1993—No. 434

RADIATION CONTROL ACT 1990—REGULATION

(Radiation Control Regulation 1993)

NEW SOUTH WALES

[Published in Gazette No. 94 of 27 August 1993]

HIS Excellency the Governor, with the advice of the Executive Council, and in pursuance of the Radiation Control Act 1990, has been pleased to make the Regulation set forth hereunder.

MICHAEL S. PHOTIOS, M.P.,
Acting Minister for the Environment.

PART 1—PRELIMINARY

Citation

1. This Regulation may be cited as the Radiation Control Regulation 1993.

Commencement

2. This Regulation commences on 1 September 1993.

Definitions

3. (1) In this Regulation:

"absorbed dose" has the same meaning as it has in the 1990 ICRP recommendations;

"approved" means approved for the time being by the Director-General

"Director-General" means the Director-General of the Environment Protection Authority;

"effective dose" has the same meaning as it has in the 1990 ICRP recommendations;

"equivalent dose" has the same meaning as it has in the 1990 ICRP recommendations;

"occupationally exposed person" means a person who is or is likely to be exposed to ionising or non-ionising radiation as a result of being directly involved, in the course of his or her employment, with radiation apparatus or radioactive substances;

"radiation accident" is defined in clause 24;

"the Act" means the Radiation Control Act 1990;

"the 1990 ICRP recommendations" means the document entitled ''1990 Recommendations of the International Commission on Radiological Protection" and numbered "ICRP Publication 60", as adopted by the International Commission on Radiological Protection in November 1990, a copy of which is deposited in the offices of the Environment Protection Authority.

(2) In this Regulation, a reference to a radioactive substance of a particular Group is a reference to a radioactive substance referred to in the corresponding Part of Schedule 1.

Definition of "radioactive ore" (sec. 4)

4. (1) For the purposes of the definition of "radioactive ore" in section 4 (1) of the Act, the prescribed concentrations of uranium and thorium are:

(a) in the case of an ore that contains uranium but not thorium, 0.02 per cent by weight of uranium; or

(b) in the case of an ore that contains thorium but not uranium, 0.05 per cent by weight of thorium; or

(c) in the case of an ore that contains both uranium and thorium, a percentage by weight of uranium and thorium such that the expression:

$$\frac{U}{0.02} + \frac{Th}{0.05}$$

is greater than or equal to one.

(2) In the expression referred to in subclause (1) (c):

(a) "U" represents the percentage by weight of uranium; and

(b) "Th" represents the percentage by weight of thorium.

Definition of "radioactive substance" (sec. 4)

5. (1) For the purposes of the definition of "radioactive substance" in section 4 (1) of the Act, the prescribed amount is 100 becquerels per gram.

(2) For the purposes of the definition of "radioactive substance" in section 4 (1) of the Act, a substance has the prescribed activity if the expression:

$$\frac{A1}{40} + \frac{A2}{400} + \frac{A3}{4000} + \frac{A4}{40000}$$

is greater than or equal to one.

(3) In the expression referred to in subclause (2):

(a) A1 represents the total activity, in kilobecquerels, of the Group 1 radionuclides contained in the substance;

(b) A2 represents the total activity, in kilobecquerels, of the Group 2 radionuclides contained in the substance;

(c) A3 represents the total activity, in kilobecquerels, of the Group 3 radionuclides contained in the substance;

(d) A4 represents the total activity, in kilobecquerels, of the Group 4 radionuclides contained in the substance.

Safe dose limits to be taken into account by the Council

6. When making a recommendation under the Act, the Council is to take into account, where relevant, the dose limits for exposure to ionising radiation, and the guidelines for assessing those limits, set out in Schedule 2.

PART 2—LICENSING, REGISTRATION ACCREDITATION

Exemptions from sec. 6 licensing requirements for certain radiation apparatus etc.

7. (1) A person is exempt from the requirement to be licensed under section 6 of the Act in relation to the use of the kinds of radioactive substances specified in Part 1 of Schedule 3.

(2) A person is exempt from the requirement to be licensed under section 6 of the Act in relation to the use or sale of the kinds of radioactive substances specified in Part 2 of Schedule 3.

