this Part in respect of any action taken by the person if the person acted in good faith and with reasonable care.

63 Radiation response plan

The Director must ensure that there is a radiation response plan for events that may involve radiation safety and that the plan contains appropriate operational arrangements.

64 Director to contribute to development of emergency management planning and strategies under other Acts

The Director must contribute to the development of emergency management strategies and emergency management plans under other Acts to the extent that those strategies or plans relate to radiation safety.

Subpart 3—Offences

65 Offence to contravene fundamental requirements

(1) A person who contravenes any of the fundamental requirements commits an offence and is liable on conviction,—

(a) in the case of an individual, to a fine not exceeding $100,000; or

(b) in the case of a person or an organisation other than an individual, to a fine not exceeding $500,000.

(2) If a person is convicted of an offence under this section, the court may, instead of or in addition to imposing a fine, order the person to mitigate or remedy, or pay the costs of mitigating or remedying, any adverse effects on people or the environment that—

(a) were caused by or on behalf of the person; or

(b) relate to any land of which the person is the owner or the occupier.

(3) In a prosecution for an offence against this section, it is not necessary to prove that the defendant intended to commit the offence.

(4) **Section 76** contains a defence to a prosecution for an offence against this section.

66 Offence to do certain things without authorisation

(1) A person who contravenes any of **paragraphs (a) to (c)** of **section 14** commits an offence and is liable on conviction,—

(a) in the case of an individual, to a fine not exceeding $100,000; or

(b) in the case of a person or an organisation other than an individual, to a fine not exceeding $500,000.

(2) A person who contravenes **section 14(d)** commits an offence and is liable on conviction,—

(a) in the case of an individual, to a fine not exceeding $20,000; or

(b) in the case of a person or an organisation other than an individual, to a fine not exceeding $100,000.

(3) In a prosecution for an offence against this section, it is not necessary to prove that the defendant intended to commit the offence.

(4) **Section 76** contains a defence to a prosecution for an offence against this section.

67 Offence to provide false or misleading information

(1) A person commits an offence who provides false or misleading information in any—

(a) application for an authorisation or renewal of an authorisation; or

(b) radiation safety plan submitted to the Director.

(2) A person who commits an offence under this section is liable on conviction,—

(a) in the case of an individual, to a fine not exceeding $50,000; or

(b) in the case of a person or an organisation other than an individual, to a fine not exceeding $250,000.

(3) In a prosecution for an offence against this section, it is not necessary to prove that the defendant intended to commit the offence.

(4) **Section 76** contains a defence to a prosecution for an offence against this section.

68 Duties of persons who hold authorisations

(1) A holder of a source licence commits an offence who fails to comply with **section 21**.

(2) A person who uses a radiation source (whether as a holder of a use licence or under the direct supervision of a person who holds a use licence) commits an offence if the person fails to comply with **section 24**.

(3) A consent holder commits an offence who fails to comply with **section 26**.

(4) A person who commits an offence against any of **subsections (1) to (3)** is liable on conviction,—

(a) in the case of an individual, to a fine not exceeding $50,000; or

(b) in the case of a person or an organisation other than an individual, to a fine not exceeding $250,000.

(5) A person with approval to perform a radiation ancillary service who fails to comply with any conditions of that approval commits an offence and is liable to a fine not exceeding $20,000.

(6) In a prosecution for an offence against this section, it is not necessary to prove that the defendant intended to commit the offence.

(7) **Section 76** contains a defence to a prosecution for an offence against this section.

69 Offences relating to register

(1) A person who contravenes **section 34** commits an offence and is liable on conviction,—

(a) in the case of an individual, to a fine not exceeding $20,000; or

(b) in the case of a person or an organisation other than an individual, to a fine not exceeding $100,000.

(2) In a prosecution for an offence against this section, it is not necessary to prove that the defendant intended to commit the offence.

(3) **Section 76** contains a defence to a prosecution for an offence against this section.

70 Offence relating to record keeping

(1) A person who contravenes **section 38** commits an offence and is liable on conviction,—

(a) in the case of an individual, to a fine not exceeding $20,000; or

(b) in the case of a person or an organisation other than an individual, to a fine not exceeding $100,000.

(2) In a prosecution for an offence against this section, it is not necessary to prove that the defendant intended to commit the offence.

(3) **Section 76** contains a defence to a prosecution for an offence against this section.

71 Offence to refuse entry

A person who refuses an enforcement officer's request for entry under **section 40** commits an offence and is liable on conviction,—

(a) in the case of an individual, to a fine not exceeding $50,000; or

(b) in the case of a person or an organisation other than an individual, to a fine not exceeding $250,000.

72 Offence not to answer questions or provide requested information

(1) A person commits an offence who,—

(a) in response to a question by an enforcement officer under **section 43**, fails to provide an answer or provides a false or misleading answer:

(b) in response to a request under **section 44**, fails to provide information or provides false or misleading information:

(c) alters, conceals, or destroys a document or information, contrary to **section 38(1) and (2)** or any other applicable requirement of this Act.

(2) A person who commits an offence against this section is liable on conviction,—

(a) in the case of an individual, to a fine not exceeding $50,000; or

(b) in the case of a person or an organisation other than an individual, to a fine not exceeding $250,000.

73 Offence to obstruct, etc, enforcement officers

(1) A person commits an offence who obstructs, hinders, resists, or deceives an enforcement officer in the exercise or performance by that officer of—

(a) any power or function under **section 60**; or

(b) any other power or function under this Act.

(2) A person who commits an offence against **subsection (1)(a)** is liable on conviction,—

(a) in the case of an individual, to a fine not exceeding $100,000; or

(b) in the case of a person or an organisation other than an individual, to a fine not exceeding $500,000.

(3) A person who commits an offence against **subsection (1)(b)** is liable on conviction,—

(a) in the case of an individual, to a fine not exceeding $50,000; or

(b) in the case of a person or an organisation other than an individual, to a fine not exceeding $250,000.

(4) In a prosecution for an offence against this section, it is not necessary to prove that the defendant intended to commit the offence.

(5) **Section 76** contains a defence to a prosecution for an offence against this section.

74 Offence not to comply with requirement of enforcement officer in emergency

(1) A person who contravenes **section 60(5)** commits an offence and is liable on conviction,—

(a) in the case of an individual, to a fine not exceeding $100,000; or

(b) in the case of a person or an organisation other than an individual, to a fine not exceeding $500,000.

(2) In a prosecution for an offence against this section, it is not necessary to prove that the defendant intended to commit the offence.

(3) **Section 76** contains a defence to a prosecution for an offence against this section.

75 Offence not to comply with compliance order

(1) A person who does not comply with a compliance order commits an offence and is liable on conviction,—

(a) in the case of an individual, to a fine not exceeding $50,000; or

(b) in the case of a person or an organisation other than an individual, to a fine not exceeding $250,000.

(2) If the Director takes remedial action because a person has not complied with a compliance order, the Director may recover the costs of the remedial action from the person.

(3) In this section, **remedial action** means any action that the Director reasonably takes to protect the health or safety of people or protect the environment.

(4) In a prosecution for an offence against this section, it is not necessary to prove that the defendant intended to commit the offence.

(5) **Section 76** contains a defence to a prosecution for an offence against this section.

76 Defence in prosecution for strict liability offence

(1) This section applies in a prosecution for an offence against any of sections **65 to 70 and 73 to 75**.

(2) The defendant has a defence if the defendant proves that—

- (a) the commission of the offence was due to—
  - (i) an act or omission of another person; or
  - (ii) an accident; or
  - (iii) some other cause outside the defendant's control; and
- (b) the defendant took all reasonable steps to avoid the commission of the offence or offences of the same kind.

77 Liability of body corporate, principal, or individual

(1) This section applies when—

- (a) a body corporate is charged with an offence against this Act for an act or omission of a director, an employee, or an agent:
- (b) the principal is charged with an offence against this Act for an act or omission of an agent:
- (c) an individual is charged with an offence against this Act for an act or omission of an employee or agent.

(2) The act or omission under **subsection (1)** is also treated as the act or omission of the body corporate, principal, or individual.

(3) In this section, **agent** includes a contractor.

78 Court may order person to mitigate or remedy adverse effects

If a person is convicted of an offence under a provision of this subpart, the court may, instead of or in addition to imposing a

fine under that provision, order the person to mitigate or remedy, or pay the costs of mitigating or remedying, any adverse effects on people or the environment that—

(a) were caused by or on behalf of the person; or

(b) relate to any land of which the person is the owner or the occupier.

Subpart 4—Director for Radiation Safety

79 Appointment of Director for Radiation Safety

(1) There must be a Director for Radiation Safety.

