RADIATION ADVISORY COUNCIL
ANNUAL REPORT 2001–02
The Honourable Bob Debus, MP  
Minister for the Environment  

Dear Minister  

It is my pleasure to forward to you for presentation to the Parliament of New South Wales the Annual Report of the Radiation Advisory Council for the period 1 July 2001 to 30 June 2002. This report has been prepared in accordance with the provisions of the *Radiation Control Act 1990*.

Yours sincerely  

D R LEECE  
Chairperson  
Radiation Advisory Council
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CHAIRPERSON'S REVIEW

The New South Wales Radiation Control Act 1990 (the Act) is administered by a ‘Minister’, currently the Minister for the Environment, and an ‘Authority’, currently the Environment Protection Authority (EPA). Both the Minister and the Authority (hereafter referred to as the EPA) are advised by an independent expert body, the Radiation Advisory Council (the Council).

The role of the Council is to:

• advise the Minister on policy matters, especially amendments to the Act, the Radiation Control Regulation 1993 (the Regulation) and other subordinate legislation (such as codes of practice and guidelines) made under the Act, and

• advise the Authority on operational matters (such as licensing, registration and accreditation matters), approval of scientific research, appointment of radiation safety officers and committees, compliance monitoring and enforcement, and radiation accident investigations.

The Council met for this purpose 12 times during 2001–02. The principal focus of its deliberations was proposed changes to the Act to bring it into line with recommendations of the national review of radiation protection legislation undertaken in 2000–01 under the National Competition Policy—recommendations designed to progressively achieve national uniformity in radiation protection. The resulting Radiation Control Amendment Act 2002 (the Amendment Act) was passed by the New South Wales Parliament in June 2002.

The Amendment Act allows new national codes of practice and guidelines made under the National Directory of Radiation Protection to progressively replace corresponding legislation in New South Wales.

In addition, the Amendment Act increases the membership of Council from 14 to 16 (adding an expert in naturally occurring radioactivity and a representative of the WorkCover Authority. This makes the EPA responsible and accountable at law for operational decisions, and puts beyond legal doubt the modus operandi of the Council in relation to its provision of advice to the EPA on operational matters.

The Council regularly provided advice to the EPA on operational matters throughout the year, primarily through its Technical Committee and the Course and Competencies Committee. This was a heavy work load for the Council and the EPA expressed considerable satisfaction with the quality and timeliness of the advice it received.

Council’s initial foci in 2002–03 will be the provision of advice to the EPA on remaking the Regulation, review of Radiation Guideline No. 6 (EPA 1999) that governs registration of diagnostic imaging apparatus, and the commencement of the registration of premises.

As I retire today as Chairperson of Council, I wish to thank the members of the Council for their contribution and support during my term. I have particularly appreciated their expert advice, wise counsel and willingness to openly debate contentious issues in a reasoned and a personal manner, thereby enabling the Council to reach a sound position on each issue.

I am also grateful for the unfailing support of the Council’s staff, particularly Ms Daniela Freschi-Nair and Ms Lindi Bowen, without whom the Council could not function.

D R LEECE
Chairperson
4 July 2002
RESPONSIBILITIES OF THE COUNCIL
The Council is constituted under section 29 of the Act.

The object of this Act is to:

‘...secure the protection of persons and the environment from exposure to ionising radiation, and harmful non-ionising radiation, to the maximum extent that is reasonably practicable, taking into account social and economic factors and recognising the need for the use of radiation for therapeutic purposes’.

Section 33(1) of the Act requires that ‘as soon as practicable after 30 June (but on or before 31 December) in each year, the Council is to prepare and forward to the Minister a report of its work and activities for the 12 months ending on 30 June in that year’.

CONSTITUTION OF THE COUNCIL
The Council is constituted under section 29 of the Act and is to consist of 14 members appointed by the Minister for the Environment. Membership of the Council is to consist of:

(a) the Director General or a member of staff of the EPA, who is to be the Chairperson of the Council
(b) a medical practitioner who is a specialist in radiology
(c) a radiographer with expertise in the field of human diagnostic radiography
(d) a person with expertise in the industrial uses of radiation
(e) a person with expertise in health physics
(f) a medical practitioner who specialises in nuclear medicine
(g) a person with expertise in non-ionising radiation
(h) a person with expertise in occupational health and safety
(i) a person who is a legal practitioner of at least 7 years standing
(j) a person who represents community interests
(k) an officer of the Department of Health
(l) a radiotherapist
(m) a medical physicist
(n) a person chosen by the Minister.

FUNCTIONS OF THE COUNCIL
Section 30 of the Act prescribes the functions of the Council, namely:

(1) The Council is to advise the Minister on:

(a) proposed amendments to the Act and the making, amendment or repeal of regulations under the Act;
(b) the administration of the Act and the regulations;
(c) measures to prevent or minimise the dangers arising from radiation;
(d) the granting, renewal, suspension and cancellation of any licence, registration or accreditation under the Act; and
(e) such other matters relating to radiation safety as the Minister considers appropriate.

(2) Any such advice may be given either at the request of the Minister or without any such request;

(3) The Council has such other functions as are conferred or imposed on it by or under this or any other Act.

Officers of the Radiation Control Section of the EPA support the work of the Council.

MEETINGS OF THE COUNCIL

During the reporting period ending 30 June 2001, the Council met 12 times (11 scheduled and one extraordinary meeting).

The attendance of members at meetings during this period is shown in Table 1, on page 3. The Council’s governance arrangements and procedures are described in Appendix 1.

COMMITTEES OF THE COUNCIL

Section 31 of the Act provides for the Council to establish committees to help it exercise its functions. The committees of the Council during 2001–02 were:

- The Technical Committee (formerly the Medical Radiation Committee and Health Physics Committee which met as the Conjoint Committee)

  The Technical Committee met on eleven occasions during the 12-month period. This committee does much of the Council’s technical work. It makes recommendations to the Council on:
  - matters such as applications for a licence and accreditation, including competency requirements and conditions to attach to licences for the use of radiation apparatus and radioactive substances
  - the use of ionising radiation on humans for medical research studies
  - safety protocols for the use of ionising radiation.

- The Course and Competencies Committee (formerly the Course Assessment Committee).

  The Course and Competencies Committee provides advice to the Council, pursuant to sections 6(5) and 9(3) of the Act pertaining to proposed licensing and accreditation qualifications. Its role also encompasses making recommendations to the Council on emerging issues, technical developments and regulatory matters or policy development relating to suitability of or necessity for approved courses. The committee met four times during this period.

Membership, terms of reference and operating procedures for the two committees of the Council are described in the Council’s governance arrangements in Appendix 1.

During this period, attendance by members at the meetings of both committees is shown in Appendix 2.
TABLE 1
Members of the Radiation Advisory Council and Meeting Attendance

<table>
<thead>
<tr>
<th>Member</th>
<th>Appointed position</th>
<th>Meetings attended</th>
<th>Meetings eligible to attend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr D Leece</td>
<td>Chairperson (EPA member)</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Ms D Campbell</td>
<td>Deputy to the EPA member</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Dr Phillip Pasfield</td>
<td>Radiologist</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Mr J Robinson</td>
<td>Diagnostic radiographer</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Mr C Hockings</td>
<td>Expert in industrial uses of radiation</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Mr M Carter</td>
<td>Health physicist</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Dr G Larcos</td>
<td>Physician in nuclear medicine</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Mr L Collins</td>
<td>Expert in non-ionising radiation</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Mr P Dunphy</td>
<td>Expert in occupational health and safety</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Dr L Robinson</td>
<td>Barrister</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Dr K Crawford</td>
<td>Community representative</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Ms K Meleady (Appointed 9 July 2001)</td>
<td>Department of Health</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Dr M Izard</td>
<td>Radiotherapist</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Dr D McLean</td>
<td>Medical physicist</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Mr Luke Platt (Appointed 27 May 2002)</td>
<td>Minister’s nominee</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

All members who were unable to attend meetings were granted leave from those meetings by the Council. In many instances, absent members tendered written advice on agenda items which was considered by Council and its committees during deliberation on those items.

NATIONAL COMPETITION POLICY REVIEW

In its December 1998 meeting, the Council of Australian Governments (COAG) Senior Officials Group agreed that the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) would conduct a National Competition Policy (NCP) review of radiation protection legislation in all the jurisdictions (NCP Review). Queensland declined to participate in this review because it had recently completed a review of its own legislation.

The NCP Review began on 8 August 2000 and an issues paper was released for public comment from 16 October 2000 to 15 December 2000. A draft final report was produced on 28 February 2001 and released for public comment until 31 March 2001. The final report, *NCP Review of Radiation Protection Legislation – Final Report May 2001*, was completed on 8 May 2001 and tabled at the Australian Health Ministers’ Advisory Council (AHMAC) meeting of 31 May 2001. This report was noted by the Australian Health Ministers Conference of 1 August 2001 and circulated to all jurisdictions for comment. Following responses from participating jurisdictions, three of the 19 recommendations of the NCP Review were then amended, to clarify their intent.
On advice from the National Competition Council, COAG directed that the participating jurisdictions must complete the review of their own legislation by 30 June 2002, to make them nationally consistent under the terms of the NCP.

As many of the recommendations of the NCP Review could not be implemented before 30 June 2002, ARPANSA published an Implementation Plan. On 23 November 2001, ARPANSA circulated to the jurisdictions a proposal for proceeding with the Implementation Plan. At the same time, ARPANSA submitted the Implementation Plan to the National Competition Council as a Transitional Plan for NCP payments.

The Implementation Plan has 12 projects. Outcomes and outputs have been specified for each of these projects. Many of the outputs are to be incorporated into the National Directory for Radiation Protection as the agreed means for achieving national uniformity of radiation protection legislation.

The Implementation Plan and the 19 recommendations of the NCP Review were endorsed by AHMAC in May 2002 and were then submitted to the Health Ministers in June 2002, out of session of AHMC.

During this reporting period, Council provided the EPA with comment on the NCP Review.

NATIONAL UNIFORMITY

In August 1999, the Australian Health Ministers’ Council agreed that the approach to national uniformity would be through the development of the National Directory for Radiation Protection (the Directory) as a means by which the nine Australian jurisdictions, including the Commonwealth, would achieve national uniformity in radiation protection legislation.

The Directory is being developed and implemented through the National Uniformity Implementation Panel (Radiation Control), (the NUIP), a working party of the Radiation Health Committee (RHC) facilitated by ARPANSA.

Comments on the draft Directory were sought from key stakeholders as part of the agreed process for resolving issues in the preparation of the Directory. Council considered and provided comments on the draft Directory at its March 2002 meeting.

REVIEW OF THE RADIATION CONTROL LEGISLATION

The reasons for the review of radiation legislation in NSW were:

a) in accord with New South Wales Government policy, all primary legislation should be reviewed at least once every 10 years as a means to consider whether it continues to best serve the public interest, either in its current form or at all, and all subordinate legislation is to be reviewed every five years, and

b) under the NCP review, all jurisdictions are required to review their radiation protection legislation by 30 June 2002. In August 2001, the EPA advised the Council that it had considered it appropriate for the review of the Act to be carried out in conjunction with the NCP review of radiation protection legislation.