(3) A person is exempt from the requirement to be licensed under section 6 of the Act in relation to the use of the kinds of ionising radiation apparatus specified in Part 3 of Schedule 3.

(4) A person is exempt from the requirement to be licensed under section 6 of the Act in relation to the use or sale of the kinds of ionising radiation apparatus specified in Part 4 of Schedule 3.

Exemptions from sec. 6 licensing requirements for certain persons

8. (1) The following persons are exempt from the licensing requirements of section 6 of the Act in relation to the use of radioactive substances and ionising radiation apparatus:

(a) a person who is a medical registrar at a hospital and is training in nuclear medicine, diagnostic radiology, radiation oncology or in a medical discipline which uses fluoroscopy;

(b) a person who is a student in medical radiation technology and is a trainee technologist in nuclear medicine, diagnostic radiology or radiation oncology;

(c) a person who is an assistant to an industrial radiographer;

(d) an undergraduate student in a university or other educational institution who is undertaking course work or research;

(e) a postgraduate student in a university or other educational institution who is undertaking research or hgher studies.

(2) This exemption does not have effect with respect to a person unless the person:

(a) is the subject of an approval under this clause; and

(b) is complying with the conditions to which the approval is subject.

(3) A person who holds a licence may give approvals for the purposes of this clause, but only if the conditions of the licence so allow.

(4) An approval:

(a) must be in writing; and

(b) must specify the radioactive substances or radiation apparatus to which it relates; and

(c) must set out any conditions to which it is subject; and

(d) must identify each person, or class of persons, to whom it relates; and

(e) must identify the person or persons who are to supervise each person, or class of persons, to whom it relates.

(5) A person who gives an approval for the purposes of this clause must ensure that a copy of the approval:

(a) is given to each person to whom it relates; or

(b) is conspicuously displayed at each place in which the radioactive substances or ionising radiation apparatus to which the approval relates are proposed to be used.

Maximum penalty: 15 penalty units.

(6) A person who grants an approval must ensure that each person so approved is supervised by a qualified person as follows:

(a) a person referred to in subclause (1) (a) must be subject to:

(i) immediate supervision at all times during the first 6 months of the person's training; and

(ii) general supervision after that period;

(b) a person referred to in subclause (1) (b) must be subject to:

(i) immediate supervision at all times while the person is using the radioactive substances or radiation apparatus to which the approval relates during clinical experience in the course of training; and

(ii) general supervision at all other times;

(c) a person referred to in subclause (1) (c) must be subject to immediate supervision at all times;

(d) a person referred to in subclause (1) (d) must be subject to:

(i) immediate supervision at all times while the person is using the radioactive substances or radiation apparatus to which the approval relates in any clinical situation; and

(ii) general supervision at all other times;

(e) a person referred in subclause (1) (e) must be subject to general supervision at all times.

Maximum penalty: 15 penalty units.

(7) In this clause:

"general supervision" means supervision by a qualified supervisor who oversees the person being supervised and ensures that the person follows safe radiation work practices in relation to the use of radioactive substances or radiation apparatus;

"immediate supervision" means supervision by a qualified supervisor who is present at all times during, and is observing and directing, the use by the person being supervised of radioactive substances or radiation apparatus;

"qualified person", in relation to supervision for a particular radioactive substance or item of radiation apparatus, means a person who is the holder of a licence which allows the person to provide supervision with respect to that substance or item.

Supervision of certain licensees

9. (1) When granting a licence under section 6 of the Act to a person who is a nuclear medicine technologist, the Authority must impose a condition on the licence to the effect that the person must not carry out:

(a) any nuclear medicine diagnostic procedures using scintigraphy; or

(b) any nuclear medicine therapeutic procedures using unsealed radioactive sources,

otherwise than under close supervision.

(2) In this clause:

"close supervision" means supervision by a qualified person who is in close proximity and is capable, if required, of observing the person being supervised and directing the person in the carrying out of the procedures referred to in subclause (1);

"qualified person" means:

(a) a person who is the holder of a licence which allows the person to provide close supervision; or

(b) a person who is a medical registrar, at a hospital providing training in nuclear medicine, and is certified by a person referred to in paragraph (a) (being a person whose licence authorises the person to so certify) as being competent to provide close supervision.