(2) The Director-General must appoint a person as Director after being satisfied that the person has the appropriate experience and expertise to perform the functions and duties and exercise the powers of the Director.

(3) The person who is appointed Director must be an existing employee of the Ministry or be appointed as an employee of the Ministry.

80 Functions, duties, and powers of Director

(1) The functions, duties, and powers of the Director are those conferred or imposed by this Act or any other enactment.

(2) A function of the Director is to facilitate New Zealand's compliance with its international obligations, including providing assistance to international inspectors.

(3) In performing his or her functions or duties and in exercising his or her powers, the Director—

(a) must act independently of the Director-General; but

(b) is subject to any general policy directions given by the Minister that—

(i) affect radiation safety; and

(ii) are not inconsistent with this Act or regulations.

(4) The Director is accountable to the Director-General for the performance of his or her functions and duties and the exercise of his or her powers.

(5) The Director must have effective arrangements in place to avoid or manage any conflicts of interest that may arise in the performance of his or her functions and duties and the exercise of his or her powers.

(6) The Director must, after making any decision on an authorisation,—

(a) give notice of the decision to any authorities or agencies or any representative of those authorities or agencies that, in the Director's opinion, ought to be notified and are likely to have an interest in the subject matter of the decision; and

(b) if the Director thinks appropriate, include in the notice the reasons for the decision.

81 Minister may authorise Director to approve authorisations relating to nuclear material

The Minister may, in writing, authorise the Director to approve a source licence, use licence, or consent, or any class of source licence, use licence, or consent, that relates to a specified type or quantity of nuclear material.

82 Delegation of powers, functions, or duties of Director

(1) The Director may delegate to any person any of his or her functions, duties, or powers other than the general power to delegate or a power granted under **section 81**.

(2) A delegation under **subsection (1)**—

(a) may be made subject to any conditions that the Director thinks appropriate:

(b) may be made generally or in any particular case:

(c) does not affect or prevent the performance of any function or duty, or the exercise of any power, by the Director:

(d) does not affect the responsibility of the Director for the actions of any delegate acting under the delegation.

(3) A person who is delegated any function, duty, or power under **subsection (1)** may, unless the delegation provides otherwise, perform the function or duty or exercise the power in the same manner and with the same effect as if the delegate were the Director.

(4) Every person purporting to act under any delegation under **subsection (1)**—

(a) is, in the absence of proof to the contrary, presumed to be acting in accordance with the terms of the delegation; and

(b) must produce evidence of his or her authority to do so, if reasonably requested to do so.

(5) A delegation under **subsection (1)** may be revoked at will by—

(a) written notice to the delegate; or

(b) any other method provided for in the delegation.

Subpart 5—Radiation Safety Advisory Council

83 Radiation Safety Advisory Council

(1) This section establishes the Radiation Safety Advisory Council.

(2) The Council is the same organisation that immediately before the commencement of this Act was known as the Radiation Protection Advisory Council.

(3) The members of the Council are appointed by the Minister.

(4) In appointing members to the Council, the Minister must, subject to **subsection (5)**, appoint—

(a) at least 2 members who, in the Minister's opinion, have appropriate knowledge, expertise, or interest in radiation and nuclear safety; and

(b) at least 2 members who, in the Minister's opinion, have appropriate knowledge and experience in the use of radiation and radiation sources; and

(c) at least 1 lay member.

(5) Despite **subsection (4)**, the Minister may appoint 1 or more members to the Council who do not have the qualifications or qualities set out in that subsection if the Minister is unable to find suitable people who are willing to accept the appointment.

(6) The Director-General and the Director must not be members of the Council.

(7) Each member of the Council is appointed on any terms and conditions (including terms and conditions as to remuneration and travelling allowances and expenses) that the Minister determines by written notice to the member.

(8) A person, other than the Director-General or the Director, who was a member of the Radiation Protection Advisory Council immediately before the commencement of this Act remains in office until the expiry of the person's term of office.

84 Functions of Council

The functions of the Council are to—

(a) provide advice to the Director and the Minister on general matters relating to or affecting radiation safety and standards relating to radiation safety; and

(b) advise and make recommendations to—

(i) the Minister on the exercise of the Minister's powers under this Act:

(ii) the Director on the adoption of recommendations, policies, codes of practice, and standards relating to radiation safety:

(iii) the Director in respect of authorisations referred to it by the Director; and

(c) provide advice as requested on any matter relating to radiation safety referred to it by the Minister, the Director-General, or the Director.

85 Advisory and technical committees

(1) The Council may, as it thinks fit, appoint advisory or technical committees to advise it on any matters within the scope of the Council's functions that are referred to the committees by the Council.

(2) The Council may appoint any person it thinks fit to be a member of a committee.

(3) Every committee may regulate its own procedure, subject to any direction from the Council.

86 Other matters

(1) The Council may, subject to this Act and regulations, regulate its procedure in any manner it thinks fit.

(2) **Schedule 4** contains further provisions that apply to the Council.

87 Consultation

The Council may, in carrying out any of its functions, consult any person or body it considers appropriate.

88 Annual report

(1) The Council must, at least once each year, deliver to the Minister a report setting out its advice on the matters referred to in **section 84(a) and (b)**.

(2) As soon as practicable after receiving a report under **subsection (1)**, the Minister must present a copy of it to the House of Representatives.

Subpart 6—Codes of practice and regulations

Codes of practice

89 Codes of practice

(1) The Director may, by notice in the *Gazette*, issue codes of practice for the purpose of implementing any fundamental requirement or provision of this Act.

(2) A person who complies with a code of practice is presumed to have complied with the fundamental requirement or provision to which the code relates unless the person knew or ought reasonably to have known that compliance with the code did not achieve compliance with the fundamental requirement or provision.

(3) Compliance with a code of practice is not the only way of complying with the fundamental requirement or provision to which the code relates.

(4) A code of practice is neither a legislative instrument nor a disallowable instrument for the purposes of the Legislation Act 2012 and does not have to be presented to the House of Representatives under section 41 of that Act.

Compare: 1996 No 30 ss 78(1), 117(3); 2004 No 72 ss 22, 23

90 Content of codes of practice

(1) A code of practice must state—

(a) the date on which it comes into force; and

(b) the fundamental requirement or provision of this Act to which it relates.

(2) A code of practice must not contain a provision that is inconsistent with this Act or regulations.

Compare: 2004 No 72 s 25

91 Codes of practice to be available on Internet site

(1) The Director must ensure that,—

(a) promptly after a new code is issued, a copy is publicly available on an Internet site maintained by, or on behalf of, the Director:

(b) after a code has been amended or revoked, a copy of it in its original form continues to be publicly available on the Internet site:

(c) promptly after a code is amended, the following are publicly available on the Internet site:

(i) a copy of the amendment; and

(ii) a copy of the code in its up-to-date form.

(2) The electronic copies must be made available free of charge.

Compare: 2004 No 72 s 25A

92 Director may amend or revoke codes of practice

(1) The Director may, by notice in the *Gazette*, amend or revoke a code of practice at any time.

(2) If **subsection (1)** applies, the amendment or revocation does not have retrospective effect.

Compare: 2004 No 72 s 24

Regulations

93 Regulations

(1) The Governor-General may, by Order in Council, make regulations for all or any of the following purposes:

(1) prescribing requirements for the purpose of implementing 1 or more specified fundamental requirements, including—

(a) requirements relating to the manner in which a fundamental requirement must be complied with; and

(b) the standards that must be achieved to comply with the fundamental requirement:

(2) prescribing, for the purpose of **section 14(b)**, situations or classes of situations in which a use licence is not required:

(3) granting, or enabling the Director, after consulting with the Council, to grant, exemptions from any provision in **subpart 2 or 3 of Part 1** in respect of—

(a) the operation of the armed forces; or

(b) subject to **subsection (4)**, the operation of ships or aircraft not registered in New Zealand that are visiting New Zealand:

(4) prescribing, subject to **subsection (2)**, any material as a source material or a special fissionable material:

(5) prescribing requirements for transport of radiation sources:

(6) prescribing requirements relating to the duties of source licence holders in incidents involving unintended loss of, release of, or exposure to any radiation source:

(7) prescribing requirements for radiation safety plans:

(8) prescribing requirements relating to radiation emergencies:

(9) specifying radiation ancillary services, other than dosimetry or calibration, that directly or indirectly support or are supported by a radiation source:

(10) prescribing information that must be included in—

(a) an application for a source licence, use licence, consent, or approval; and

(b) an application for a renewal of a source licence, use licence, consent, or approval:

(11) specifying situations or classes of situations where a use licence is not required and specifying activities or classes of activities that may be performed by a specified person or persons in that situation or class of situation:

(12) prescribing the manner in which radiation sources must be marked or labelled:

(13) prescribing the requirements for signage of radiation sources:

(14) prescribing the method of treatment, use, storage, or disposal of a radiation source or the treatment or disposal of a package, container, or vessel used in connection with that radiation source:

(15) prescribing maximum periods for which authorisations may be granted, and different periods may be prescribed for—

(a) different radiation sources:

(b) different purposes:

(16) prescribing the fees that are payable in respect of an application for an authorisation, and different fees may be prescribed for different types or classes of authorisation:

(17) prescribing controls to avoid or mitigate adverse effects on the environment caused by a radiation source:

(18) prescribing controls to avoid or mitigate illness or injury to people or damage to the environment or chattels caused by a radiation source:

(19) prohibiting or restricting the use of a radiation source:

(20) specifying unsealed radioactive materials that must be registered under **section 34**:

(21) prescribing requirements for registration of a controlled radiation source:

(22) providing for the keeping of records, inspection of those records, and the making of returns of entries in those records in connection with a radiation source:

(23) specifying details that must be included in warrants of appointment for enforcement officers:

(24) prescribing matters that must be specified in any form that is required for the purposes of this Act or a particular provision of this Act:

(25) prescribing the content of a compliance order:

(26) prescribing the manner or form in which any order, document, or other matter under this Act is to be served:

(27) regulating the procedure of the Council:

(28) providing for any other matters contemplated by or necessary for giving full effect to this Act and for its due administration.

(2) A regulation under **subsection (1)(4)** must be made on the recommendation of the Minister after the Minister has had regard to any relevant determination made by the IAEA.

(3) For the purpose of **subsection (1)(21)**, different requirements may be prescribed for the registration of different classes or types of controlled radiation sources.

(4) No regulations may be made under **subsection (1)(3)(b)** that relate to a radiation source that is—

(a) part of a nuclear reactor; or

(b) pyrophoric or associated with a pyrophoric material; or

(c) an explosive or associated with an explosive material; or

(d) a material that would, if transported in accordance with the IAEA Regulations for the Safe Transport of Radioactive Material, require notification; or

(e) fissile material.

94 Order in Council amending Schedules 2 and 3

(1) The Governor-General may, by Order in Council, on the recommendation of the Minister made after complying with this section, amend **Schedule 2 or 3**.

(2) Without limiting the generality of **subsection (1)**, an amendment to **Schedule 2** may, in relation to a radioactive material (radionuclide) listed in the first column of the schedule,—

(a) replace the level of activity concentration listed for that material in the second column; or

(b) replace the level of activity listed for that material in the third column.

(3) Before making any recommendation under this section, the Minister must—

(a) consult any person or organisation that the Minister considers has an interest in, or will be representative of the interests of people likely to be substantially affected by, the proposed order; and

(b) be satisfied that the proposed order is necessary in order to comply with any applicable requirements, guidelines, or standards of the IAEA, or is consistent with those requirements, guidelines, or standards; and

(c) be satisfied that the proposed order is necessary for the purpose of protecting the health or safety of people, or protecting the environment, from the harmful effects of ionising radiation.

Subpart 7—Other matters

95 Transitional, savings, and related provisions

The transitional, savings, and related provisions set out in **Schedule 1** have effect according to their terms.

Repeal and revocations

96 Radiation Protection Act 1965 repealed

The Radiation Protection Act 1965 (1965 No 23) is repealed.

97 Revocations

The following legislative instruments are revoked:

(a) Radiation Protection Act Commencement Order 1973 (SR 1973/47):

(b) Radiation Protection (Appeals) Regulations 1974 (SR 1974/319):

(c) Radiation Protection Regulations 1982 (SR 1982/72).

Amendments to Terrorism Suppression Act 2002

98 Amendments to Terrorism Suppression Act 2002

(1) This section amends the Terrorism Suppression Act 2002.

(2) In section 4(1), replace the definition of **radioactive material** with:

"**radioactive material** has the meaning given in section 5(1) of the Radiation Safety Act **2014**".

(3) After section 13C(1)(a), insert:

"(ab) without lawful authority, carries, sends, transports, or otherwise moves nuclear material into or out of New Zealand; or".

(4) Replace section 13E(1)(d) with:

"(d) unlawfully and intentionally demands by threat, in circumstances that indicate the credibility of the threat, or

by use of force or by any other form of intimidation, any radioactive material, radioactive device, or nuclear facility; or".

Consequential amendments to enactments

99 Consequential amendments

Amend the enactments specified in **Schedule 5** as set out in that schedule.

Schedule 1

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Transitional, savings, and related provisions

1 Interpretation

In this schedule, unless the context otherwise requires,—

commencement means the commencement of this schedule

former Act means the Radiation Protection Act 1965

former regulations means the Radiation Protection Regulations 1982.

2 No compensation for loss of office

The Crown is not liable to make a payment to, or otherwise compensate, any person in respect of the person ceasing to hold any office established by or under the former Act.

3 Members of Radiation Protection Advisory Council

(1) Each member of the Radiation Protection Advisory Council whose term of office has not expired before or on commencement of this clause—

(a) becomes, on commencement, a member of the Radiation Safety Advisory Council as if the member were appointed under **section 83**; and

(b) remains a member until the expiry of that term of office.

(2) Despite **subclause (1)**, if a member of the Radiation Protection Advisory Council is, on commencement, the Director-General or the Director, his or her membership on the Council ceases immediately.

4 Obligations under former Act and former regulations

Nothing in this Act operates to relieve a licence holder, owner, or other person using or possessing a radioactive material or an irradiating apparatus from any obligation imposed on him or her by the former Act or the former regulations, or otherwise by law, in relation to radiation protection.

5 Consents under former Act

Every consent issued under section 12 of the former Act that is in force immediately before commencement—

(a) is deemed to have been granted under **section 23** of this Act; and

(b) may not be renewed after it expires.

6 Licences under former Act

(1) Every licence issued under section 16 of the former Act that is in force immediately before commencement is deemed to have been granted under **section 23** of this Act.

(2) Every decision to cancel or suspend a licence under section 20 of the former Act that is in force immediately before commencement is deemed to have been made under **section 30** of this Act.

(3) Every decision to impose conditions on or to vary or revoke conditions in licences under section 17 of the former Act that is in force immediately before commencement is deemed to have been made under **section 30** of this Act.

7 Exemptions under former regulations

(1) Every exemption prescribed in Part 2 of the former regulations that is in force immediately before commencement continues to have effect (despite **section 97**) as if it were prescribed in regulations made pursuant to **section 93(1)(3)**.

(2) Every decision made under Part 2 of the former regulations to exempt materials, apparatus, ships, aircraft, certain licence holders, and employers of licence holders that is in force immediately before commencement continues to have effect (despite **section 97**) as if it were a decision made under regulations made pursuant to **section 93(1)(3)**.

8 References to Radiation Protection Advisory Council

Every reference in a notice or document to the Radiation Protection Advisory Council must be read as a reference to the Radiation Safety Advisory Council.

Schedule 2

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List of radioactive material and acceptable activity concentration levels and activity levels

Radioactive material (radionuclide)	Acceptable level of activity concentration (Bq/g)	Acceptable level of activity (Bq)
H-3	1×10^6	1×10^9
Be-7	1×10^3	1×10^7
Be-10	1×10^4	1×10^6
C-11	1×10^1	1×10^6
C-14	1×10^4	1×10^7
N-13	1×10^2	1×10^9
Ne-19	1×10^2	1×10^9
O-15	1×10^2	1×10^9
F-18	1×10^1	1×10^6
Na-22	1×10^1	1×10^6
Na-24	1×10^1	1×10^5
Mg-28	1×10^1	1×10^5
Al-26	1×10^1	1×10^5
Si-31	1×10^3	1×10^6
Si-32	1×10^3	1×10^6
P-32	1×10^3	1×10^5
P-33	1×10^5	1×10^8
S-35	1×10^5	1×10^8
Cl-36	1×10^4	1×10^6
Cl-38	1×10^1	1×10^5
Cl-39	1×10^1	1×10^5
Ar-37	1×10^6	1×10^8
Ar-39	1×10^7	1×10^4
Ar-41	1×10^2	1×10^9
K-40	1×10^2	1×10^6
K-42	1×10^2	1×10^6
K-43	1×10^1	1×10^6
K-44	1×10^1	1×10^5
K-45	1×10^1	1×10^5