In progressing the review of the Act and Regulation the Council during the last reporting period made significant contribution towards the development of an issues paper being prepared by Macinante Consulting Pty Ltd, *Review of the Radiation Control Act 1990 and Radiation Control Regulation 1993*. This paper was being prepared as a public discussion
document on changes to the Act and Regulation. As the NCP review had, however, already consulted on the majority of the issues identified by Council a decision was taken that any further consultation would not be required. As a consequence of the NCP Review the EPA undertook a number of amendments to the Act and Regulation.

The Environment Protection Legislation Amendment Act 2002 (Commenced 1 July 2002)

The Environment Protection Legislation Amendment Act 2002 (EPLA Act) was assented to by the NSW Governor on 15 May 2002 and commenced on 1 July 2002. The EPLA Act amends the Radiation Control Act 1990 as follows:

- a new licence category was added to that of a licence to use or sell. There is now a licence to possess, use or sell radioactive substances and radiation apparatus
- accreditation of Consulting Radiation Experts (CREs) is now to be for a term specified by the EPA, rather than being for an indefinite period
- the three-month limit on the term of a temporary licence under the Act has been removed
- a new power to issue penalty notices is now provided. The amendments will make it possible to prescribe offences against the Act and Regulation as offences for which penalty notices may now be issued
- the designation of ‘Inspectors’ has been altered to ‘authorised officers’. Authorised officers are now to be appointed under the terms of the Protection of the Environment Operations Act 1997 (POEO Act) and are now empowered to act using the powers of an authorised officer under Chapter 7 of the POEO Act. ‘Inspectors’ appointed under the Radiation Control Act 1990 before the amendments commenced are deemed to have been appointed as ‘authorised officers’.

The Radiation Control Amendment Act 2002 (Commenced 1 August 2002)

The Radiation Control Amendment Act 2002 (Amendment Act) was developed as a result of the NCP review of radiation protection legislation in all the Australian jurisdictions, except Queensland. The Amendment Act alters the ‘Object’ of the Act; provides for review of the Act at regular intervals; provides for a reference to the National Directory for Radiation Protection and for the adoption of documents forming part of the National Directory for Radiation Protection and for other purposes. The Amendment Act also altered the powers of the Council to advisory.

Some of the key amendments made are:
- changes to the wording of the ‘Object’ of the Act in the interests of uniformity across jurisdictions
- addition of a provision for mandatory review of the Act at intervals of no greater than 10 years
- addition of a provision to refer to the National Directory for Radiation Protection
- addition of a power enabling documents placed onto the National Directory for radiation Protection to be called up and given statutory effect in New South Wales
- an amendment to the definition of ‘environment’ to achieve consistency with the more contemporary definition in the POEO Act
- amendments to the powers of the Radiation Advisory Council from mandatory to advisory in relation to certain operational matters carried out by the EPA
• increases in membership of the Council from 14 to 16 people, to include a representative of the WorkCover Authority and a person with expertise in naturally occurring radioactivity.

The Council had originally agreed that the Act—as it related to the modus operandi that had evolved in Council’s role in the EPA’s issuing of licences, registrations and accreditations—needed to be amended to provide legal clarification of this role.

The Council did not, however, support amendments in the Amendment Act that removed Council’s powers in relation to all operational matters.

During this period of drafting the amending legislation, the Council also expressed concerns regarding the consultation process.

The new legislation was passed by the Parliament as proposed and the Council is now focussing on continuing to provide strategic and operational advice to the EPA across the wide range of radiation matters.

The Council has also proposed the development of a memorandum of understanding with the EPA to set out the agreed way in which the two bodies will collaborate in fulfilling their responsibilities under the legislation.

**Radiation Control Regulation 1993 (the Regulation)**

In 2001–02, the Regulation has undergone two sets of amendments, through the Radiation Control Amendment Regulation 2001 and the Amendment Act.

Key amendments include:

• prescription of cyclotrons as radiation apparatus required to be registered under the Act and the setting of fees for this registration process

• an increase in the fees applicable under the Act to reflect the increases in the Consumer Price Index from 1993 to 2001

• updating the reference to the Code of Practice for the Safe Transport of Radioactive Material, in light of the review of this document completed in 2001 by ARPANSA.

In addition to the amendments to the Act, the Regulation promulgated on 1 September 1993 is required to be reviewed under the Subordinate Legislation Act 1989 every five years and is due for remake by 1 September 2002. The EPA is considering whether to commence the remake of the Regulation or seek a further postponement.

During the reporting period ending 30 June 2002, the Council provided comments to the EPA on amendments to the Regulation.
LICENCES TO USE AND SELL RADIOACTIVE SUBSTANCES AND RADIATION APPARATUS

Section 6 of the Act regulates the use and sale of radioactive substances and radiation apparatus. Specifically, section 6(2) prohibits a person from using or selling any of the above substances and/or apparatus unless the person holds a current licence and complies with the conditions of the licence. An exemption from section 6 of the Act for specified categories of persons is provided in clause 8 of the Regulation.

Section 6 of the Act provides for the EPA to grant licences and impose conditions on licences on the recommendation of the Council. Following the Council’s recommendation, the Radiation Control Section of the EPA may issue a licence.

In considering licence applications, the Council was aware of its responsibilities under section 6(5) of the Act. Namely, the Council is not to recommend that a licence, or a temporary licence, authorising a person to use anything to which this section applies, be granted unless it is satisfied that the applicant:

(a) is a natural person and is a fit and proper person to hold the licence, and

(b) has appropriate knowledge of the principles and practices of radiation hygiene and protection applicable to the activities proposed to be carried on by the applicant in pursuance of the licence.

For the reporting period ending 30 June 2002, 1655 licence applications were received. On the advice of the Council, the EPA issued 1564 new licences from these applications.

The Council recommended the granting of 397 new licences for the use or sale of radioactive substances and 1167 new licences for the use or sale of radiation apparatus. These numbers represent 25.4% and 74.6%, respectively, of the total number of new licences approved and issued during the year.

Table 2 (on page 9) summarises the occupational categories of new licensees.

Table 3 (on page 9) summarises the number of new licences issued by the EPA during the period 1992–93 to 2001–02.

During 2001–02 the EPA also renewed a total of 10,828 licences: 2223 licences for radioactive substances and 8605 licences for radiation apparatus.

At the end of the reporting period, there were 2675 active licences for radioactive substances and 9822 active licences for radiation apparatus, totalling 12,497 active licences.
### TABLE 2
Number of new licences issued (listed by occupational category) to use or sell radioactive substances and ionising radiation apparatus in 2001–02

<table>
<thead>
<tr>
<th>Occupational category</th>
<th>Radioactive substances</th>
<th>Ionising radiation apparatus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental</td>
<td>-</td>
<td>232</td>
</tr>
<tr>
<td>Medical—specialist</td>
<td>10</td>
<td>68</td>
</tr>
<tr>
<td>Medical—other and related</td>
<td>60</td>
<td>538</td>
</tr>
<tr>
<td>Servicing/installation</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>Educational</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Safety</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Management</td>
<td>18</td>
<td>26</td>
</tr>
<tr>
<td>Scientific/research</td>
<td>103</td>
<td>89</td>
</tr>
<tr>
<td>Engineering</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>Technical</td>
<td>114</td>
<td>12</td>
</tr>
<tr>
<td>Company (licence to sell)</td>
<td>15</td>
<td>32</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>35</td>
<td>130</td>
</tr>
<tr>
<td>TOTAL</td>
<td>397</td>
<td>1167</td>
</tr>
</tbody>
</table>

### TABLE 3
Number of new licences issued by the EPA from 1992–93 to 2001–02

<table>
<thead>
<tr>
<th>Period</th>
<th>Radioactive substances</th>
<th>Radiation apparatus</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1992–June 1993</td>
<td>290</td>
<td>722</td>
<td>1012</td>
</tr>
<tr>
<td>July 1993–June 1994</td>
<td>347</td>
<td>716</td>
<td>1063</td>
</tr>
<tr>
<td>July 1994–June 1995</td>
<td>454</td>
<td>1102</td>
<td>1556</td>
</tr>
<tr>
<td>July 1995–June 1996</td>
<td>415</td>
<td>1695</td>
<td>2110</td>
</tr>
<tr>
<td>July 1997–June 1998</td>
<td>364</td>
<td>776</td>
<td>1140</td>
</tr>
<tr>
<td>July 1999–June 2000</td>
<td>295</td>
<td>882</td>
<td>1177</td>
</tr>
<tr>
<td>July 2000–June 2001</td>
<td>299</td>
<td>1255</td>
<td>1554</td>
</tr>
<tr>
<td>July 2001–June 2002</td>
<td>397</td>
<td>1167</td>
<td>1564</td>
</tr>
</tbody>
</table>
REGISTRATION OF SEALED RADIOACTIVE SOURCES, RADIATION APPARATUS AND PREMISES

Section 7 of the Act requires registration of sealed radioactive sources and certain prescribed radiation apparatus. Section 8 of the Act requires premises to be registered where unsealed radioactive substances are kept or used.

The purpose of registration is to:

- ensure that all sealed radioactive sources, radiation apparatus and premises in which unsealed radioactive sources are kept or used—and which are required to be registered—comply with specified minimum standards designed to optimise the protection of individuals and the environment from exposure to ionising radiation
- enable up-to-date records to be kept of all sealed radioactive sources, certain radiation apparatus and premises in which unsealed radioactive sources are kept or used.

The Council recommended that the EPA grant registration of fixed radiation gauges and prescribed radiation apparatus if the application satisfies all applicable requirements of the Regulation. During the year ending 30 June 2002, the EPA granted 263 new applications and renewed 357 applications for registration of fixed radiation gauges. At the end of this period there were a total of 707 registrations for fixed radiation gauges.

Clause 10A of the Radiation Control Regulation 1993, which commenced on 11 February 2000, provides for the mandatory registration of radiation apparatus used for diagnostic imaging purposes and prescribes parts of Radiation Guideline No. 6 (EPA 1999) as the applicable requirements for registration.

As a consequence of the commencement of clause 10A, all x-ray equipment—such as that used for medical, dental, chiropractic and veterinary diagnostic purposes—was required to be registered with the EPA by 11 August 2000 and to have met compliance testing requirements by 11 August 2002 (for two-year registrations) and 11 February 2003 (for five-year registrations). The Council recommended that the EPA register all diagnostic imaging apparatus that has been certified as compliant with the applicable requirements of the Regulation.

During the year ending 30 June 2002, the EPA granted 568 new applications for registration of diagnostic imaging apparatus. Table 4 (below) summarises the number of new diagnostic imaging apparatus that has been registered by the EPA during the period 2000-01 to 2001-02.