Registration of certain sealed radioactive sources

10. (1) All sealed radioactive sources, other than fixed radiation gauges, are exempt from the application of section 7 of the Act.

(2) Registration under section 7 of the Act of a fixed radiation gauge has effect for 2 years.

Consulting radiation experts

11. (1) For the purposes of section 9 (1) of the Act, the following activities are prescribed as the activities of a consulting radiation expert:

(a) advising on the design of premises to be registered under section 8 of the Act in relation to radiation safety requirements;

(b) assessing plans for premises to be registered under section 8 of the Act in relation to radiation safety requirements for the purpose of certifying compliance with the requirements necessary for registration;

(c) calibrating ionising radiation apparatus used for medical therapy;

(d) calibrating ionising radiation apparatus used for diagnostic purposes;

(e) assessing radiation apparatus, sealed radioactive sources and premises which are required to be registered under section 7 or 8 of the Act for the purpose of certifying compliance with the requirements for registration.

(2) For the purposes of this Regulation:

"radiation assessor" means a person whose accreditation under section 9 of the Act allows the person to carry out the activities referred to in subclause (1) (e) but does not allow the person to carry out any of the activities referred to in subclause (1) (a)–(d);

"radiation consultant" means a person whose accreditation under section 9 of the Act allows the person to carry out any one or more of the activities referred to in subclause (1) (a)–(d), whether or not it also allows the person to carry out the activities referred to in subclause (1) (e).

(3) Inspectors appointed under section 32 of the Act are exempt from the provisions of section 9 (1) of the Act.

Fees

12. The following fees are prescribed for the purposes of the Act:

TABLE OF FEES

Licence under section 6 of the Act (other than a temporary licence).....	$68
Temporary licence under section 6 of the Act	$20
Registration under section 7 of the Act	$100
Renewal of licence under section 11 of the Act	$38
Renewal of registration under section 11 of the Act.....	$80
Accreditation under section 9 of the Act.....	$68
Transfer of registration under section 12 of the Act	$20

PART 3—RADIATION SAFETY

Division 1—Radiation safety in the workplace

Duty to inform occupationally exposed persons

13. An employer must ensure that each occupationally exposed person in his or her employ is made aware of, and kept informed of any changes in, the following particulars:

(a) the hazards that can arise in connection with the use of radioactive substances and radiation apparatus;

(b) the safety arrangements that exist to protect persons from such hazards and of the steps that the person must take in order to minimise the likelihood that such a hazard will arise;

(c) the name of the radiation safety officer or other person to whom the person should refer in connection with any matters relating to the use of radioactive substances and radiation apparatus.

Maximum penalty: 15 penalty units.

Radiation safety manual

14. (1) The Director-General may, by notice in writing served on an employer, direct the employer:

(a) to prepare or adopt a radiation safety manual; and

(b) to submit a copy of the manual to the Council for approval,

within such period of time as is specified in the direction.

(2) An employer must not fail to comply with such a direction.

Maximum penalty: 15 penalty units.

(3) An employer whose radiation safety manual has been approved by the Council:

(a) must ensure that a copy of the manual is available to all occupationally exposed persons employed by the employer; and

(b) must take all reasonable steps to ensure that the procedures set out in the manual with respect to the use of radioactive substances and radiation apparatus are followed by all persons in his or her employ.

Maximum penalty: 15 penalty units.

(4) A radiation safety manual may not be approved by the Council unless it conforms to the document adopted by the Council and entitled "Guideline: Preparation of Radiation Safety Manuals", a copy of which is deposited in the offices of the Environment Protection Authority.

Division 2—Radiation monitoring

Personal monitoring devices

15. (1) An employer must ensure that all occupationally exposed persons in his or her employ who are involved in the use of ionising radiation for any one or more of the following purposes are issued with

approved personal monitoring devices for detecting and measuring cumulative exposure to ionising radiation:

(a) radiotherapy;

(b) industrial radiography;

(c) nuclear medicine;

(d) scientific research in laboratories classified as medium or high level laboratories (within the meaning of Part 4 of Australian Standard 2243.4–1986, Safety in Laboratories, published by the Standards Association of Australia) where unsealed radioactive sources are used.