Radioactive material (radionuclide)	Acceptable level of activity concentration (Bq/g)	Acceptable level of activity (Bq)
Ca-41	1×10^5	1×10^7
Ca-45	1×10^4	1×10^7
Ca-47	1×10^1	1×10^6
Sc-43	1×10^1	1×10^6
Sc-44	1×10^1	1×10^5
Sc-45	1×10^2	1×10^7
Sc-46	1×10^1	1×10^6
Sc-47	1×10^2	1×10^6
Sc-48	1×10^1	1×10^5
Sc-49	1×10^3	1×10^5
Ti-44	1×10^1	1×10^5
Ti-45	1×10^1	1×10^6
V-47	1×10^1	1×10^5
V-48	1×10^1	1×10^5
V-49	1×10^4	1×10^7
Cr-48	1×10^2	1×10^6
Cr-49	1×10^1	1×10^6
Cr-51	1×10^3	1×10^7
Mn-51	1×10^1	1×10^5
Mn-52	1×10^1	1×10^5
Mn-52m	1×10^1	1×10^5
Mn-53	1×10^4	1×10^9
Mn-54	1×10^1	1×10^6
Mn-56	1×10^1	1×10^5
Fe-52	1×10^1	1×10^6
Fe-55	1×10^4	1×10^6
Fe-59	1×10^1	1×10^6
Fe-60	1×10^2	1×10^5
Co-55	1×10^1	1×10^6
Co-56	1×10^1	1×10^5
Co-57	1×10^2	1×10^6
Co-58	1×10^1	1×10^6
Co-58m	1×10^4	1×10^7

Radioactive material (radionuclide)	**Acceptable level of activity concentration (Bq/g)**	**Acceptable level of activity (Bq)**
Co-60	1×10^1	1×10^5
Co-60m	1×10^3	1×10^6
Co-61	1×10^2	1×10^6
Co-62m	1×10^1	1×10^5
Ni-56	1×10^1	1×10^6
Ni-57	1×10^1	1×10^6
Ni-59	1×10^4	1×10^8
Ni-63	1×10^5	1×10^8
Ni-65	1×10^1	1×10^6
Ni-66	1×10^4	1×10^7
Cu-60	1×10^1	1×10^5
Cu-61	1×10^1	1×10^6
Cu-64	1×10^2	1×10^6
Cu-67	1×10^2	1×10^6
Zn-62	1×10^2	1×10^6
Zn-63	1×10^1	1×10^5
Zn-65	1×10^1	1×10^6
Zn-69	1×10^4	1×10^6
Zn-69m	1×10^2	1×10^6
Zn-71m	1×10^1	1×10^6
Zn-72	1×10^2	1×10^6
Ga-65	1×10^1	1×10^5
Ga-66	1×10^1	1×10^5
Ga-67	1×10^2	1×10^6
Ga-68	1×10^1	1×10^5
Ga-70	1×10^2	1×10^6
Ga-72	1×10^1	1×10^5
Ga-73	1×10^2	1×10^6
Ge-66	1×10^1	1×10^6
Ge-67	1×10^1	1×10^5
Ge-68	1×10^1	1×10^5
Ge-69	1×10^1	1×10^6
Ge-71	1×10^4	1×10^8

Radioactive material (radionuclide)	Acceptable level of activity concentration (Bq/g)	Acceptable level of activity (Bq)
Ge-75	1×10^3	1×10^6
Ge-77	1×10^1	1×10^5
Ge-78	1×10^2	1×10^6
As-69	1×10^1	1×10^5
As-70	1×10^1	1×10^5
As-71	1×10^1	1×10^6
As-72	1×10^1	1×10^5
As-73	1×10^3	1×10^7
As-74	1×10^1	1×10^6
As-76	1×10^2	1×10^5
As-77	1×10^3	1×10^6
As-78	1×10^1	1×10^5
Se-70	1×10^1	1×10^6
Se-73	1×10^1	1×10^6
Se-73m	1×10^2	1×10^6
Se-75	1×10^2	1×10^6
Se-79	1×10^4	1×10^7
Se-81	1×10^3	1×10^6
Se-81m	1×10^3	1×10^7
Se-83	1×10^1	1×10^5
Br-74	1×10^1	1×10^5
Br-74m	1×10^1	1×10^5
Br-75	1×10^1	1×10^6
Br-76	1×10^1	1×10^5
Br-77	1×10^2	1×10^6
Br-80	1×10^2	1×10^5
Br-80m	1×10^3	1×10^7
Br-82	1×10^1	1×10^6
Br-83	1×10^3	1×10^6
Br-84	1×10^1	1×10^5
Kr-74	1×10^2	1×10^9
Kr-76	1×10^2	1×10^9
Kr-77	1×10^2	1×10^9

Radioactive material (radionuclide)	**Acceptable level of activity concentration (Bq/g)**	**Acceptable level of activity (Bq)**
Kr-79	1×10^3	1×10^5
Kr-81	1×10^4	1×10^7
Kr-81m	1×10^3	1×10^{10}
Kr-83m	1×10^5	1×10^{12}
Kr-85	1×10^5	1×10^4
Kr-85m	1×10^3	1×10^{10}
Kr-87	1×10^2	1×10^9
Kr-88	1×10^2	1×10^9
Rb-79	1×10^1	1×10^5
Rb-81	1×10^1	1×10^6
Rb-81m	1×10^3	1×10^7
Rb-82m	1×10^1	1×10^6
Rb-83	1×10^2	1×10^6
Rb-84	1×10^1	1×10^6
Rb-86	1×10^2	1×10^5
Rb-87	1×10^3	1×10^7
Rb-88	1×10^2	1×10^5
Rb-89	1×10^2	1×10^5
Sr-80	1×10^3	1×10^7
Sr-81	1×10^1	1×10^5
Sr-82	1×10^1	1×10^5
Sr-83	1×10^1	1×10^6
Sr-85	1×10^2	1×10^6
Sr-85m	1×10^2	1×10^7
Sr-87m	1×10^2	1×10^6
Sr-89	1×10^3	1×10^6
Sr-90	1×10^2	1×10^4
Sr-91	1×10^1	1×10^5
Sr-92	1×10^1	1×10^6
Y-86	1×10^1	1×10^5
Y-86m	1×10^2	1×10^7
Y-87	1×10^1	1×10^6
Y-88	1×10^1	1×10^6

Radioactive material (radionuclide)	Acceptable level of activity concentration (Bq/g)	Acceptable level of activity (Bq)
Y-90	1×10^3	1×10^5
Y-90m	1×10^1	1×10^6
Y-91	1×10^3	1×10^6
Y-91m	1×10^2	1×10^6
Y-92	1×10^2	1×10^5
Y-93	1×10^2	1×10^5
Y-94	1×10^1	1×10^5
Y-95	1×10^1	1×10^5
Zr-86	1×10^2	1×10^7
Zr-88	1×10^2	1×10^6
Zr-89	1×10^1	1×10^6
Zr-93	1×10^3	1×10^7
Zr-95	1×10^1	1×10^6
Zr-97	1×10^1	1×10^5
Nb-88	1×10^1	1×10^5
Nb-89 (2.03h)	1×10^1	1×10^5
Nb-89m (1.10h)	1×10^1	1×10^5
Nb-90	1×10^1	1×10^5
Nb-93m	1×10^4	1×10^7
Nb-94	1×10^1	1×10^6
Nb-95	1×10^1	1×10^6
Nb-95m	1×10^2	1×10^7
Nb-96	1×10^1	1×10^5
Nb-97	1×10^1	1×10^6
Nb-98	1×10^1	1×10^5
Mo-90	1×10^1	1×10^6
Mo-93	1×10^3	1×10^8
Mo-93m	1×10^1	1×10^6
Mo-99	1×10^2	1×10^6
Mo-101	1×10^1	1×10^6
Tc-93	1×10^1	1×10^6
Tc-93m	1×10^1	1×10^6
Tc-94	1×10^1	1×10^6

Radioactive material (radionuclide)	**Acceptable level of activity concentration (Bq/g)**	**Acceptable level of activity (Bq)**
Tc-94m	1×10^1	1×10^5
Tc-95	1×10^1	1×10^6
Tc-95m	1×10^1	1×10^6
Tc-96	1×10^1	1×10^6
Tc-96m	1×10^3	1×10^7
Tc-97	1×10^3	1×10^8
Tc-97m	1×10^3	1×10^7
Tc-98	1×10^1	1×10^6
Tc-99	1×10^4	1×10^7
Tc-99m	1×10^2	1×10^7
Tc-101	1×10^2	1×10^6
Tc-104	1×10^1	1×10^5
Ru-94	1×10^2	1×10^6
Ru-97	1×10^2	1×10^7
Ru-103	1×10^2	1×10^6
Ru-105	1×10^1	1×10^6
Ru-106	1×10^2	1×10^5
Rh-99	1×10^1	1×10^6
Rh-99m	1×10^1	1×10^6
Rh-100	1×10^1	1×10^6
Rh-101	1×10^2	1×10^7
Rh-101m	1×10^2	1×10^7
Rh-102	1×10^1	1×10^6
Rh-102m	1×10^2	1×10^6
Rh-103m	1×10^4	1×10^8
Rh-105	1×10^2	1×10^7
Rh-106m	1×10^1	1×10^5
Rh-107	1×10^2	1×10^6
Pd-100	1×10^2	1×10^7
Pd-101	1×10^2	1×10^6
Pd-103	1×10^3	1×10^8
Pd-107	1×10^5	1×10^8
Pd-109	1×10^3	1×10^6