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Total No. Registered 2000–01</th>
<th>Total No. Registered 2001–02</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Dental Radiography</td>
<td>2592</td>
<td>168</td>
<td>2760</td>
</tr>
<tr>
<td>Fixed Radiography</td>
<td>832</td>
<td>134</td>
<td>966</td>
</tr>
<tr>
<td>Fixed Fluoroscopy</td>
<td>69</td>
<td>18</td>
<td>87</td>
</tr>
<tr>
<td>Fixed Radiography/Fluoroscopy</td>
<td>246</td>
<td>31</td>
<td>277</td>
</tr>
<tr>
<td>Fixed Mammography</td>
<td>161</td>
<td>31</td>
<td>192</td>
</tr>
<tr>
<td>Computed Tomography</td>
<td>174</td>
<td>22</td>
<td>196</td>
</tr>
</tbody>
</table>
The Council agreed that a review of the Radiation Guideline No. 6 (EPA 1999) would be required after commencement of compliance testing. At the request of Council, the EPA is currently undertaking this review.

Under the Radiation Control Amendment Regulation 2001 which commenced on 1 December 2001, cyclotrons are now required to be registered as radiation apparatus. There is currently one cyclotron registered under these provisions. It is anticipated that when the remake of the Regulation commences there will be registration of sealed sources, premises where unsealed radioactive substances are kept, and some additional radiation apparatus.

**ACCREDITATION OF RADIATION EXPERTS**

At the recommendation of the Council, section 9 of the Act provides that the EPA is responsible for accreditation of CREs.

Clause 11 of the Regulation prescribes the following as the activities of a CRE:

(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 that are required to be registered under sections 7 or 8 of the Act for the purpose of certifying compliance with the requirements for registration

(f) advising on the design of premises, in relation to radiation safety requirements, in which sealed radioactive sources or radiation apparatus prescribed under section 7(1) of the Act are kept or used

(g) assessing plans for premises in which sealed radioactive sources or radiation apparatus prescribed under section 7(1) of the Act are kept or used, for the purposes of certifying compliance with any requirements for registration under section 7(5) of the Act

(h) assessing the integrity of any shielding of premises in which sealed radioactive sources or radiation apparatus prescribed under section 7(1) of the Act are kept or used for purposes of certifying compliance with the requirements for registration.

Under clause 11(2) of the Regulation, a CRE may be accredited as either a ‘radiation assessor’ or ‘radiation consultant’.

A **radiation assessor** is a person whose accreditation under section 9 of the Act allows the person to only carry out the activities referred to in clause 11 (1)(e) or (h) of the Regulation.
A radiation consultant is 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 clause 11(1)(a)-(d) or (f-g) of the Regulation, whether or not the Regulation also allows the person to carry out the activities referred to in clause 11(1)(e) or (h).

The Council has recommended that the EPA approve the accreditation of CREs if the applicant satisfies all applicable requirements of accreditation. During the year ending 30 June 2002 the EPA accredited a total of 17 CREs in the Category of Diagnostic Imaging. Two CREs were accredited under mutual recognition arrangements.

Table 5 (below) summarises the total number of CREs accredited by the EPA as at 30 June 2002.

<table>
<thead>
<tr>
<th>Category</th>
<th>Equipment</th>
<th>Radiation Consultant (RC)</th>
<th>Radiation Assessor (RA)</th>
<th>Number CREs Registered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic Imaging</td>
<td>Mammography</td>
<td>RC</td>
<td>RA</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Dental (Intra-oral, OPG and Cephalometry)</td>
<td></td>
<td>RA</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Dental (Intra-oral, OPG and Cephalometry)</td>
<td></td>
<td>RC</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Radiography</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluoroscopy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Computed Tomography</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bone Mineral Densitometry (incl. Veterinary &amp; Chiropractic)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Radiography</td>
<td></td>
<td>RA</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Fluoroscopy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Computed Tomography</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bone Mineral Densitometry (incl. Veterinary &amp; Chiropractic)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premises*</td>
<td>Low &amp; Medium Level Laboratories</td>
<td>RC</td>
<td>RA</td>
<td>8</td>
</tr>
<tr>
<td>Industrial</td>
<td>Fixed Radiation Gauges</td>
<td></td>
<td>RA</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td>99</td>
</tr>
</tbody>
</table>

* Accreditation pending commencement of section 8 of the Act

**PERSONAL RADIATION MONITORING**

Under clause 15 of the Regulation, an employer must ensure that an occupationally exposed person in his or her employ using ionising radiation in the following fields is issued with an approved personal monitoring device (PMD) for detecting and measuring cumulative exposure to ionising radiation:
• radiotherapy
• industrial radiography
• nuclear medicine
• scientific research in medium-level or high-level radiation laboratories
• diagnostic radiology.

The Regulation does not exclude any other person, or category of people, from being issued with a PMD.

During the reporting period ending 30 June 2002, no occupational high-dose cases were reported to the Council.

VOLUNTARY EXPOSURE TO IONISING RADIATION FOR SCIENTIFIC OR RESEARCH PURPOSES

Clause 20 of the Regulation prohibits a person from exposing any other person to ionising radiation for scientific or research purposes, except in accordance with the National Health and Medical Research Council (NHMRC) guideline, *Administration of Ionising Radiation to Human Subjects in Medical Research* (1984).

The NHMRC guideline requires that the approval of the EPA be obtained in studies where:

• the radiation dose to any individual subject in any year exceeds 5 mSv
• the radiation dose to a child or other persons incapable of giving informed consent exceeds 0.5 mSv
• the radiation dose to a baby, infant or foetus exceeds 0.1 mSv.

In the year ending 30 June 2002, the EPA submitted five medical research studies involving the use of radioactive substances or radiation apparatus to Council for expert advice, all of which were recommended for approval. These studies are listed in Appendix 3.

APPOINTMENT OF RADIATION SAFETY OFFICERS AND RADIATION SAFETY COMMITTEES

Clause 28 of the Radiation Control Regulation provides for the EPA, on the recommendation of the Council, to require an employer to appoint a radiation safety officer (RSO) and/or a Radiation Safety Committee (RSC) for a workplace. If such a direction is made, the Council also determines the appropriate qualifications required by the RSO and determines the functions of the RSO and RSC.

The Radiation Safety Officer Committee (now in recess) was established by the Council to review:

• the organisations that should be required to appoint an RSO and an RSC
• the knowledge and skills required by a person who is to be appointed as an RSO
• the functions of an RSO and an RSC.

The RSO Committee produced two documents to help implement clause 28. The first guideline, *RAC Statement on Radiation Safety Officers and Radiation Safety Committees*, provided advice to the Director General of the EPA on:
• types of organisations that need to appoint a radiation safety officer and a radiation safety committee
• qualifications needed for appointment as a radiation safety officer
• functions of a radiation safety officer and a radiation safety committee.

The second guideline, Radiation Control Guideline, Radiation Safety Officers and Radiation Safety Committees, was developed to help employers fulfil their responsibilities under clause 28 of the Regulation. The Council recommended that the EPA adopt both documents. The EPA undertook a regulatory impact assessment on the proposed guidance. The guideline was released by the EPA for public comment in April 2002.

RADIATION ACCIDENTS

Clause 24 of the Regulation specifies the types of incidents that are classified as radiation accidents for the purposes of the Act. The mandatory requirements imposed on an employer in regard to the reporting and recording of radiation accidents are outlined in clauses 25 and 26 of the Regulation.

Accidents are normally caused by either deficiencies in the relevant management systems, or failures on the part of individuals to implement those systems correctly. Where investigations reveal the former, the Council normally recommends that new procedures be developed and implemented. Where an individual is at fault, the Council usually recommends counselling and/or further training. In specific circumstances, disciplinary action may be warranted.

The Council may refer serious accidents to the Health Care Complaints Commission.

The Council emphasises that it is vital that accidents be consistently reported, not just because of a legal requirement to do so, but because the knowledge gained can help to develop processes and procedures that reduce the risk of similar accidents occurring in the future.

The need for a nationally uniform system of classification for radiation incidents and accidents and the need to develop a cost-effective national system to collect and collate information and publish a national register for radiation incidents is highlighted as one of the 19 recommendations made in the NCP Review of Radiation Protection Legislation, Final Report May 2001.

During the reporting period ending 30 June 2002, the EPA was informed of 15 instances where radiation accidents may have occurred involving 21 individuals. The Council investigated and considered each case individually and, where appropriate, made recommendations that, in its opinion, would reduce the risk of similar accidents recurring.

A summary of the accidents and consequent recommendations made by the Council follows:

• A patient received 900 MBq of 99m-Tc sestamibi instead of 200 MBq 67-Ga citrate
  Council reviewed the case and recommended that further controls be instigated by the facility to correct deficiencies in standard operating procedures, in order to prevent the recurrence of similar accidents.
• A patient received a dose of 1000 MBq 99m-Tc pertechnetate instead of 1000 MBq 99m-Tc-
Council reviewed the case and recommended that further controls be instigated by the facility to correct deficiencies in standard operating procedures, in order to prevent the recurrence of similar accidents.

• A patient received a dose 1092 MBq of 99m Tc tetrofosmin instead of 1092 MBq of 99m MDP
Council recommended that further controls be instigated by the facility to correct deficiencies in standard operating procedures, in order to prevent the recurrence of similar accidents.

• A patient received 1 GBq Tc-99m Pertechnetate instead of Tc-99m-Sestamibi
Council reviewed the case and recommended that further information be sought in order to assess the cause of the accident. This information was not available at the time of writing this report.

• A patient received 300 MBq Tc-99m Pertechnetate instead of Tc-99m-Sestamibi
Council recommended that further information be sought in order to assess the cause of the accident. This information was not available at the time of writing this report.

• A patient received 300 MBq Tc-99m Pertechnetate instead of Tc-99m-Sestamibi
Council recommended that further information be sought in order to assess the cause of the accident. This information was not available at the time of writing this report.

• A patient received 6250 MBq of I-131 instead of 222 MBq I-131
Council noted the severity of the accident and recommended that:
  – accident be referred to the Health Care Complaints Commission
  – the matter be raised at the national level with appropriate bodies; and
  – preventative measures of this type of accident be discussed with the Hospitals and University Radiation Safety Officers Group (HURSOG).

• A patient received 37 kBq C-14 (Urea Breath Test) instead of a Hydrogen Breath Test
Council reviewed the case and recommended that further controls be instigated by the facility to correct deficiencies in standard operating procedures, in order to prevent the recurrence of similar accidents.

• Seven patients received incorrect radiotherapy doses of between 10.3%–12.3% above those prescribed. The cause was due to the use of a new dose rate table which contained erroneous dose rate data.
Council recommended that further controls be instigated by the facility to correct deficiencies in standard operating procedures, in order to prevent the recurrence of similar accidents.
• A patient received 629 MBq of I-131 instead of 185 MBq of I-131. Council recommended that further controls be instigated by the facility to correct deficiencies in standard operating procedures, in order to prevent the recurrence of similar accidents.