Maximum penalty: 15 penalty units.

(2) An occupationally exposed person to whom an approved monitoring device has been issued in accordance with this clause must wear the device while involved in the use of ionising radiation in the course of the person's employment.

Maximum penalty: 15 penalty units.

Personal radiation exposure record

16. (1) An employer must ensure that, for each occupationally exposed person to whom a personal monitoring device is issued, a record is kept, on an appropriate periodic basis:

(a) of the amount of radiation to which the person has been exposed, as measured by the device; and

(b) of the results of any tests carried out or caused to be carried out by the employer in relation to the person for the purpose of determining the amount of radiation to which the person has been exposed.

Maximum penalty: 15 penalty units.

(2) Such a record must contain the following particulars:

(a) the full name, sex and date of birth of the occupationally exposed person;

(b) the current home address of the occupationally exposed person or, if the person is no longer employed by the employer, the person's last known home address;

(c) the date of commencement of employment (and, if applicable, the date of cessation of employment) as an occupationally exposed person;

(d) the kind of work performed by the occupationally exposed person;

(e) details of the types of ionising radiation to which the occupationally exposed person may have been exposed in the course of employment with the employer, including information about radioactive substances in unsealed form (if any) to which the occupationally exposed person may have been exposed;

(f) details of any radiation accidents in which the person has been involved or by which the person may have been affected;

(g) details of the personal monitoring device worn by the occupationally exposed person;

(h) the results of monitoring the levels of radiation exposure of the occupationally exposed person.

(3) When an employee leaves an employer's employment, the employer:

(a) must cause a copy of the radiation exposure records relating to the employee to be given to the employee; and

(b) if the employer is aware that the employee is taking up employment as an occupationally exposed person with some other employer, and if the employee consents, must cause a further copy of those records to be given to the other employer.

Maximum penalty: 15 penalty units.

(4) An employer must ensure that a warning in the following terms accompanies a copy of the radiation exposure records given to an employee by the employer in accordance with subclause (3):

THESE RECORDS SHOULD BE KEPT SAFELY AND BE GIVEN TO ANY FUTURE EMPLOYER IN THE RADIATION AREA. THEY CONTAIN INFORMATION OF PERMANENT APPLICATION.

Maximum penalty: 15 penalty units.

(5) An ernployer by whom a record is required to be kept must ensure that the records are available for inspection by the person to whom they relate at reasonable times during normal working hours.

Maximum penalty: 15 penalty units.

Area monitoring devices

17. (1) On the recommendation of the Council, the Director-General may, by notice in writing served on an employer, direct the employer to take specified action with respect to the monitoring of radiation on specified premises.

(2) In particular, such a direction may require the employer to ensure that specified premises are equipped with approved monitoring devices for the purpose of monitoring the presence and level of radiation on the premises.

(3) An employer must not contravene a direction in force under this clause.

Maximum penalty: 15 penalty units.

Maintenance of monitoring devices

18. An employer must ensure that all monitoring devices that are issued or installed by the employer in accordance with the requirements of this Division are checked, maintained and calibrated in accordance with the document adopted by the Council and entitled "Guideline: Monitoring Devices", a copy of which is deposited in the offices of the Environment Protection Authority.

Maximum penalty: 15 penalty units.

Records to be kept of monitoring equipment

19. An employer must ensure that, for each monitoring device issued or installed by the employer in accordance with this Division, a record is kept of the following particulars:

(a) the date on which the device was acquired;

(b) the date of each occasion on which the device was repaired and the details of the repairs;

(c) the date on which the device was last calibrated.

Maximum penalty: 15 penalty units.

Division 3—Voluntary exposure to radiation for scientific or research purposes

Voluntary exposure to radiation for scientific or research purposes

20. A person must not expose any other person to ionising radiation for scientific or research purposes except in accordance with the document entitled "Administration of Ionizing Radiation to Human Subjects in Medical Research (1984)" of the National Wealth and Medical Research Council, published by the Australian Government Publishing Service.

Maximum penalty: 15 penalty units.

Division 4—Disposal and transport of radioactive substances and radiation apparatus

Disposal of radioactive substances and radiation apparatus

21. (1) A person must not dispose of any radioactive substance except with the consent of the Director-General.