Radioactive material (radionuclide)	Acceptable level of activity concentration (Bq/g)	Acceptable level of activity (Bq)
Ag-102	1×10^1	1×10^5
Ag-103	1×10^1	1×10^6
Ag-104	1×10^1	1×10^6
Ag-104m	1×10^1	1×10^6
Ag-105	1×10^2	1×10^6
Ag-106	1×10^1	1×10^6
Ag-106m	1×10^1	1×10^6
Ag-108m	1×10^1	1×10^6
Ag-110m	1×10^1	1×10^6
Ag-111	1×10^3	1×10^6
Ag-112	1×10^1	1×10^5
Ag-115	1×10^1	1×10^5
Cd-104	1×10^2	1×10^7
Cd-107	1×10^3	1×10^7
Cd-109	1×10^4	1×10^6
Cd-113	1×10^3	1×10^6
Cd-113m	1×10^3	1×10^6
Cd-115	1×10^2	1×10^6
Cd-115m	1×10^3	1×10^6
Cd-117	1×10^1	1×10^6
Cd-117m	1×10^1	1×10^6
In-109	1×10^1	1×10^6
In-110 (4.9h)	1×10^1	1×10^6
In-110 (69.1m)	1×10^1	1×10^5
In-111	1×10^2	1×10^6
In-112	1×10^2	1×10^6
In-113m	1×10^2	1×10^6
In-114	1×10^3	1×10^5
In-114m	1×10^2	1×10^6
In-115	1×10^3	1×10^5
In-115m	1×10^2	1×10^6
In-116m	1×10^1	1×10^5
In-117	1×10^1	1×10^6

Radioactive material (radionuclide)	**Acceptable level of activity concentration (Bq/g)**	**Acceptable level of activity (Bq)**
In-117m	1×10^2	1×10^6
In-119m	1×10^2	1×10^5
Sn-110	1×10^2	1×10^7
Sn-111	1×10^2	1×10^6
Sn-113	1×10^3	1×10^7
Sn-117m	1×10^2	1×10^6
Sn-119m	1×10^3	1×10^7
Sn-121	1×10^5	1×10^7
Sn-121m	1×10^3	1×10^7
Sn-123	1×10^3	1×10^6
Sn-123m	1×10^2	1×10^6
Sn-125	1×10^2	1×10^5
Sn-126	1×10^1	1×10^5
Sn-127	1×10^1	1×10^6
Sn-128	1×10^1	1×10^6
Sb-115	1×10^1	1×10^6
Sb-116	1×10^1	1×10^6
Sb-116m	1×10^1	1×10^5
Sb-117	1×10^2	1×10^7
Sb-118m	1×10^1	1×10^6
Sb-119	1×10^3	1×10^7
Sb-120 (5.76d)	1×10^1	1×10^6
Sb-120 (15.89m)	1×10^2	1×10^6
Sb-122	1×10^2	1×10^4
Sb-124	1×10^1	1×10^6
Sb-124m	1×10^2	1×10^6
Sb-125	1×10^2	1×10^6
Sb-126	1×10^1	1×10^5
Sb-126m	1×10^1	1×10^5
Sb-127	1×10^1	1×10^6
Sb-128 (9.01h)	1×10^1	1×10^5
Sb-128 (10.4m)	1×10^1	1×10^5
Sb-129	1×10^1	1×10^6

Radioactive material (radionuclide)	Acceptable level of activity concentration (Bq/g)	Acceptable level of activity (Bq)
Sb-130	1×10^1	1×10^5
Sb-131	1×10^1	1×10^6
Te-116	1×10^2	1×10^7
Te-121	1×10^1	1×10^6
Te-121m	1×10^2	1×10^6
Te-123	1×10^3	1×10^6
Te-123m	1×10^2	1×10^7
Te-125m	1×10^3	1×10^7
Te-127	1×10^3	1×10^6
Te-127m	1×10^3	1×10^7
Te-129	1×10^2	1×10^6
Te-129m	1×10^3	1×10^6
Te-131	1×10^2	1×10^5
Te-131m	1×10^1	1×10^6
Te-132	1×10^2	1×10^7
Te-133	1×10^1	1×10^5
Te-133m	1×10^1	1×10^5
Te-134	1×10^1	1×10^6
I-120	1×10^1	1×10^5
I-120m	1×10^1	1×10^5
I-121	1×10^2	1×10^6
I-123	1×10^2	1×10^7
I-124	1×10^1	1×10^6
I-125	1×10^3	1×10^6
I-126	1×10^2	1×10^6
I-128	1×10^2	1×10^5
I-129	1×10^2	1×10^5
I-130	1×10^1	1×10^6
I-131	1×10^2	1×10^6
I-132	1×10^1	1×10^5
I-132m	1×10^2	1×10^6
I-133	1×10^1	1×10^6
I-134	1×10^1	1×10^5

Radioactive material (radionuclide)	**Acceptable level of activity concentration (Bq/g)**	**Acceptable level of activity (Bq)**
I-135	1×10^{1}	1×10^{6}
Xe-120	1×10^{2}	1×10^{9}
Xe-121	1×10^{2}	1×10^{9}
Xe-122	1×10^{2}	1×10^{9}
Xe-123	1×10^{2}	1×10^{9}
Xe-125	1×10^{3}	1×10^{9}
Xe-127	1×10^{3}	1×10^{5}
Xe-129m	1×10^{3}	1×10^{4}
Xe-131m	1×10^{4}	1×10^{4}
Xe-133m	1×10^{3}	1×10^{4}
Xe-133	1×10^{3}	1×10^{4}
Xe-135	1×10^{3}	1×10^{10}
Xe-135m	1×10^{2}	1×10^{9}
Xe-138	1×10^{2}	1×10^{9}
Cs-125	1×10^{1}	1×10^{4}
Cs-127	1×10^{2}	1×10^{5}
Cs-129	1×10^{2}	1×10^{5}
Cs-130	1×10^{2}	1×10^{6}
Cs-131	1×10^{3}	1×10^{6}
Cs-132	1×10^{1}	1×10^{5}
Cs-134m	1×10^{3}	1×10^{5}
Cs-134	1×10^{1}	1×10^{4}
Cs-135	1×10^{4}	1×10^{7}
Cs-135m	1×10^{1}	1×10^{6}
Cs-136	1×10^{1}	1×10^{5}
Cs-137	1×10^{1}	1×10^{4}
Cs-138	1×10^{1}	1×10^{4}
Ba-126	1×10^{2}	1×10^{7}
Ba-128	1×10^{2}	1×10^{7}
Ba-131	1×10^{2}	1×10^{6}
Ba-131m	1×10^{2}	1×10^{7}
Ba-133	1×10^{2}	1×10^{6}
Ba-133m	1×10^{2}	1×10^{6}

Radioactive material (radionuclide)	Acceptable level of activity concentration (Bq/g)	Acceptable level of activity (Bq)
Ba-135m	1×10^2	1×10^6
Ba-137m	1×10^1	1×10^6
Ba-139	1×10^2	1×10^5
Ba-140	1×10^1	1×10^5
Ba-141	1×10^2	1×10^5
Ba-142	1×10^2	1×10^6
La-131	1×10^1	1×10^6
La-132	1×10^1	1×10^6
La-135	1×10^3	1×10^7
La-137	1×10^3	1×10^7
La-138	1×10^1	1×10^6
La-140	1×10^1	1×10^5
La-141	1×10^2	1×10^5
La-142	1×10^1	1×10^5
La-143	1×10^2	1×10^5
Ce-134	1×10^3	1×10^7
Ce-135	1×10^1	1×10^6
Ce-137	1×10^3	1×10^7
Ce-137m	1×10^3	1×10^6
Ce-139	1×10^2	1×10^6
Ce-141	1×10^2	1×10^7
Ce-143	1×10^2	1×10^6
Ce-144	1×10^2	1×10^5
Pr-136	1×10^1	1×10^5
Pr-137	1×10^2	1×10^6
Pr-138m	1×10^1	1×10^6
Pr-139	1×10^2	1×10^7
Pr-142	1×10^2	1×10^5
Pr-142m	1×10^7	1×10^9
Pr-143	1×10^4	1×10^6
Pr-144	1×10^2	1×10^5
Pr-145	1×10^3	1×10^5
Pr-147	1×10^1	1×10^5