• A patient intended to receive an abdominal ultrasound was mistakenly administered 890 MBq Tc-99m medronate (MDP). Council recommended that further controls be instigated by the facility to correct deficiencies in standard operating procedures, in order to prevent the recurrence of similar accidents.

• A patient treated for Hodgkin’s disease died after receiving 20 fractionated doses totalling 36 Gray over a 4 week period with no shielding to non targeted organs. Council recommended that the accident report be referred to the Health Care Complaints Commission for investigation.

• A patient was wrongly administered with 200 MBq of 99m-Tc pertechnetate instead of Tc99m HDP. Council recommended that further controls be instigated by the facility to correct deficiencies in standard operating procedures, in order to prevent the recurrence of similar accidents.

• A patient was wrongfully administered 968 MBq 99m-Tc-labelled red blood cells instead of 200 MBq 99m-Tc-sulphur-colloid. Council recommended that further controls be instigated by the facility to correct deficiencies in standard operating procedures, in order to prevent the recurrence of similar accidents.

• The wrong patient was administered 870 MBq of Tc-99m-MDP for a bone scan. Council recommended that further controls be instigated by the facility to correct deficiencies in standard operating procedures, in order to prevent the recurrence of similar accidents.

The Council noted that the number of reported accidents had increased and that the number of reported incidents do not necessarily reflect the number of individuals involved in accidents. The Council agreed to investigate the increase of reported incidents.

Table 6 (overleaf) summarises the number of accidents reported to the EPA during the period 1994–95 to 2001–02.
<table>
<thead>
<tr>
<th>Year</th>
<th>Number of accidents reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1994–June 1995</td>
<td>8</td>
</tr>
<tr>
<td>July 1995–June 1996</td>
<td>7</td>
</tr>
<tr>
<td>July 1996–June 1997</td>
<td>6</td>
</tr>
<tr>
<td>July 1997–June 1998</td>
<td>8</td>
</tr>
<tr>
<td>July 1999–June 2000</td>
<td>5</td>
</tr>
<tr>
<td>July 2000–June 2001</td>
<td>10</td>
</tr>
<tr>
<td>July 2001–June 2002</td>
<td>15</td>
</tr>
</tbody>
</table>

**NON-IONISING RADIATION**

The proliferation in the use of laser equipment led the Council to recommend to the Minister in 1998 that there was a need to initiate regulatory controls over the use of certain types of laser equipment. The Minister supported this recommendation.

A committee of inquiry into cosmetic surgery in NSW was established under the *Health Administration Act 1982*. The report of the committee, *The Cosmetic Surgery Report—Report to the NSW Minister for Health* (Health Care Complaints Commission 1999) also supported the recommendations of the Council with respect to the need for regulatory control of lasers used for health-related and cosmetic purposes.

The committee further recommended the Cosmetic Surgery Credentialling Council (CSCC) be established to facilitate development of guidelines and accreditation of training programs for the use of lasers by registered cosmetic surgery providers.

The EPA and NSW Health supported the recommendations of the committee that licensing and registration for the use of class 3B and 4 lasers be introduced under the Act.

In April 2001 the CSCC was established by NSW Health in association with the Australian Medical Association (NSW Branch). The CSCC will liaise with the Council to ensure a uniform approach to the accreditation of training programs for the use of lasers in cosmetic surgery.
APPENDIX 1: GOVERNANCE ARRANGEMENTS AND PROCEDURES OF THE COUNCIL AS AT JUNE 2002

Role of the Council

The Council has two broad functions:

• to provide high-level policy advice to the Minister administering the Radiation Control Act 1990, vide s 30 and 39 of the Radiation Control Act 1990

• to provide operational advice to the New South Wales Environment Protection Authority (EPA), vide s 6 to 10 of the Radiation Control Act 1990 and clauses 6, 10B, 14, 17, 18 and 28 of the Radiation Control Regulation 1993.

[Note: At the EPA’s request, Council also advises on clause 20 of the Regulation.]

General Duties and Responsibilities of Council Members

Members of the Council owe their fiduciary duty solely to the Council when exercising their duties as a member of the Council. This requires members to act in good faith in the best interests of the Council, irrespective of the separate interests of any organisation, agency or profession that they might belong to or represent on the Council as the case may be. Each member owes these fiduciary duties individually.

Each member of the Council more generally also has a duty to:

• act honestly and in good faith
• exercise care, skill and diligence
• exercise the powers, duties and responsibilities of the Council for the purpose for which they were conferred
• retain his/her discretionary powers
• avoid conflicts of interest.

Conflicts of Interest and Disclosures

Members must at all times avoid situations in which there is a real possibility of conflict arising between their personal interests or professional duties and the duty owed to the Council.

Such a conflict may exist when a member has a direct pecuniary interest in a matter that is before the Council. Alternatively, a conflict may occur when an issue listed for discussion by the Council involves an institution or organisation to which a member owes a duty in a professional context.

Consequently, members must be attuned to the possibility of conflicts of duty or interest arising between their duties to the Council and their personal and professional affairs. Therefore, when a member believes that such a situation may occur, whether it be actual or potential, full disclosure of the conflicting interest or duty must be made to the Council.

Disclosure of interest

Where a member has a potential conflict of interest in relation to any matter before the Council, the member must disclose that interest and the nature of it at the beginning of the meeting called to discuss the matter. Provision for such disclosures will normally be made at
Agenda Item 2—Adoption of Draft Agenda and Disclosure of Interests. Any disclosures made are to be recorded in the minutes.

**Action to prevent a conflict from arising**

A potential conflict having been disclosed, it is the duty of the meeting to determine what further action, if any, may be needed to prevent a conflict from arising. Such action could include:

- noting the potential conflict and its nature, and taking these into account during debate on the issue
- directing that the member abstain from any vote that may be called on the matter
- allowing the member to confirm the facts of the matter, but requiring the member to abstain from any discussion of it
- requiring the member to leave the meeting during discussion and debate on the matter
- a combination of the above-described actions.

The more extreme of these actions would normally be reserved for a conflict involving direct pecuniary interest.

Where action is taken to prevent a conflict, the nature of that action is to be recorded in the minutes.

In the unusual event of serious on-going conflict, the question of the member’s continued membership of the Council may need to be considered.

**Confidentiality**

All material dealt with by Council should be treated as confidential by all Council members. The only records of Council that are not confidential are the confirmed minutes of Council meetings, once signed, and Council’s annual report to Parliament, once tabled by the Minister.

Confidential information available to Council members must be used only in ways that are consistent with the obligations of Council members to act impartially, with integrity and in the public interest.

Council members must take care to ensure that confidential information in their possession is kept secure, and that numbers of copies are kept to the minimum necessary. If such information is to be disposed of by a Council member, it must be destroyed.

Information available to Council members must not be used to obtain any advantage, whether direct or indirect, for himself/herself or for any other person or body.

Council members should avoid investments or business activities in relation to which they might reasonably be perceived to have access to confidential information that might give them an unfair or improper advantage over other persons.

**Exercise of due diligence**

Each member of the Council is expected to display the degree of care, skill and diligence that it is reasonable to expect from a member of the Council.

‘Reasonable expectation’ takes into account the knowledge, skill and experience that the member brings to the Council and could be reasonably expected to bring to it, noting in the distribution of functions that each member of the Council brings different expertise to it.
Care and diligence also include the concept of acting honestly in the discharge of one’s duties.

Members of the Council, being part-time, are not bound to give continuous attention to the affairs of the Council.

**Attendance at Council meetings and leave of absence**

All members of Council are to attend each Council meeting, unless granted leave of absence by the Council.

Schedule 1 to the Act provides that the office of a member becomes vacant if the member is absent from four consecutive meetings of the Council, for which reasonable notice has been given, except on leave granted by the Council.

Accordingly, where a member finds that she/he is unable to attend a properly convened meeting, the member should submit a written request for leave to the Chairperson prior to the meeting for consideration by the Council at the meeting. Should the member be unable to apply for leave in advance, the member may request to be excused retrospectively by the Council for having been absent.

Where a member has been absent without leave from four consecutive meetings, she/he may request to be excused retrospectively by Council. Any decision by Council to excuse the member, however, only has effect if the decision is made before the expiration of four weeks after the last of those meetings (see schedule 1, clause 5(1)(e) of the Act).

In addition, officers of the EPA who are providing secretariat support or advice to the Council may attend all or parts of Council meetings as their duties necessitate, subject to the consent of the Chairperson in consultation with the Council.

The Chairperson of the Council, subject to the concurrence of Council, may invite other persons to attend the relevant parts of Council meetings to assist Council in its consideration of specific agenda items.

Otherwise, meetings of the Council are closed to non-members.

**Council Meeting Procedures**

Schedule 1 to the Act provides that the procedure for calling meetings of the Council and for the conduct of business at those meetings is, subject to the Act and Regulation, to be as determined by the Council.

The Council normally determines its schedule of meetings for the financial year at the last meeting that it holds in the previous year. Normally, no fewer than four and no more than 12 regular meetings are to be scheduled in any financial year.

If an urgent matter arises at short notice, the Chairperson is authorised to convene a special meeting if she/he judges that the situation so warrants.

Schedule 1 to the Act provides:

- that the quorum for a meeting is eight members
- that the presiding member will be the Chairperson or, in the Chairperson’s absence, another member elected by the members present
- for the resolution of issues by voting, with a decision supported by a majority of votes cast at a meeting at which a quorum is present becoming the decision of the Council. The person presiding has both a deliberative vote and, in the event of an equality of votes, has a second or casting vote.
The agenda for Council meetings is normally to be structured as vide the proforma at Schedule 1 at the end of this Appendix.

The Chairperson of Council is to ensure that accurate minutes of each Council meeting are recorded listing details of:

- members and other persons in attendance, apologies received, grants of leave of absence, and disclosures of interest
- confirmation, with or without amendment, of previous minutes
- the nature (a brief synopsis) of agenda papers and other business discussed, the detail of decisions reached and whether those decisions were by consensus or resolved motion.

The Chairperson of Council is to ensure that:

- the draft minutes are considered at the next Council meeting and accepted, with or without amendment, as being a true and correct record of business
- the confirmed minutes are signed and dated by the Chairperson who presided at the meeting that confirmed the minutes
- the signed minutes are made publicly available on request.

The Council may specify other meeting procedures from time to time.

Possible conflicts between Council and EPA positions

The EPA is represented on the Council through the Chair. The EPA, therefore is entitled to put a position at Council meetings, as, indeed, is each of the 14 members of the Council.

While it is desirable for the Council to reach consensus on matters before it, Schedule 1 to the Act provides at clauses 10(2) and 11 for voting to resolve a matter. A decision supported by a majority of votes cast at a Council meeting at which a quorum is present is the decision of the Council. The person presiding at any Council meeting has a deliberative vote and, in the event of an equality of votes, has a second or casting vote.