Maximum penalty: 100 penalty units.

(2) A person must not dispose of any radiation apparatus except with the consent of the Director-General and unless the apparatus has been rendered permanently inoperable.

Maximum penalty: 100 penalty units.

(3) The consent of the Director-General may be given generally or in a particular case and may be subject to such conditions as the Director-General thinks fit to impose.

Records to be kept of discharge of radioactive substances

22. (1) The occupier of any premises on which radioactive substances are kept must maintain a record of all radioactive substances discharged from the premises.

Maximum penalty: 100 penalty units.

(2) The record must include the following information:

(a) the type of radioactive substances discharged;

(b) an estimate of the total activity of the radioactive substances discharged;

(c) the manner in which the radioactive substances were discharged;

(d) the date on which the radioactive substances were discharged.

Transport of radioactive substances

23. A person must not cause any radioactive substance to be transported otherwise than in accordance with the requirements of the Code of Practice for the Safe Transport of Radioactive Substances 1990 prepared by the Department of the Arts, Sport, the Environment, Tourism and the Territories of the Commonwealth.

Maximum penalty: 100 penalty units.

Division 5—Radiation accidents

Certain occurrences are taken to be radiation accidents

24. (1) For the purposes of this Regulation, a radiation accident is to be treated as having occurred if there is an occurrence that involves the unplanned or unexpected emission of radiation (such as spillage or leakage of a radioactive substance or damage to radiation apparatus) and that is of such a nature or extent that it is likely:

(a) that one or more persons have, or could have, received a dose of radiation equal to or in excess of:

(i) 5 millisieverts, in the case of an occupationally exposed person; or

(ii) 1 millisievert, in any other case; or

(b) that premises or the environment may have become contaminated within the meaning of section 21 of the Act.

(2) For the purposes of this Regulation, a radiation accident is to be treated as having occurred if there is an occurrence that involves the misuse of radiation apparatus or maladministration of a radioactive substance used for medical purposes, including:

(a) the administration of a radioactive substance for diagnostic purposes in a quantity of more than 50 per cent more than that prescribed;

(b) the administration of a radioactive substance for therapeutic purposes at an activity differing by more than 15 per cent from that prescribed;

(c) administration of a therapeutic dose of radiation from radiation apparatus or a sealed radioactive source which differs from the prescribed treatment dose by more than 10 per cent;

(d) the unintended administration of radiation as a result of a malfunction of radiation apparatus;

(e) administration of a radiopharmaceutical otherwise than as prescribed.

Duty to report and investigate apparent radiation accidents

25. (1) Immediately on becoming aware of an apparent radiation accident, an employer must cause notice of that fact to be given to the Director-General.

Maximum penalty: 15 penalty units.

(2) The notice must contain the following particulars:

(a) particulars of the accident indicating, as far as is possible, the place where it occurred and the period during which emission of radiation was uncontrolled;

(b) particulars of the area over which any radioactive substances may have been dispersed;

(c) particulars of any steps taken to rectify the accident;

(d) particulars of any personal injury or exposure that may have resulted;

(e) particulars of any assessment of the radiation dose to which any person may have been exposed as a result of the accident.

Register of accidents

26. (1) An employer must maintain a record of all radiation accidents.

Maximum penalty: 15 penalty units.

(2) Such a record must, for each radiation accident that is reported to the ernployer, contain the following particulars:

(a) particulars of the accident indicating, as far as is possible, the place where it occurred and the period during which emission of radiation was uncontrolled;

(b) the name of any occupationally exposed person or other person who was there during that period;

(c) an estimate of the radiation dose to which any person may have been exposed;

(d) details and results of any medical examinations undertaken as a result of the accident;

(e) particulars of the area over which any radioactive substances may have been dispersed;

(f) particulars of any steps taken to rectify the accident;

(g) the time at which the accident was reported to the employer;

(h) the probable cause of the accident;

(i) particulars of any investigations conducted into the accident, together with the results of the investigations;

(j) details of any steps taken to reduce the risk of a similar accident occurring in the future.