Radioactive material (radionuclide)	**Acceptable level of activity concentration (Bq/g)**	**Acceptable level of activity (Bq)**
Nd-136	1×10^2	1×10^6
Nd-138	1×10^3	1×10^7
Nd-139	1×10^2	1×10^6
Nd-139m	1×10^1	1×10^6
Nd-141	1×10^2	1×10^7
Nd-147	1×10^2	1×10^6
Nd-149	1×10^2	1×10^6
Nd-151	1×10^1	1×10^5
Pm-141	1×10^1	1×10^5
Pm-143	1×10^2	1×10^6
Pm-144	1×10^1	1×10^6
Pm-145	1×10^3	1×10^7
Pm-146	1×10^1	1×10^6
Pm-147	1×10^4	1×10^7
Pm-148	1×10^1	1×10^5
Pm-148m	1×10^1	1×10^6
Pm-149	1×10^3	1×10^6
Pm-150	1×10^1	1×10^5
Pm-151	1×10^2	1×10^6
Sm-141	1×10^1	1×10^5
Sm-141m	1×10^1	1×10^6
Sm-142	1×10^2	1×10^7
Sm-145	1×10^2	1×10^7
Sm-146	1×10^1	1×10^5
Sm-147	1×10^1	1×10^4
Sm-151	1×10^4	1×10^8
Sm-153	1×10^2	1×10^6
Sm-155	1×10^2	1×10^6
Sm-156	1×10^2	1×10^6
Eu-145	1×10^1	1×10^6
Eu-146	1×10^1	1×10^6
Eu-147	1×10^2	1×10^6
Eu-148	1×10^1	1×10^6

Radioactive material (radionuclide)	Acceptable level of activity concentration (Bq/g)	Acceptable level of activity (Bq)
Eu-149	1×10^2	1×10^7
Eu-150 (34.2a)	1×10^1	1×10^6
Eu-150 (12.6h)	1×10^3	1×10^6
Eu-152	1×10^1	1×10^6
Eu-152m	1×10^2	1×10^6
Eu-154	1×10^1	1×10^6
Eu-155	1×10^2	1×10^7
Eu-156	1×10^1	1×10^6
Eu-157	1×10^2	1×10^6
Eu-158	1×10^1	1×10^5
Gd-145	1×10^1	1×10^5
Gd-146	1×10^1	1×10^6
Gd-147	1×10^1	1×10^6
Gd-148	1×10^1	1×10^4
Gd-149	1×10^2	1×10^6
Gd-151	1×10^2	1×10^7
Gd-152	1×10^1	1×10^4
Gd-153	1×10^2	1×10^7
Gd-159	1×10^3	1×10^6
Tb-147	1×10^1	1×10^6
Tb-149	1×10^1	1×10^6
Tb-150	1×10^1	1×10^6
Tb-151	1×10^1	1×10^6
Tb-153	1×10^2	1×10^7
Tb-154	1×10^1	1×10^6
Tb-155	1×10^2	1×10^7
Tb-156	1×10^1	1×10^6
Tb-156m (24.4h)	1×10^3	1×10^7
Tb-156m (5h)	1×10^4	1×10^7
Tb-157	1×10^4	1×10^7
Tb-158	1×10^1	1×10^6
Tb-160	1×10^1	1×10^6
Tb-161	1×10^3	1×10^6

Radioactive material (radionuclide)	**Acceptable level of activity concentration (Bq/g)**	**Acceptable level of activity (Bq)**
Dy-155	1×10^1	1×10^6
Dy-157	1×10^2	1×10^6
Dy-159	1×10^3	1×10^7
Dy-165	1×10^3	1×10^6
Dy-166	1×10^3	1×10^6
Ho-155	1×10^2	1×10^6
Ho-157	1×10^2	1×10^6
Ho-159	1×10^2	1×10^6
Ho-161	1×10^2	1×10^7
Ho-162	1×10^2	1×10^7
Ho-162m	1×10^1	1×10^6
Ho-164	1×10^3	1×10^6
Ho-164m	1×10^3	1×10^7
Ho-166	1×10^3	1×10^5
Ho-166m	1×10^1	1×10^6
Ho-167	1×10^2	1×10^6
Er-161	1×10^1	1×10^6
Er-165	1×10^3	1×10^7
Er-169	1×10^4	1×10^7
Er-171	1×10^2	1×10^6
Er-172	1×10^2	1×10^6
Tm-162	1×10^1	1×10^6
Tm-166	1×10^1	1×10^6
Tm-167	1×10^2	1×10^6
Tm-170	1×10^3	1×10^6
Tm-171	1×10^4	1×10^8
Tm-172	1×10^2	1×10^6
Tm-173	1×10^2	1×10^6
Tm-175	1×10^1	1×10^6
Yb-162	1×10^2	1×10^7
Yb-166	1×10^2	1×10^7
Yb-167	1×10^2	1×10^6
Yb-169	1×10^2	1×10^7

Radioactive material (radionuclide)	Acceptable level of activity concentration (Bq/g)	Acceptable level of activity (Bq)
Yb-175	1×10^3	1×10^7
Yb-177	1×10^2	1×10^6
Yb-178	1×10^3	1×10^6
Lu-169	1×10^1	1×10^6
Lu-170	1×10^1	1×10^6
Lu-171	1×10^1	1×10^6
Lu-172	1×10^1	1×10^6
Lu-173	1×10^2	1×10^7
Lu-174	1×10^2	1×10^7
Lu-174m	1×10^2	1×10^7
Lu-176	1×10^2	1×10^6
Lu-176m	1×10^3	1×10^6
Lu-177	1×10^3	1×10^7
Lu-177m	1×10^1	1×10^6
Lu-178	1×10^2	1×10^5
Lu-178m	1×10^1	1×10^5
Lu-179	1×10^3	1×10^6
Hf-170	1×10^2	1×10^6
Hf-172	1×10^1	1×10^6
Hf-173	1×10^2	1×10^6
Hf-175	1×10^2	1×10^6
Hf-177m	1×10^1	1×10^5
Hf-178m	1×10^1	1×10^6
Hf-179m	1×10^1	1×10^6
Hf-180m	1×10^1	1×10^6
Hf-181	1×10^1	1×10^6
Hf-182	1×10^2	1×10^6
Hf-182m	1×10^1	1×10^6
Hf-183	1×10^1	1×10^6
Hf-184	1×10^2	1×10^6
Ta-172	1×10^1	1×10^6
Ta-173	1×10^1	1×10^6
Ta-174	1×10^1	1×10^6

Radioactive material (radionuclide)	**Acceptable level of activity concentration (Bq/g)**	**Acceptable level of activity (Bq)**
Ta-175	1×10^1	1×10^6
Ta-176	1×10^1	1×10^6
Ta-177	1×10^2	1×10^7
Ta-178	1×10^1	1×10^6
Ta-179	1×10^3	1×10^7
Ta-180	1×10^1	1×10^6
Ta-180m	1×10^3	1×10^7
Ta-182	1×10^1	1×10^4
Ta-182m	1×10^2	1×10^6
Ta-183	1×10^2	1×10^6
Ta-184	1×10^1	1×10^6
Ta-185	1×10^2	1×10^5
Ta-186	1×10^1	1×10^5
W-176	1×10^2	1×10^6
W-177	1×10^1	1×10^6
W-178	1×10^1	1×10^6
W-179	1×10^2	1×10^7
W-181	1×10^3	1×10^7
W-185	1×10^4	1×10^7
W-187	1×10^2	1×10^6
W-188	1×10^2	1×10^5
Re-177	1×10^1	1×10^6
Re-178	1×10^1	1×10^6
Re-181	1×10^1	1×10^6
Re-182 (64h)	1×10^1	1×10^6
Re-182 (12.7h)	1×10^1	1×10^6
Re-184	1×10^1	1×10^6
Re-184m	1×10^2	1×10^6
Re-186	1×10^3	1×10^6
Re-186m	1×10^3	1×10^7
Re-187	1×10^6	1×10^9
Re-188	1×10^2	1×10^5
Re-188m	1×10^2	1×10^7