The voting provisions of Schedule 1 are to apply to any situation where consensus cannot be reached, including those involving differences of position between the EPA (and/or other public authorities) and other members of the Council.

Council committees

Council forms committees from time to time, vide s 31 of the Act to assist it in formulating advice to the Minister or the EPA as the case may be. These committees are chaired by a Council member and may consist of both Council members and non-members. The latter are one means by which Council can expand the range of expertise available to it.

Committees generally are bound by the Act, the Regulation and these corporate governance and operating procedures, plus the terms of reference and any other directions given by the Council.

At present there are two standing committees:

- Technical Committee
- Course and Competency Committee.

Membership and terms of reference of these committees are at Schedules 3 and 4 respectively.
Standing advice to EPA on operational matters

The Council has specific duties under sections 6–10 of the Act to advise the EPA on aspects of the exercise of the EPA’s regulatory powers. For a number of these matters of a common routine type, it is feasible to provide advice generically. Matters for which the Council has provided generic advice are listed in Schedule 2 at the end of this Appendix. The Council may add to this schedule from time to time.

For all other matters upon which the EPA may only act on the recommendation of the Council, Council expects the EPA to refer each matter individually to Council for its consideration and recommendation to the EPA.

Public pronouncements and media liaison

As the primary role of Council is to provide advice to the Minister administering the Act, it should rarely be necessary for the Council to make public pronouncements or to liaise with the media.

The Chairperson of Council is the spokesperson for Council on matters on which Council has determined a position. No other member of Council may speak publicly on behalf of Council, unless specifically authorised to do so by Council.

Delegations to the Chairperson of Council

The Chairperson of the Council is authorised to:

• sign correspondence on behalf of the Council
• answer routine correspondence addressed to the Council
• be the public spokesperson for the Council on matters on which the Council has determined a position
• convene unscheduled meetings at short notice in emergency situations.

Induction of new members

There is a formal procedure for induction of new members. It includes:

• a reading package, including copies of:
  – the Act
  – the Regulation
  – the most recent Radiation Advisory Council Annual Report
  – the most recent Radiation Advisory Council Strategic Direction Statement
  – a list of Council members and their professional contact details
  – any corporate governance and operating procedures statement that may be extant
  – a list of Council committees, their terms of reference and membership
  – standard licence conditions and qualification requirements for the use and sale of radioactive substances and radiation apparatus
- the current Council work program
- background information on the EPA.

- a briefing session covering the above matters and the current issues before the Council.

Allowances

Schedule 1 to the Act provides that a member is entitled to be paid such allowances as the Minister from time to time determines.

The Minister has determined that non-government employees are to be paid sitting fees at the standard government rate. The Premier’s Department guidelines, Guidelines for Government Boards and Committees, outlines the remuneration, allowances and appointment arrangements for part-time members of Council.
**Schedule 1: Radiation Advisory Council Model Agenda**

**Introductory items**
1. Opening of meeting  
   1.1 Opening remarks  
   1.2 Membership/attendance  
2. Adoption of draft agenda and disclosure of interests  
3. Minutes of previous meeting

**Discussion items**
4.  
5. as required  
6.  

**Committee reports**
7. Technical Committee Report  
8. Other committee reports as required

**Non-discussion items (unless ‘starred’ at Agenda Item 2)**
9. Correspondence  
10. as required  
11.  

**Concluding items**
12. Other business  
13. Next meeting

**Note:** Council will normally ‘note’ non-discussion items, essentially treating them as information items, unless they have been ‘selected’ for discussion at the meeting.
Schedule 2: Standing Advice

The Council recommends that the EPA exercise its statutory powers in relation to the following matters without seeking further advice from the Council, subject to the specific case satisfying the detail in the relevant recommendation.

<table>
<thead>
<tr>
<th>Date</th>
<th>Agenda Item</th>
<th>Issue</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>16/12/94</td>
<td>7.1</td>
<td>Minor Variations to Licence</td>
<td>The EPA may grant a variation to a licence where the variation sought is minor.</td>
</tr>
<tr>
<td>01/04/96</td>
<td>6.8</td>
<td>Registration of Fixed Radiation Gauges</td>
<td>The EPA may grant a certificate of registration where an accredited assessor has so recommended.</td>
</tr>
<tr>
<td>21/08/98</td>
<td>3.3</td>
<td>Standard Licence Applications</td>
<td>The EPA may grant a licence where the predetermined minimum qualifications recommended by the Council are met (standard licence).</td>
</tr>
<tr>
<td>16/06/00</td>
<td>6.0</td>
<td>Non-standard Licence Applications</td>
<td>The EPA may grant a non-standard licence during periods when the Council is in recess, subject to such approvals being ratified by the Council at its next meeting.</td>
</tr>
<tr>
<td>18/05/01</td>
<td>4.2.</td>
<td>Revoke Licence Conditions from former EPA employees</td>
<td>The EPA may revoke the special licence conditions relating to radiation inspectors once they cease to be EPA employees.</td>
</tr>
<tr>
<td>20/07/01</td>
<td>5</td>
<td>Approval to Grant Exemption Condition</td>
<td>The EPA may grant licence exemption conditions to licensees who wish to grant exemptions under the provision of clause 8(3) of the regulation, subject to meeting Council’s pre-requisite.</td>
</tr>
<tr>
<td>17/08/01</td>
<td>5</td>
<td>Approval to Grant Accreditation as Consulting Radiation Experts in Diagnostic Imaging</td>
<td>The EPA may grant accreditation status to individuals, in the category of diagnostic imaging, who meet the pre-requisites set by Council under the provision of section 9 of the Act and clause 11 of the Regulation.</td>
</tr>
<tr>
<td>19/04/02</td>
<td>4.2.1</td>
<td>Approval to Grant Renewal of Lapsed Licences</td>
<td>The EPA may grant renewal of licences where the lapse of the licence has been six months or less.</td>
</tr>
</tbody>
</table>

Standard licences

For certain standard types of licence, the Council has established a schedule of standard qualification criteria. These approval criteria are at Annexure A. Where a licence applicant meets these criteria, the Council recommends that the EPA exercise its statutory responsibilities in relation to the application without seeking further advice from the Council. For certain standard types of licence, the Council has also established a schedule of standard licence conditions. These standard conditions are at Annexure B. The Council recommends that the Authority take these into account as relevant when issuing standard licences.
Schedule 2 Annexure A—Qualification Criteria for Standard Types of Licence

All qualifications must be obtained from Australian institutions unless otherwise stated. The qualification for all other licence types will be assessed on an individual basis.

**I Type Licences**

**Sale of Radiation Apparatus I2**
No formal qualification required

**Radiation Oncologists I3**
Must meet the following two prerequisites:
- Must be registered under the *Medical Practitioners Act 1992*
- Must be recognised as a specialist with the Health Insurance Commission as a specialist oncologist.

**Radiologists I4**
Must meet the following two prerequisites:
- Must be registered under the *Medical Practitioners Act 1992*
- Must be recognised with the Health Insurance Commission as a specialist in Radiology

**Analytical Purposes I5**
Must provide evidence of completion of one of the following approved courses:
- Mike Carter & Associates, *Radiation Safety in Laboratories Using XRD and XRF Equipment* (half-day)
- BHP Steel, Flat Products Division, Port Kembla Steelworks, In-house Training Course, *X-ray Fluorescence Operators* (1 day)
- Radiation Engineering Measurement Services Pty Ltd, *Industrial Radiation Safety, Its Basis, Use and Your Responsibilities*
- Bartolo Safety Management Services, *The Safe Use of Unsealed Sources & XRD equipment in the Laboratory, The Safe Use of XRD Equipment in the Laboratory* (Originally endorsed course entitle ‘Radiation Safety in the Laboratory’)
- Australian Radiation Services Pty Ltd, *X-Ray Analysis Equipment – Operation of XRD/XRF Units*
- Radiation Safety Services (Western Australia), *Analysis – X-ray (Used & Restricted Service and Analysis X-ray (Diamond Sorting))*

**Medical Diagnostic Radiographers and Radiation Therapists I14 and I14Y (PDY)/I13 and I13Y (PDY)**
Must provide evidence of one of the following:
- AIR Provisional Accreditation (AIR Prov Accred) (issued for PDY)
- AIR Statement of Accreditation (AIR Stat Accred) (issued after successful completion of PDY)
• AIR Diploma Diagnostic Radiography (AIR Dip Diag Rad)
• AIR Diploma Radiation Therapy (AIR Dip Rad Therapy)
• AIR Certificate of Competence (AIR Cert Comp)
• Conjoint Board Certificate – Diploma of Qualification

**General Practitioner or Nurse (Remote Operator) I14R**

Must meet two prerequisites:
1. Be a registered nurse or a medical practitioner
2. Completion of the RAC approved Remote Operators Course
   —University of Newcastle or the South Australia Health Commission (extended).

**Dentist I20**

Must be currently registered with the NSW Dental Board.

**Dental Assistants I20**

Must provide evidence of completing one of the following:
- Dental Radiography Certificate
- Dental Assistant Certificate
- Statement of Attainment in Dental Assisting Radiography

**Dental Hygienists I20**

Must provide evidence of completing a Diploma of Dental Hygiene

Overseas dental hygienists must provide evidence of satisfactory assessment by either Curtin University (SA) or TAFE Gilles Plains (SA)

**Dental Therapists I20 (only dental nurses employed by a government organisation are considered dental therapists)**

Must provide evidence of completing a Diploma of Dental Therapy

**Dental Nurse 120 (as employed in the private sector)**

Must provide evidence of completing one of the following:
- Dental Radiography Certificate (Dent Rad Cert)
- Dental Assistant Certificate
- Diploma of Dental Hygiene
- Diploma of Dental Therapy

**Chiropractors I21**

Must meet two prerequisites:
1. Current registration under the *Chiropractic Act 1978* (NSW Chiropractors and Osteopaths Registration Board)
2. Provide evidence of completing at least one of the following:
   - Bachelor of Applied Science (Chiropractic) (B App Sc (Chiro))
   - Master of Chiropractic (MChiro)
   - Doctor of Chiropractic (DC)
   —Canadian Memorial Chiropractic College, Ontario

**Medical Fluoroscopy I22**
Must meet three prerequisites:
1. Must be recognised as a medical specialist in the field for which they are applying. This proof must be obtained from the Health Insurance Commission
2. Must be registered under the *Medical Practitioners Act 1992*
3. Must have completed an RAC approved Radiation Safety Course in Medical Fluoroscopy

**Veterinarians I23**
Must be registered with the NSW Department of Agriculture’s ‘NSW Veterinary Surgeons’.

**Use For Bone Mineral Analysis Tier 1- (Without Supervision) I27**
Must provide proof of:
1. prior qualifications in a medically based course eg medicine, nursing
2. attendance at one of the following RAC approved courses for BMA:
   - Inderlec–Norland Bone Densitometer Training Program (Operation of Norland pDEXA, XR36 Bone Densitometers)
   - Sir Charles Gardener Hospital (WA) – Radiation Protection for Operators of Bone Densitometry Units
   - St Vincent’s Hospital—Bone Mineral Densitometry (Measurement and Interpretation)
   - University of Sydney—Bone Mineral Densitometry (2 year part time course at postgraduate level)
   - St Vincent’s Hospital—Certificate of Completion in Clinical Bone Densitometry
3. eligibility for membership with either the Australian and New Zealand Society of Nuclear Medicine (ANZSNM) or Australian and New Zealand Bone Mineral Society (ANZBMS)