Faults or defects

27. An employer, on becoming aware that a fault may exist in any radiation apparatus:

(a) must investigate the apparent fault and, if necessary, cause the apparatus to be removed, replaced or repaired; and

(b) must inform all persons who may have been exposed to radiation in quantities in excess of those that would normally be received from the apparatus in faultless condition that they may have been so exposed.

Maximum penalty: 50 penalty units.

PART 4—RADIATION SAFETY OFFICERS AND COMMITTEES

Appointment of radiation safety officers and committees

28. (1) On the recommendation of the Council, the Director-General may, by notice in writing served on an employer:

(a) direct the employer to appoint a radiation safety officer or a radiation safety committee, or both, for a workplace; and

(b) in the case of a direction to appoint a radiation safety officer, determine the qualifications to be held by a person so appointed; and

(c) direct what functions are to be exercised by a radiation safety officer or radiation safety committee so appointed.

(2) An employer:

(a) must not fail to appoint a radiation safety officer or a radiation safety committee, or both, in accordance with a direction under this clause; and

(b) must not allow the functions of the radiation safety officer or radiation safety committee to be exercised otherwise than by the officer or the committee, as the case requires.

Maximum penalty: 15 penalty units.

PART 5—MISCELLANEOUS

Destruction etc. of records

29. (1) An employer must not destroy or otherwise dispose of any records required to be kept under this Regulation otherwise than in accordance with this clause.

Maximum penalty: 15 penalty units.

(2) An employer may, with the consent of the Director-General, destroy or otherwise dispose of any records that the employer is required by this Regulation to keep.

(3) The Director-General is not to give consent to the destruction of any records kept under clause 16 by an employer until at least 5 years after the cessation of employment with the employer of the employee concerned.

(4) An employer may forward to the Director-General the records kept under this Regulation by the employer if the employer ceases to carry on business in New South Wales.

(5) The Director-General may dispose of any records forwarded to or kept by the Director-General in accordance with this Regulation.

Contamination of premises by radioactivity (sec. 21)

30. (1) For the purposes of section 21 (4) of the Act, the prescribed level of activity for premises inside a building is:

(a) 0.04 becquerels per square centimetre for any Group 1 or Group 2 radioactive substance that emits alpha radiation; or

(b) 0.4 becquerels per square centimetre for any Croup 3 or Group 4 radioactive substance that emits alpha radiation; or

(c) 0.4 becquerels per square centimetre for any radioactive substance that emits beta or gamma radiation.

(2) For the purposes of section 21 (4) of the Act, the prescribed level of activity for premises outside a building is:

(a) 0.01 becquerels per square centimetre for any Group 1 radioactive substance; or

(b) 0.1 becquerels per square centimetre for any Group 2 radioactive substance; or

(c) 1.0 becquerels per square centimetre for any Group 3 radioactive substance; or

(d) 10.0 becquerels per square centimetre for any Group 4 radioactive substance.

Loss or theft of radioactive substance or radiation apparatus

31. (1) If any radioactive substance, or any radiation apparatus registered under section 7 of the Act, is lost or stolen:

(a) the person who is the owner of the substance or apparatus; and

(b) any other person who is the holder of a licence and is employed to use, or to supervise the use of, the substance or apparatus,

must cause notice of the loss or theft to be given to the Director-General within 3 days after the person becomes aware of the loss or theft.

Maximum penalty: 15 penalty units.

(2) Notice does not have to be given by any one of those persons if notice has already been given by any other of those persons.

Forfeiture of property (secs. 26 and 27)

32. (1) An application made by or on behalf of the Authority for the purposes of section 26 (2) of the Act is to be in writing.

(2) A notice referred to in section 27 (1) (b) of the Act is to be in writing addressed to the owner of the substance or thing concerned at that person's address last known to the Authority.

Warning signs

33. The occupier of any premises in or on which any radiation apparatus or radioactive substance, not specified in Schedule 3, is kept must ensure that a warning sign in or to the effect of the form set out in Schedule 4 (with colouring as indicated in the note to that Schedule) is conspicuously displayed in the immediate vicinity of the apparatus or substance.

Maximum penalty: 10 penalty units.

Savings

34. (1) A file referred to in Regulation 6 of the Radioactive Substances Regulations 1959 (as in force immediately before their repeal) is taken to be a record referred to in clause 16 of this Regulation.