Radioactive material (radionuclide)	Acceptable level of activity concentration (Bq/g)	Acceptable level of activity (Bq)
Re-189	1×10^2	1×10^6
Os-180	1×10^2	1×10^7
Os-181	1×10^1	1×10^6
Os-182	1×10^2	1×10^6
Os-185	1×10^1	1×10^6
Os-189m	1×10^4	1×10^7
Os-191	1×10^2	1×10^7
Os-191m	1×10^3	1×10^7
Os-193	1×10^2	1×10^6
Os-194	1×10^2	1×10^5
Ir-182	1×10^1	1×10^5
Ir-184	1×10^1	1×10^6
Ir-185	1×10^1	1×10^6
Ir-186 (15.8h)	1×10^1	1×10^6
Ir-186 (1.75h)	1×10^1	1×10^6
Ir-187	1×10^2	1×10^6
Ir-188	1×10^1	1×10^6
Ir-189	1×10^2	1×10^7
Ir-190	1×10^1	1×10^6
Ir-190m (3.1h)	1×10^1	1×10^6
Ir-190m (1.2h)	1×10^4	1×10^7
Ir-192	1×10^1	1×10^4
Ir-192m	1×10^2	1×10^7
Ir-193m	1×10^4	1×10^7
Ir-194	1×10^2	1×10^5
Ir-194m	1×10^1	1×10^6
Ir-195	1×10^2	1×10^6
Ir-195m	1×10^2	1×10^6
Pt-186	1×10^1	1×10^6
Pt-188	1×10^1	1×10^6
Pt-189	1×10^2	1×10^6
Pt-191	1×10^2	1×10^6
Pt-193	1×10^4	1×10^7

Radioactive material (radionuclide)	**Acceptable level of activity concentration (Bq/g)**	**Acceptable level of activity (Bq)**
Pt-193m	1×10^3	1×10^7
Pt-195m	1×10^2	1×10^6
Pt-197	1×10^3	1×10^6
Pt-197m	1×10^2	1×10^6
Pt-199	1×10^2	1×10^6
Pt-200	1×10^2	1×10^6
Au-193	1×10^2	1×10^7
Au-194	1×10^1	1×10^6
Au-195	1×10^2	1×10^7
Au-198	1×10^2	1×10^6
Au-198m	1×10^1	1×10^6
Au-199	1×10^2	1×10^6
Au-200	1×10^2	1×10^5
Au-200m	1×10^1	1×10^6
Au-201	1×10^2	1×10^6
Hg-193	1×10^2	1×10^6
Hg-193m	1×10^1	1×10^6
Hg-194	1×10^1	1×10^6
Hg-195	1×10^2	1×10^6
Hg-195m	1×10^2	1×10^6
Hg-197	1×10^2	1×10^7
Hg-197m	1×10^2	1×10^6
Hg-199m	1×10^2	1×10^6
Hg-203	1×10^2	1×10^5
Tl-194	1×10^1	1×10^6
Tl-194m	1×10^1	1×10^6
Tl-195	1×10^1	1×10^6
Tl-197	1×10^2	1×10^6
Tl-198	1×10^1	1×10^6
Tl-198m	1×10^1	1×10^6
Tl-199	1×10^2	1×10^6
Tl-200	1×10^1	1×10^6
Tl-201	1×10^2	1×10^6

Radioactive material (radionuclide)	Acceptable level of activity concentration (Bq/g)	Acceptable level of activity (Bq)
Tl-202	1×10^2	1×10^6
Tl-204	1×10^4	1×10^4
Pb-195m	1×10^1	1×10^6
Pb-198	1×10^2	1×10^6
Pb-199	1×10^1	1×10^6
Pb-200	1×10^2	1×10^6
Pb-201	1×10^1	1×10^6
Pb-202	1×10^3	1×10^6
Pb-202m	1×10^1	1×10^6
Pb-203	1×10^2	1×10^6
Pb-205	1×10^4	1×10^7
Pb-209	1×10^5	1×10^6
Pb-210	1×10^1	1×10^4
Pb-211	1×10^2	1×10^6
Pb-212	1×10^1	1×10^5
Pb-214	1×10^2	1×10^6
Bi-200	1×10^1	1×10^6
Bi-201	1×10^1	1×10^6
Bi-202	1×10^1	1×10^6
Bi-203	1×10^1	1×10^6
Bi-205	1×10^1	1×10^6
Bi-206	1×10^1	1×10^5
Bi-207	1×10^1	1×10^6
Bi-210	1×10^3	1×10^6
Bi-210m	1×10^1	1×10^5
Bi-212	1×10^1	1×10^5
Bi-213	1×10^2	1×10^6
Bi-214	1×10^1	1×10^5
Po-203	1×10^1	1×10^6
Po-205	1×10^1	1×10^6
Po-206	1×10^1	1×10^6
Po-207	1×10^1	1×10^6
Po-208	1×10^1	1×10^4

Radioactive material (radionuclide)	**Acceptable level of activity concentration (Bq/g)**	**Acceptable level of activity (Bq)**
Po-209	1×10^{1}	1×10^{4}
Po-210	1×10^{1}	1×10^{4}
At-207	1×10^{1}	1×10^{6}
At-211	1×10^{3}	1×10^{7}
Fr-222	1×10^{3}	1×10^{5}
Fr-223	1×10^{2}	1×10^{6}
Rn-220	1×10^{4}	1×10^{7}
Rn-222	1×10^{1}	1×10^{8}
Ra-223	1×10^{2}	1×10^{5}
Ra-224	1×10^{1}	1×10^{5}
Ra-225	1×10^{2}	1×10^{5}
Ra-226	1×10^{1}	1×10^{4}
Ra-227	1×10^{2}	1×10^{6}
Ra-228	1×10^{1}	1×10^{5}
Ac-224	1×10^{2}	1×10^{6}
Ac-225	1×10^{1}	1×10^{4}
Ac-226	1×10^{2}	1×10^{5}
Ac-227	1×10^{-1}	1×10^{3}
Ac-228	1×10^{1}	1×10^{6}
Th-226	1×10^{3}	1×10^{7}
Th-227	1×10^{1}	1×10^{4}
Th-228	1×10^{0}	1×10^{4}
Th-229	1×10^{0}	1×10^{3}
Th-230	1×10^{0}	1×10^{4}
Th-231	1×10^{3}	1×10^{7}
Th-232	1×10^{1}	1×10^{4}
Th-234	1×10^{3}	1×10^{5}
Pa-227	1×10^{1}	1×10^{6}
Pa-228	1×10^{1}	1×10^{6}
Pa-230	1×10^{1}	1×10^{6}
Pa-231	1×10^{0}	1×10^{3}
Pa-232	1×10^{1}	1×10^{6}
Pa-233	1×10^{2}	1×10^{7}

Radioactive material (radionuclide)	Acceptable level of activity concentration (Bq/g)	Acceptable level of activity (Bq)
Pa-234	1×10^{1}	1×10^{6}
U-230	1×10^{1}	1×10^{5}
U-231	1×10^{2}	1×10^{7}
U-232	1×10^{0}	1×10^{3}
U-233	1×10^{1}	1×10^{4}
U-234	1×10^{1}	1×10^{4}
U-235	1×10^{1}	1×10^{4}
U-236	1×10^{1}	1×10^{4}
U-237	1×10^{2}	1×10^{6}
U-238	1×10^{1}	1×10^{4}
U-239	1×10^{2}	1×10^{6}
U-240	1×10^{3}	1×10^{7}
U-240	1×10^{1}	1×10^{6}
Np-232	1×10^{1}	1×10^{6}
Np-233	1×10^{2}	1×10^{7}
Np-234	1×10^{1}	1×10^{6}
Np-235	1×10^{3}	1×10^{7}
Np-236 (1.5×10^{5}a)	1×10^{2}	1×10^{5}
Np-236 (22.5h)	1×10^{3}	1×10^{7}
Np-237	1×10^{0}	1×10^{3}
Np-238	1×10^{2}	1×10^{6}
Np-239	1×10^{2}	1×10^{7}
Np-240	1×10^{1}	1×10^{6}
Pu-234	1×10^{2}	1×10^{7}
Pu-235	1×10^{2}	1×10^{7}
Pu-236	1×10^{1}	1×10^{4}
Pu-237	1×10^{3}	1×10^{7}
Pu-238	1×10^{0}	1×10^{4}
Pu-239	1×10^{0}	1×10^{4}
Pu-240	1×10^{0}	1×10^{3}
Pu-241	1×10^{2}	1×10^{5}
Pu-242	1×10^{0}	1×10^{4}
Pu-243	1×10^{3}	1×10^{7}