Note: Nuclear medicine physicians, radiologists, radiation oncologists, nuclear medicine technologists (including PDY), radiographers (diagnostic and therapy, including PDY) who hold a radiation licence are automatically eligible for a tier 1 licence and will only need to apply for a variation to their current licence.
Use For Bone Mineral Analysis Tier 2 (Under Supervision) I27S

Must provide:

1. proof of attendance of an RAC approved course for BMA as indicated above I27(2)
2. eligibility for membership with either the Australian and New Zealand Society of Nuclear Medicine (ANZSNM) or Australian and New Zealand Bone Mineral Society (ANZBMS)

Medical Physicists ( Radiation Oncology Physics) I29

Must provide evidence of Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM) accreditation in Radiotherapy Equipment Commissioning and Quality Assurance

Medical Physicists ( Radiation Oncology Physics) I29S (Under Supervision)

Must hold a degree in:

1. medical/health physics, or
2. physics as well as evidence of medical/health physics training or radiation safety training such as :
   - Westmead Hospital Cadetship in Medical Physics

Detection of Concealed Explosives I41

Must provide evidence of completing Standing Advisory Committee for the Prevention Against Violence (SACPAV) Bomb Technician Accreditation
R Type Licences

Sale of Radioactive Substances R2
No formal qualifications required

Radiation Oncologist R3
Must meet the following two prerequisites:
- Must be registered under the Medical Practitioners Act 1992
- Must be recognised as a specialist with the Health Insurance Commission as a specialist oncologist

Nuclear Medicine Physician R4
Must meet the following two prerequisites:
- Must be registered under the Medical Practitioners Act 1992
- Must be eligible for admission, or be admitted, as a member of the Australian and New Zealand Association of Physicians in Nuclear Medicine

Radiation Therapist R13/R13Y
- AIR Provisional Accreditation (AIR Prov Accred) (issued for PDY)
- AIR Statement of Accreditation (AIR Stat Accred) (issued after successful completion of PDY)

Nuclear Medicine Technologist R14/14Y
- Australian and New Zealand Society of Nuclear Medicine Accreditation (ANZSNM Prov Accred) (issued for PDY)
- Australian and New Zealand Society of Nuclear Medicine Accreditation (Accred ANZSNM (issued after successful completion of PDY)

Medical Physicists (Radiation Oncology Physics) R29
Must provide evidence of Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM) accreditation in Radiotherapy Equipment Commissioning and Quality Assurance

Medical Physicists (Radiation Oncology Physics) R29s (Under Supervision)
1. Must hold a degree in medical/health physics, or
2. Must hold a degree in physics and evidence of medical/health physics training or radiation safety training such as:
   - Westmead Hospital Cadetship in Medical Physics

Moisture/Density Gauges R30
Must provide evidence of successfully completing one of the following:
- ANSTO training certificate in Safe Use of Soil Moisture Gauges
- Coffey Partners or Coffey Geosciences training certificate in The Safe Use of Nuclear Type Soil Moisture and Density Gauges
- F Robotham training certificate in Radiation Safety in the Use of Soil Density and Moisture Gauges
- South Australian Health Commission Radiation Protection Branch examination ‘nuclear moisture and density gauges’
- University of New England radiation safety training course certificate in ‘Safe Use of Nuclear Type Soil Moisture and Density Gauges’
- McKavanagh Engineering Services — Industrial Radiation Safety Level 2 Soil Density and Moisture Gauge Users
- Radiation Safety Services (WA)—Portable Gauges (Moisture Density)

**Gamma/Blood Irradiators R43**

Must meet two prerequisites:
- Minimum qualifications—laboratory technician certificate or equivalent
- Trained in the operation of the equipment

**Temporary Licences**

- All of the above apply as appropriate.
Schedule 1 Annexure B—Standard Licence Conditions for Standard Types of Licence

I Type Licences

Sale of Radiation Apparatus Type I 2
The licensee shall:

(i) sell radiation apparatus only to a person who holds a current licence, issued under the Radiation Control Act 1990, to use that radiation apparatus of the type, and for the purpose specified on the purchaser’s licence

(ii) provide the following data to the Director, Radiation Control Section of the Environment Protection Authority before the apparatus is installed:

(a) the name and licence number of the purchaser

(b) the address of the premises where the apparatus will be installed

(c) the make, model, maximum operating voltage, and maximum operating current of the apparatus.

Medical Radiation Therapy (Radiation Oncologist) Type I 3
The licensee must only use radiation apparatus for the purpose of radiation oncology.

Diagnostic Radiology (Radiologist) Type I 4
The licensee shall:

(i) use radiation apparatus only for the purpose of diagnostic medical imaging.

(ii) exercise general supervision throughout all stages of a computed tomography procedure.

Analytical Purposes I5
The licensee shall use analytical x-ray equipment in accordance with the NHMRC Radiation Health Series Publication No 9. ‘Code of Practice for Protection Against Ionizing Radiation Emitted from X-Ray Analysis Equipment (1984)’

Therapy Radiography (Radiation Therapist) Type I 13
The licensee shall:

(i) use radiation apparatus for the purpose of administering a therapy dose of radiation to a patient in accordance with the treatment prescribed and approved by a licensed radiation oncologist.

(ii) use radiation apparatus for the purposes of radiotherapy treatment planning and patient alignment at the direction of a licensed radiation oncologist.

Therapy Radiography (Radiation Therapist PDY) Type I 13Y
The licensee shall:

(i) use radiation apparatus for the purpose of administering a therapy dose of radiation to a patient in accordance with the treatment prescribed and approved by a licensed radiation oncologist

(ii) use radiation apparatus for the purposes of radiotherapy treatment planning and patient alignment at the direction of a licensed radiation oncologist
(iii) use ionising radiation apparatus, only for the purpose of radiation therapy while working in a centre accredited by the NSW Professional Accreditation and Education Committee of the Australian Institute of Radiography in accordance with the AIR's guidelines for the Professional Development Year, and shall work under the general supervision of a licensed radiation therapist.

**Diagnostic Radiography Type I 14**

The licensee shall:

(i) use radiation apparatus for the purpose of undertaking radiological examinations

(ii) use fluoroscopic and fluorographic apparatus:

(a) for the purpose of checking the final position of a patient

(b) while working under the general supervision and direction of a licensed radiologist

(c) while working under the direction of a registered medical practitioner who requires fluoroscopy during surgical and other procedures

(iii) use computed tomography only while working under the general supervision of a licensed radiologist, or a registrar who is training in the discipline of diagnostic radiology at a hospital.

**Diagnostic Radiography (PDY) Type I 14Y**

The licensee shall:

(i) use radiation apparatus for the purpose of undertaking radiological examinations;

(ii) use fluoroscopic and fluorographic apparatus:

(a) for the purpose of checking the final position of a patient

(b) while working under the general supervision and direction of a licensed radiologist

(c) while working under the direction of a registered medical practitioner who requires fluoroscopy during surgical and other procedures

(iii) use computed tomography only while working under the general supervision of a licensed radiologist, or a registrar who is training in the discipline of diagnostic radiology at a hospital

(iv) use ionising radiation apparatus only for the purpose of diagnostic imaging and only while working in a centre accredited by the NSW Professional Accreditation and Education Committee of the Australian Institute of Radiography in accordance with the AIR Guideline for the Professional Development Year, and shall work under the general supervision of a licensed radiographer.

**Diagnostic Radiographer (Remote Operator – GP and Nurse) Type I 14R**

(i) (a) Subject to condition IV, the licensee shall use radiation apparatus only when a diagnostic radiographer who is licensed under the *Radiation Control Act 1990* is unavailable.

(b) For the purposes of this condition, but subject to paragraph (d), a diagnostic radiographer is taken to be unavailable:

(1) where a diagnostic radiographer is not in attendance at or on call for the radiology facility
(2) a registered medical practitioner (ie, a person registered under the Medical Practitioners Act 1992) certifies that in the circumstances a radiological examination should be undertaken before arrangements could otherwise reasonably be made for the examination to be performed by a diagnostic radiographer.

(c) In the event that the licensee is a registered medical practitioner, the licensee shall not make any certification for the purposes of paragraph (b) (2) unless the licensee first makes reasonable inquiries and those inquiries indicate that arrangements cannot reasonably be made for the examination to be undertaken by a diagnostic radiographer.

(d) For the purposes of this condition, a diagnostic radiographer is taken to be available at all times in the locations described in the Schedule of Locations (below).

(ii) Subject to condition iv, the licensee must only use a radiation apparatus to produce plain radiographs of the following anatomical regions:

- Chest (frontal projection only)
- Fingers, hand, wrist, forearm, elbow, and arm with the shoulder girdle being a frontal projection only
- Toes, foot ankle, lower leg, knee and upper leg with the pelvic girdle being a frontal projection only.

(iii) The licensee shall use radiation apparatus in accordance with the National Health and Medical Research Council Radiation Health Series Publication No 14 Recommendations for Minimising Radiological Hazards to Patients (1985).

(iv) The licensee may use any radiation apparatus at any time for any radiological examination (not being limited to those set out in condition (ii)) if requested to do so by a medical practitioner who:

(a) reasonably considers that the life or wellbeing of the patient could be seriously threatened if the examination is not undertaken immediately; and

(b) certifies this on the request form.

(v) (a) The Environment Protection Authority (EPA) may, whenever it sees fit to do so, serve a written notice on the licensee, requiring the licensee to satisfy the EPA that his/her level of competence is sufficient to properly carry out the activities under this licence.

(b) If the EPA serves a notice under paragraph (a), the licensee must satisfy the EPA of his/her competence by undertaking the steps specified in the notice to the satisfaction of the EPA within the time specified in the notice.

Schedule of Locations

Dental Radiography Type I 20
The licensee shall:
(i) use radiation apparatus only for the purpose of dental radiography

Chiropractic Radiography Type I 21
The licensee shall:
(i) use radiation apparatus only for chiropractic radiography
(ii) be limited to the following radiographic images:
   (a) radiographs of the cervical spine using cassettes of up to 24 x 30 cm maximum size
   (b) radiographs of the thoracic and of the lumbo-sacral spine using cassettes of 35 x 43 cm maximum size
   (c) antero-posterior radiographs of the pelvis using cassettes of up to 35 x 43 cm maximum size
   (d) lateral radiographs of the spine using cassettes up to 90 x 35 cm
   (e) antero-posterior radiographs of the spine using cassettes up to 90 x 35 cm and using inverted T collimation
   (f) radiographs of the extremities.