(2) A fixed radiation gauge which was the subject of a licence in force under section 9 of the Radioactive Substances Act 1957 immediately before its repeal is taken to be registered under section 7 of the Radiation Control Act 1990 until 1 September 1994.

SCHEDULE 1—PRESCRIBED ACTIVITY OF A RADIOACTIVE SUBSTANCE

(Cl. 3)

Column 1	Column 2
GROUP 1	40 kilo-becquerels
Ac227 Am241 Am243 Cf249 Cf250 Cf252 Cm242 Cm243 Cm244 Cm245 Cm246 Np237 Pa231 Pb210 Po210 Pu238 Pu239 Pu240 Pu241 Pu242 Ra223 Ra226 Ra228 Th227 Th228 Th230 U230 U232 U233 U234 Any alpha emitting radionuclide which is not included in any other Group in this Schedule	
GROUP 2	400 kilo-becquerels
Ac228 Ag110m At211 Ba140 Bi207 Bi210 Bk249 Ca45 Cd115m Ce144 Cl36 Co56 Co60 Cs134 Cs137 Eu152 Eu154 Ge68 Hf181 I124 I125 I126 I131 I133 In114m Ir192 Mn54 Na22 Pa230 Pb212 Ra224 Ru106 Sb124 Sb125 Sc46 Sr89 Sr90 Ta182 Tb160 Te127m Te129m Th234 Tl204 Tm170 U236 Y91 Zr95 Any radionuclide which is not alpha emitting and is not included in any other Group in this Schedule	
GROUP 3	mega-becquerels
Ag105 Ag111 Ar41 As73 As74 As76 As77 Au196 Au198 Au199 Ba131 Ba133 Be7 Bi206 Bi212 Br75 Br76 Br82 C14 Ca47 Cd109 Cd115 Ce141 Ce143 Cl38 Co57 Co58 Cr51 Cs129 Cs131 Cs136 Cu64 Cu67 Dy165 Dy166 Er161 Er169 Er171 Eu152m Eu155 F18 Fe52 Fe55 Fe59 Ga67 Ga68 Ga72 Gd153 Gd159 Hf175 Hg195m Hg197 Hg197m Hg203 Ho166 I123 I130 I132 I134 I135 In111 In115 In115m Ir190 Ir194 K42 K43 Kr85m Kr87 La140 Lu177 Mg28 Mn52 Mn56 Mo99 Na24 Nb93m Nb95 Nd147 Nd149 Ni63 Ni65 Np239 Os185 Os191 Os193 P32 Pa233 Pb203 Pd103 Pd109 Pm147 Pm149 Pr142 Pr143 Pt191 Pt193 Pt197 Rb81 Rb86 Re183 Re186 Re188 Rh105 Rn220 Rn222 Ru103 Ru105 Ru97 S35 Sb122 Sc47 Sc48 Se75 Si3I Sm151 Sm153 Sn113 Sn121 Sn125 Sr85 Sr91 Sr92 Tc96 Tc97 Tc97m Tc99 Te125m Te127 Te129 Te131m Te132 Th231 Tl200 Tl201 Tl202 Tm171 U239 V48 W181 W185 W187 Xe135 Y87 Y90 Y92 Y93 Yb175 Zn62 Zn65 Zn69m Zr97	
GROUP 4	0 mega-ecquerels
Ar37 C11 Co58m Cs134m Cs135 Cu62 Ga68 Ge71 H3 I129 ln113m Kr81m Kr85 N13 Nb97 Ni59 O15 Os191m Pt193m Pt197m Rb87 Re187 Rh103m Se73 Sm147 Sr85m Sr87m Tc96m Tc99m Th nat Th232 U nat U235 U238 Xe131m Xe133 Y91m Zn69 Zr93	

SCHEDULE 2—DOSE LIMITS FOR EXPOSURE TO IONISING RADIATION

(Cl. 6)

Application	Dose limit Occupationally Exposed Person	Dose Limit Member of Public (other than patient)
Effective dose	20 mSv per year averaged over 5 years	1 mSv in a year
Equivalent dose to:		
lens of the eye	150 mSv in a year	15 mSv in a year
skin	500 mSv in a year	50 mSv in a year
the hands and feet	500 mSv in a year	No limit specified

NOTE 1: In the case of an occupationally exposed person who is a pregnant woman, a supplementary dose limit should apply to the surface of the abdomen of 2 millisieverts for the remainder of the pregnancy and the intake of radionuclide should be limited to 1/20 of the annual limit on intake for that radionuclide.