Radioactive material (radionuclide)	**Acceptable level of activity concentration (Bq/g)**	**Acceptable level of activity (Bq)**
Pu-244	1×10^{0}	1×10^{4}
Pu-245	1×10^{2}	1×10^{6}
Pu-246	1×10^{2}	1×10^{6}
Am-237	1×10^{2}	1×10^{6}
Am-238	1×10^{1}	1×10^{6}
Am-239	1×10^{2}	1×10^{6}
Am-240	1×10^{1}	1×10^{6}
Am-241	1×10^{0}	1×10^{4}
Am-242	1×10^{3}	1×10^{6}
Am-242m	1×10^{0}	1×10^{4}
Am-243	1×10^{0}	1×10^{3}
Am-244	1×10^{1}	1×10^{6}
Am-244m	1×10^{4}	1×10^{7}
Am-245	1×10^{3}	1×10^{6}
Am-246	1×10^{1}	1×10^{5}
Am-246m	1×10^{1}	1×10^{6}
Cm-238	1×10^{2}	1×10^{7}
Cm-240	1×10^{2}	1×10^{5}
Cm-241	1×10^{2}	1×10^{6}
Cm-242	1×10^{2}	1×10^{5}
Cm-243	1×10^{0}	1×10^{4}
Cm-244	1×10^{1}	1×10^{4}
Cm-245	1×10^{0}	1×10^{3}
Cm-246	1×10^{0}	1×10^{3}
Cm-247	1×10^{0}	1×10^{4}
Cm-248	1×10^{0}	1×10^{3}
Cm-249	1×10^{3}	1×10^{6}
Cm-250	1×10^{-1}	1×10^{3}
Bk-245	1×10^{2}	1×10^{6}
Bk-246	1×10^{1}	1×10^{6}
Bk-247	1×10^{0}	1×10^{4}
Bk-249	1×10^{3}	1×10^{6}
Bk-250	1×10^{1}	1×10^{6}

Radioactive material (radionuclide)	Acceptable level of activity concentration (Bq/g)	Acceptable level of activity (Bq)
Cf-244	1×10^4	1×10^7
Cf-246	1×10^3	1×10^6
Cf-248	1×10^1	1×10^4
Cf-249	1×10^0	1×10^3
Cf-250	1×10^1	1×10^4
Cf-251	1×10^0	1×10^3
Cf-252	1×10^1	1×10^4
Cf-253	1×10^2	1×10^5
Cf-254	1×10^0	1×10^3
Es-250	1×10^2	1×10^6
Es-251	1×10^2	1×10^7
Es-253	1×10^2	1×10^5
Es-254	1×10^1	1×10^4
Es-254m	1×10^2	1×10^6
Fm-252	1×10^3	1×10^6
Fm-253	1×10^2	1×10^6
Fm-254	1×10^4	1×10^7
Fm-255	1×10^3	1×10^6
Fm-257	1×10^1	1×10^5
Md-257	1×10^2	1×10^7
Md-258	1×10^2	1×10^5

Schedule 3

s 9(3)

Dose limits for ionising radiation

Occupational exposure

1 For occupational exposure of workers over 18 years of age, the dose limits for ionising radiation are—

(a) an effective dose of 20 millisieverts (**mSv**) per year averaged over 5 consecutive years (100 mSv in 5 years) and of 50 mSv in any single year; and

(b) an equivalent dose to the lens of the eye of 20 mSv per year averaged over 5 consecutive years (100 mSv in 5 years) and of 50 mSv in any single year; and

(c) an equivalent dose to the extremities (hands and feet) or the skin of 500 mSv in a year.

2 For occupational exposure of persons of 16 to 18 years of age who are being trained for employment involving radiation, and for exposure of students of 16 to 18 years of age who use ionising radiation sources in the course of their studies, the dose limits are—

(a) an effective dose of 6 mSv in a year; and

(b) an equivalent dose to the lens of the eye of 20 mSv in a year; and

(c) an equivalent dose to the extremities (hands and feet) or the skin of 150 mSv in a year.

Public exposure

3 For public exposure, including exposure to an embryo or a foetus in a female worker, the dose limits for ionising radiation are—

(a) an effective dose of 1 mSv in a year; and

(b) an equivalent dose to the lens of the eye of 15 mSv in a year; and

(c) an equivalent dose to the skin of 50 mSv in a year.

4 For public exposure, the effective dose may be higher than 1 mSv in a year, if so specified in regulations, provided that the average dose over 5 consecutive years does not exceed 1 mSv per year.

Schedule 4 s 86
Radiation Safety Advisory Council

1 Term of office

(1) A member of the Council—

(a) holds office for a term of 3 years from the date of the member's appointment or from the date (if any) specified in the instrument by which the member is appointed; and

(b) may from time to time be reappointed.

(2) A person—

(a) becomes ineligible for appointment to the Council after completing 6 consecutive years as a member; but

(b) becomes eligible for appointment 1 year after the date that the person became ineligible for appointment.

(3) A member whose term of office has expired continues, unless sooner vacating or being removed from office, by virtue of the appointment for the term that has expired, until—

(a) that member is reappointed; or

(b) a successor to that member is appointed.

2 Vacation of office

(1) A member of the Council may at any time be removed from office by the Minister for inability to perform the functions of the office, bankruptcy, neglect of duty, or misconduct proved to the satisfaction of the Minister.

(2) A member of the Council may resign from office by giving written notice to the Minister.

(3) A member of the Council who becomes ineligible for appointment under **clause 1(2)(a)** ceases to be a member of the Council.

(4) The powers of the Council are not affected by any vacancy in its membership.

3 Chairperson and deputy chairperson of Council

(1) The Council—

(a) must appoint a member as chairperson; and

(b) may appoint another member as deputy chairperson.

(2) The appointment must be by notice in writing to the member and the Council stating—

(a) the period (starting at or after the time the member comes into office as a member of the Council and ending at or before the time he or she must cease to be a member) for which the member is appointed chairperson or deputy chairperson; and

(b) the date on which he or she comes into that office.

(3) A person whose appointment as chairperson or deputy chairperson has expired—

(a) continues in that office until his or her successor is appointed; and

(b) is eligible for reappointment to that office so long as he or she continues to be a member of the Council.

4 Meetings of Council

(1) The meetings of the Council are to be held at the times and places that the Council or the chairperson from time to time appoints.

(2) At any meeting of the Council, 4 members constitute a quorum.

(3) Every question before any meeting of the Council must be determined by a majority of the votes of the members present and voting.

(4) The chairperson has a deliberative vote and, in the case of an equality of votes, has a casting vote.

Schedule 5

s 99

Consequential amendments

Part 1
Amendments to Acts

Carriage of Goods Act 1979 (1979 No 43)

In section 30, replace "Radiation Protection Act 1965" with "Radiation Safety Act **2014**".

Environment Act 1986 (1986 No 127)

In the Schedule, replace the item relating to the Radiation Protection Act 1965 with:

"Radiation Safety Act **2014**".

Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (2012 No 72)

In section 4(1), definition of **radioactive waste or other radioactive matter**, replace "Radiation Protection Act 1965" with "Radiation Safety Act **2014**".

Fire Service Act 1975 (1975 No 42)

In section 2(1), definition of **hazardous substance**, replace paragraph (b) with:

"(b) any radioactive material as defined in **section 5(1)** of the Radiation Safety Act **2014** or infectious substance that may impair human, animal, or plant health".

Health Practitioners Competence Assurance Act 2003 (2003 No 48)

Replace section 67(b)(xii) with:

"(xii) the Radiation Safety Act **2014**."

Replace section 100(2)(a)(xii) with:

"(xii) the Radiation Safety Act **2014**; or".

Maritime Transport Act 1994 (1994 No 104)

In section 257, definition of **radioactive waste or other radioactive matter**, replace "the Radiation Protection Act 1965" with "**section 5(1)** of the Radiation Safety Act **2014**".

Part 1—*continued*

Medicines Act 1981 (1981 No 118)

In section 3(1)(c)(iii), replace "section 2(1) of the Radiation Protection Act 1965" with "**section 5(1)** of the Radiation Safety Act **2014**".

In section 38(1)(a), replace "section 2(1) of the Radiation Protection Act 1965" with "**section 5(1)** of the Radiation Safety Act **2014**".

Search and Surveillance Act 2012 (2012 No 24)

In the Schedule, repeal the item relating to the Radiation Protection Act 1965.

Trans-Tasman Mutual Recognition Act 1997 (1997 No 60)

In Schedule 2, replace the item relating to the Radiation Protection Act 1965 with:

"Radiation Safety Act **2014**, to the extent that it deals with any requirement described in section 10(2) applicable to the sale of any radioactive material (within the meaning of **section 5(1)** of the Radiation Safety Act **2014**)".

Part 2
Amendment to legislative instrument

Accident Compensation (Liability to Pay or Contribute to Cost of Treatment) Regulations 2003 (SR 2003/388)

In regulation 3, replace the definition of **radiologist** with:

> "**radiologist** means a medical practitioner who holds an authorisation, appropriate to the treatment for which payment is sought, under the Radiation Safety Act **2014**".

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