Medical Fluoroscopy (Medical Specialists other than Radiologists and Radiation Oncologists) Type I 22
The licensee shall:
(i) use radiation apparatus only for the purpose of producing a medical image to be viewed by the licensee while working in the medical speciality of the licensee; and
(ii) ensure that a licensed radiographer is in attendance when a high dose rate fluoroscopic unit is being utilised; and
(iii) keep a record of the fluoroscopic parameters utilised, including total screening time and patient identification, when a high dose rate unit is being used.

Note: For the purpose of this licence a fluoroscopy unit is considered to be high dose rate when it is likely that the product of the air kerma rate at the patient entrance surface and the total radiation exposure time for a procedure exceeds 80 mGy and would include, for example, most units used for cardiac catheterisation, angiography and interventional radiology. Dose area product (DAP) meters should be attached to high dose rate units to allow estimation of accumulated patient dose

Veterinary Radiology Type I 23
The licensee shall:
(i) use radiation apparatus only for the purpose of veterinary radiology
(ii) use radiation apparatus in accordance with NHMRC Radiation Health Series Publication No. 3 *Code of Practice for the Safe use of Ionising Radiation in Veterinary Radiology – Parts 1 and 2* (1982).
Use for Bone Mineral Analysis (Tier 1) I 27

The licensee:

(i) must only use radiation apparatus for bone mineral analysis;

(ii) must provide general supervision to persons under their control who are using bone mineral analysis radiation apparatus and whose licence condition require them to be supervised.

Dictionary

‘General supervision’ means supervision by a qualified person who oversees the person being supervised and ensures that the person follows safe radiation work practices in relation to the use of radiation apparatus.

‘Qualified person’, in relation to supervision for a particular 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 item.

Use for Bone Mineral Analysis (Tier 2) I 27S

The licensee must only use radiation apparatus for bone mineral analysis while working under the general supervision of a qualified person.

Dictionary

‘General supervision’ means supervision by a qualified person who oversees the person being supervised and ensures that the person follows safe radiation work practices in relation to the use of radiation apparatus.

‘Qualified person’, in relation to supervision for a particular 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 item.

Use for Radiation Oncology Physics (Tier 1) I 29

The licensee:

(i) must only use radiotherapy radiation apparatus for the purposes of:

   (a) calibration of the apparatus
   (b) radiation dosimetry
   (c) quality assurance procedures
   (d) radiotherapy treatment planning and patient alignment, at the direction of a licensed radiation oncologist.

(ii) may provide supervision, of a level specified below, to any person issued with an approval for an exemption under clause 8 of the Regulation, i.e.:

   (a) immediate supervision at all times to an undergraduate student in a university or other educational institution who is undertaking course work or research while the person is using the radioactive substances or radiation apparatus to which the approval relates in any clinical situation

   (b) immediate supervision at all times to an undergraduate student in a university or other educational institution who is undertaking course work or research while the person is using the radioactive substances or radiation apparatus to which the approval relates in any clinical situation.
(b) general supervision at all times to an undergraduate student in a university or other educational institution who is undertaking course work or research while the person is using the radioactive substances or radiation apparatus to which the approval relates in any non-clinical situation; and

(c) general supervision at all times to a postgraduate student in a university or other educational institution who is undertaking research or higher studies.

(iii) may provide supervision only with respect to the radioactive substances and the radiation apparatus the licensee may use under this licence.

Dictionary

‘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, and is observing and directing the use by the person being supervised of radioactive substances or radiation apparatus.

‘Qualified person’ in relation to supervision at 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.

‘Regulation’ means the Radiation Control Regulation 1993.

Use for Radiation Oncology Physics (Tier 2) I 29S

The licensee:

(i) must only use radiotherapy radiation apparatus for the purposes of:

(a) calibration of the apparatus

(b) radiation dosimetry

(c) quality assurance procedures

(d) radiotherapy treatment planning and patient alignment, at the direction of a licensed radiation oncologist or a medical registrar in radiation oncology who has been granted an exemption under clause 8 of the Regulation.

(ii) must only undertake activities (a)–(c) whilst under immediate supervision of a qualified person for the first 6 months of commencing work as a radiation oncology physicist and thereafter must only undertake activities (a)–(c) whilst under general supervision of a qualified person.

(iii) may provide supervision, of a level specified below, to any person issued with an approval for an exemption under clause 8 of the Regulation, i.e.:

(a) immediate supervision at all times to an undergraduate student in a university or other educational institution who is undertaking course work or research while the person is using the radioactive substances or radiation apparatus to which the approval relates in any clinical situation

(b) general supervision at all times to an undergraduate student in a university or other educational institution who is undertaking course work or research while the person is using the radioactive substances or radiation apparatus to which the approval relates in any non-clinical situation.
(c) general supervision at all times to a postgraduate student in a university or other educational institution who is undertaking research or higher studies.

(iv) may provide supervision only with respect to the radioactive substances and radiation apparatus the licensee may use under this licence.

(v) must only carry out the activities specified above whilst employed as a radiation oncology physicist.

Dictionary

‘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, 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.

‘Regulation’ means the Radiation Control Regulation 1993.

Detection of Concealed Explosives I 41

The licensee is restricted to the use of irradiating apparatus operating up to a maximum of 150 kVp at 6 mA.
R Type Licence

Sale of radioactive substances or items containing radioactive substances Type R 2
The licensee shall:

(i) sell a radioactive substance only to a person who holds a current licence, issued under the Radiation Control Act 1990, which permits the purchaser to use that radioactive substance for the purpose indicated on the licence

(ii) ensure that all packages containing a radioactive substance, sold by the licensee, are transported in accordance with clause 23 of the Radiation Control Regulation 1993.

Medical Radiation Therapy (Radiation Oncologist) Type R 3
The licensee must only use a radioactive substance for the purpose of radiation oncology.

Medical Scintigraphy and Medical Therapy (Nuclear Medicine Physician) Type R 4
The licensee:

(i) must only use radioactive substances for the purpose of nuclear medicine or therapy treatment

(ii) must be on-site at the practice location or ensure that a medical or radiology registrar in nuclear medicine who has been granted an exemption under clause 8 of the Regulation is on-site at the practice location during any nuclear medicine examination or therapy treatment

(iii) is exempted from clause (ii) above if the practice location falls outside the local government areas listed on the schedule of locations

(iv) must provide supervision, of a level specified below, to any person conducting any nuclear medicine examination or therapy treatment on their behalf, i.e.:

(a) immediate supervision at all times to a medical or radiology registrar in nuclear medicine during the first 6 months of the person’s training

(b) general supervision to all nuclear medicine technologists, and medical or radiology registrars in nuclear medicine who have competed the first 6 months of training

(v) may provide supervision only with respect to the radioactive substances and radiation apparatus the licensee may use under this licence.

Dictionary

‘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 superior who is present at all times, 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.

‘Regulation’ means the Radiation Control Regulation 1993.
Schedule of Locations


Medical Radiation Therapy (Radiation Therapist) Type R 13

The licensee shall use equipment containing a sealed radioactive source, only for the purpose of administering a therapy dose of radiation to a patient in accordance with the treatment prescribed, approved and directed by a licensed radiation oncologist.

Medical Radiation Therapy (Radiation Therapist PDY) Type R 13Y

The licensee shall:

(i) use equipment containing a sealed radioactive source, only for the purpose of administering a therapy dose of radiation to a patient in accordance with the treatment prescribed, approved and directed by a licensed radiation oncologist

(ii) use equipment containing a sealed radioactive substances, only for the purpose of radiation therapy while working in a centre accredited by the NSW Professional Accreditation and Education Committee PAEC of the Australian Institute of Radiography in accordance with the AIR’s guidelines for the Professional Development Year, and shall work under the general supervision of a licensed radiation therapist.

Nuclear Medicine Technology Type R 14

The licensee:

(i) must only use radioactive substances for the purpose of nuclear medicine or therapy treatment

(ii) must only use radioactive substances whilst under the general supervision of a qualified person, or a medical or radiology registrar in nuclear medicine who has been granted an exemption under clause 8 of the Regulation.

Dictionary

‘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.

‘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.

‘Regulation’ means the Radiation Control Regulation 1993

Nuclear Medicine Technology PDY Type R 14Y

The licensee:

(i) must only use radioactive substances for the purpose of nuclear medicine or therapy treatment
(ii) must only use radioactive substances whilst under the general supervision of a qualified person, or a medical or radiology registrar in nuclear medicine who has been granted an exemption under clause 8 of the Regulation

(iii) must only work in a centre accredited by the Australian and New Zealand Society of Nuclear Medicine in accordance with the Society’s Accreditation Regulations (1987) when under the general supervision of a licensed nuclear medicine technologist.

Dictionary

‘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.

‘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.

‘Regulation’ means the Radiation Control Regulation 1993.

The licensee shall use an unsealed radioactive source.

Use for Radiation Oncology Physics (Tier 1) R 29

The licensee:

(i) must only use radioactive substances or equipment containing radioactive substances for the purposes of:
   (a) calibration of the sources or equipment containing radioactive substances
   (b) radiation dosimetry
   (c) quality assurance procedures
   (d) brachytherapy at the direction of a licensed radiation oncologist
   (e) radiotherapy treatment planning and patient alignment, at the direction of a licensed radiation oncologist.

(ii) may provide supervision, of a level specified below, to any person issued with an approval for an exemption under clause 8 of the Regulation, i.e.:
   (a) immediate supervision at all times to an undergraduate student in a university or other educational institution who is undertaking course work or research while the person is using the radioactive substances or radiation apparatus to which the approval relates in any clinical situation
   (b) general supervision at all times to an undergraduate student in a university or other educational institution who is undertaking course work or research while the person is using the radioactive substances or radiation apparatus to which the approval relates in any non-clinical situation
   (c) general supervision at all times to a postgraduate student in a university or other educational institution who is undertaking research or higher studies.

(iii) may provide supervision only with respect to the radioactive substances and radiation apparatus the licensee may use under this licence.

Dictionary

‘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, 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.

‘Regulation’ means the Radiation Control Regulation 1993.

Use for Radiation Oncology Physics (Tier 2) R 29S

The licensee:

(i) must only use radioactive substances or equipment containing radioactive substances for the purposes of:

   (a) calibration of the sources or equipment containing radioactive substances
   (b) radiation dosimetry
   (c) quality assurance procedures
   (d) brachytherapy at the direction of a licensed radiation oncologist
   (e) radiotherapy treatment planning and patient alignment, at the direction of a licensed radiation oncologist, or a medical registrar in radiation oncology who has been granted an exemption under clause 8 of the Regulation.

(ii) must only undertake activities (a)–(d) whilst under immediate supervision of a qualified person for the first 6 months of commencing work as a radiation oncology physicist and thereafter must only undertake activities (a)–(d) whilst under the general supervision of a qualified person.