NOTE 2: The following guidelines apply for the purpose of assessing an employee's dose:

(a) those exposures resulting from:

- operating in workplaces where the Director-General has declared that the presence of radon gas requires remedial action
- operating with or storing materials not usually regarded as radioactive but which the Director-General considers contain significant traces of natural radionuclides
- the operation of jet aircraft,

are to be taken into account;

(b) any exposure resulting from diagnosis or treatment should not be taken into account;

(c) any exposure attributable to normal background levels of radiation should not be taken into account.

SCHEDULE 3—EXEMPTIONS FROM LICENSING

(Cl. 7)

Part 1—Exemptions from licensing for use of radioactive substances

- sealed radioactive sources used for gas chromatography detectors
- sealed radioactive sources used for radiation gauges installed in fixed positions
- industrial smoke detectors that contain Am-241, if they do not contain any other radioactive substance

Part 2—Exemptions from licensing for use and sale of radioactive substances

- clocks, watches and other devices that have luminous dials
- gaseous tritium luminous devices (self luminous "EXIT" signs)
- sealed radioactive sources used in nuclear medicine for checking gamma cameras and dose calibrators and having a level of activity of less than 40 megabecquerels
- sealed radioactive sources used as laboratory reference sources and having a level of activity of less than 40 megabecquerels
- sealed radioactive sources for demonstration, teaching and training having a level of activity of less than 40 megabecquerels
- uranium metal of natural isotopic composition, or depleted in uranium 235, which is used as radiation shielding in transport packages for radioactive substances or in any other manner

Part 3—Exemptions from licensing for use of radiation apparatus

- x-ray baggage inspection apparatus
- cabinet x-ray inspection apparatus installed in a fixed position

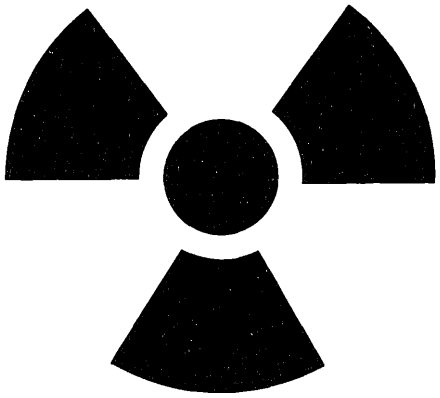
Part 4—Exemptions from licensing for use and sale of radiation apparatus

- television receivers
- visual display units
- cold cathode gas discharge tubes
- electron microscopes

SCHEDULE 4—PRESCRIBED WARNING SIGN

(Cl. 33)

CAUTION RADIATION



NOTE: The sign is to have a yellow background with the distinctive symbol in black and the lettering "CAUTION RADIATION" in black.

NOTES

TABLE OF PROVISIONS

EXPLANATORY NOTE

The object of this Regulation is to replace the Radioactive Substances Regulations 1959 which are to be repealed by the Radiation Control Act 1990. The matters with which the Regulation deals include the following:

(a) the licensing of persons to use certain radioactive substances and radiation apparatus;

(b) prescribing activities which may only be carried out by an accredited radiation expert;

(c) regulating the use of radiation apparatus and radioactive substances in the workplace and requiring employers to supply certain information to persons who are likely to be exposed to radiation in the course of their employment;

(d) requiring the radiation doses received by persons in the course of their employment to be monitored;

(e) regulating the disposal and transport of radiation apparatus and radioactive substances and the discharge of radioactive substances;

(f) requiring employers to take certain action in the event of a radiation accident;

(g) enabling the Director-General to direct an employer to appoint a radiation safety officer or radiation safety committee or both for a workplace;

(h) exemptions from certain provisions of the Act and the Regulation.

Regulation is made under the Radiation Control Act 1990, including section 40 (the general regulation making power), and various other sections mentioned in the Regulation.