(iii) may provide supervision, of a level specified below, to any person issued with an approval for an exemption under clause 8 of the Regulation, i.e.:

   (a) immediate supervision at all times to an undergraduate student in a university or other educational institution who is undertaking course work or research while the person is using the radioactive substances or radiation apparatus to which the approval relates in any clinical situation
   (b) general supervision at all times to an undergraduate student in a university or other educational institution who is undertaking course work or research while the person is using the radioactive substances or radiation apparatus to which the approval relates in any non-clinical situation
   (c) general supervision at all times to a postgraduate student in a university or other educational institution who is undertaking research or higher studies.

(iv) may provide supervision only with respect to the radioactive substances and radiation apparatus the licensee may use under this licence.

(v) must only carry out the activities specified above whilst employed as a radiation oncology physicist.

Dictionary

‘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, 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.

‘Regulation’ means the Radiation Control Regulation 1993.

**Soil Density and Moisture Determination Type R 30**

The licensee shall use a sealed radioactive source in accordance with the NHMRC Radiation Health Series Publication No. 11 *Code of Practice for the Safe Use of Soil Density and Moisture Gauges Containing Radioactive Sources* (1984).

**Gamma Irradiator R 43**

The licensee must only use a gamma irradiator for sterilisation of biological samples.
Schedule 3: RAC Technical Committee membership, terms of reference and operating procedures

Terms of reference

- Provide advice to the Radiation Advisory Council pursuant to sections 6, 7, 8, 9 and 10 of the Act and clauses 6, 14, 17, 18, 20 and 28 of the Regulation pertaining to proposed licensing, registration and accreditation determinations.
- Provide advice on other regulatory matters that the Council may refer to from time to time.
- When requested by the EPA, provide advice on research protocols involving the use of radioactive substances or other matters requiring technical expertise.
- Of its own motion, make recommendations to the Council on emerging issues, technical developments, regulatory matters or policy development.

Membership

Committee members are to be appointed by the Council, and the committee is to consist of the following persons:

- a member of Council appointed by Council as independent Chair
- a physician in nuclear medicine
- a radiologist
- a radiotherapist
- a medical physicist
- a health physicist
- a diagnostic radiographer
- an industrial radiographer
- an expert in non-ionising radiation
- a community representative.

Committee membership is not confined to members of the Council except for the Chairperson who is to be a member of the Council and who is appointed by the Council.

Standing operating procedures

- Meetings are to be held at least monthly, prior to the monthly Council meeting, unless otherwise decided by the Council.
- The Chairperson is to chair the meeting unless unable to attend, in which case the meeting is to elect another Council member to the chair for that meeting.
- The Chairperson is to report the Committee’s recommendations to the Council. Reporting is to be by exception and is to highlight any matters that the committee considers that the Council as a whole should discuss or determine.
- The report to the Council is to be the official record of the committee’s deliberations. Separate minutes need not be maintained.
• A quorum for a meeting is four specialist members. Notwithstanding this requirement, if
the members present do not have the expertise to provide the advice needed on a
particular matter, the committee is not to make a recommendation to the Council until
the necessary advice has been obtained.

• Members are to declare any interest that they have in matters on the committee agenda at
the start of each meeting. These declarations are to be recorded in the minutes, together
with the action, if any, taken to avoid conflict.

• Decisions are to be by consensus. Where consensus cannot be reached, the various views
are to be provided in the report to the Council.

• In other respects, the committee is to follow the procedures of the Council, as applicable.

• The EPA will provide staff/administrative support for the committee.
Schedule 4: RAC Course and Competency Committee membership, terms of reference and operating procedures

Terms of reference

• Provide advice to the Council, pursuant to sections 6(5) and 9(3) of the Act pertaining to proposed licensing and accreditation qualifications, and, in particular, to:
  – define the generic attributes and competencies for each of the licence categories;
  – develop a guideline for the weighting of course content
  – determine guidelines for the appropriate types of assessment suitable for each licence category
  – liaise and consult with professional qualifying bodies when establishing competencies and attributes
  – where appropriate, observe a course to establish whether the experience provided is suitable to deliver the competencies and attributes required
  – recommend courses for approval
  – advise on the frequency of review.
• Provide advice on other regulatory matters that Council may refer to it from time to time.
• Of its own motion, make recommendations to Council on emerging issues, technical developments, regulatory matters or policy development relating to the suitability of or necessity for approved courses.

Membership

The committee members are to be appointed by the Council and are to consist of the following persons:

• a diagnostic radiographer
• a health physicist
• a medical physicist
• a non-ionising radiation physicist
• an industrial radiographer
• a general professional educator
• co-opted members as required.

The Chairperson is to be one of the committee members. She/he is to be appointed by the Council and must be a member of Council. Otherwise, committee membership is not confined to members of Council.

Standing Operating Procedures

• Meetings are to be held as determined by the Committee, unless otherwise decided by the Council.
• The Chairperson is to chair the meeting unless unable to attend, in which case the meeting is to elect another Council member to the chair for that meeting.
• The Chairperson is to report the Committee’s recommendations to the Council. Reporting is to highlight any matters that the committee considers that the Council as a whole should discuss/determine.

• The report to the Council is to be the official record of the committee’s deliberations. Separate minutes need not be maintained.

• A quorum for a meeting is three members. Notwithstanding this requirement, if the members present do not have the expertise to provide the advice needed on a particular matter, the committee is not to advise on it until the necessary advice has been obtained.

• Members are to declare any interest that they have in matters on the committee agenda at the start of each meeting. These declarations are to be recorded in the report to Council together with the action, if any, taken to avoid a conflict.

• Decisions are to be by consensus. Where consensus cannot be reached, the various views are to be provided in the report to Council.

• In other respects, the committee is to follow the procedures of Council, as applicable.

• The EPA will provide staff/administrative support for the committee.
### APPENDIX 2: MEMBERSHIP OF COMMITTEES OF THE COUNCIL DURING 2001–02

#### TECHNICAL COMMITTEE

<table>
<thead>
<tr>
<th>Member</th>
<th>Profession</th>
<th>Meetings attended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr D Leece</td>
<td>Chief Scientist, NSW EPA</td>
<td>9</td>
</tr>
<tr>
<td>Dr P Pasfield</td>
<td>Radiologist</td>
<td>3</td>
</tr>
<tr>
<td>Mr J Robinson</td>
<td>Diagnostic radiographer</td>
<td>11</td>
</tr>
<tr>
<td>Dr G Larcos</td>
<td>Physician in nuclear medicine</td>
<td>5</td>
</tr>
<tr>
<td>Dr K Crawford</td>
<td>Community representative</td>
<td>3</td>
</tr>
<tr>
<td>Mr Michael Carter</td>
<td>Health physicist</td>
<td>11</td>
</tr>
<tr>
<td>Mr C Hockings</td>
<td>Industrial radiographer</td>
<td>8</td>
</tr>
<tr>
<td>Mr L Collins</td>
<td>Expert in non-ionising radiation</td>
<td>9</td>
</tr>
<tr>
<td>Dr Donald McLean</td>
<td>Medical physicist</td>
<td>11</td>
</tr>
<tr>
<td>Dr Michael Izard</td>
<td>Radiotherapist</td>
<td>7</td>
</tr>
</tbody>
</table>

#### COURSE AND COMPETENCIES COMMITTEE

<table>
<thead>
<tr>
<th>Member</th>
<th>Profession</th>
<th>Meetings attended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr J Robinson (Chairperson)</td>
<td>Diagnostic radiographer</td>
<td>4</td>
</tr>
<tr>
<td>Dr K Crawford</td>
<td>Community representative</td>
<td>3</td>
</tr>
<tr>
<td>Mr Michael Carter</td>
<td>Health physicist</td>
<td>4</td>
</tr>
<tr>
<td>Mr C Hockings</td>
<td>Industrial radiographer</td>
<td>3</td>
</tr>
<tr>
<td>Mr L Collins</td>
<td>Expert in non-ionising radiation</td>
<td>4</td>
</tr>
<tr>
<td>Dr Donald McLean</td>
<td>Medical physicist</td>
<td>3</td>
</tr>
</tbody>
</table>
APPENDIX 3: ADVICE PROVIDED ON MEDICAL RESEARCH STUDIES (IN VOLVING ADMINISTRATION OF IONISING RADIATION TO HUMANS)

Prince of Wales Hospital

• Transplantation of Human Islets into the Liver of people with Diabetes

Royal Prince Alfred Hospital

• Pilot Phase 11 Study of Sandostatin LAR in patients with Advanced Liver Cancer (Hepatocellular Carcinoma)

St George Hospital

• Assessment of Micturition Centres in the Cerebral Cortex of Women with Detrusor Instability using single photon emission computed tomography [SPECT]

John Hunter Hospital

• Hypothermia as an Adjunctive Therapy to Percutaneous Intervention in Patients with Acute Myocardial Infarction

St Vincent’s Hospital

• Atrasentan (ABT-627) A Phase 111, Randomised, Double Blind, Placebo-Controlled Study of the Safety and Efficacy of 10 mg Atrasentan in Men with Metastatic Hormone Refractory Prostate Cancer
## ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACPSEM</td>
<td>Australasian College of Physical Scientists and Engineers in Medicine</td>
</tr>
<tr>
<td>AINDT</td>
<td>Australian Institute for Non-Destructive Testing</td>
</tr>
<tr>
<td>AIR</td>
<td>Australian Institute of Radiography</td>
</tr>
<tr>
<td>ALARA</td>
<td>As Low As Reasonably Achievable</td>
</tr>
<tr>
<td>AMAC</td>
<td>Australian Health Ministers’ Advisory Council</td>
</tr>
<tr>
<td>ANSTO</td>
<td>Australian Nuclear Science and Technology Organisation</td>
</tr>
<tr>
<td>ANZAPNM</td>
<td>Australian &amp; New Zealand Association of Physicians in Nuclear Medicine</td>
</tr>
<tr>
<td>ANZBMS</td>
<td>Australian &amp; New Zealand Bone Mineral Society</td>
</tr>
<tr>
<td>ANZSBMR</td>
<td>Australian &amp; New Zealand Society of Bone Mineral Research</td>
</tr>
<tr>
<td>ARPANSA</td>
<td>Australian Radiation Protection and Nuclear Safety Agency</td>
</tr>
<tr>
<td>CCC</td>
<td>Course and Competencies Committee</td>
</tr>
<tr>
<td>COAG</td>
<td>Council of Australian Government</td>
</tr>
<tr>
<td>CRE</td>
<td>Consulting Radiation Expert</td>
</tr>
<tr>
<td>CSCC</td>
<td>Cosmetic Surgery Credentialling Council</td>
</tr>
<tr>
<td>EPA</td>
<td>Environment Protection Authority</td>
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<tr>
<td>GBq</td>
<td>gigabequerel</td>
</tr>
<tr>
<td>HCCC</td>
<td>Health Care Complaints Commission</td>
</tr>
<tr>
<td>HURSOG</td>
<td>Hospital and University Radiation Safety Officers Group</td>
</tr>
<tr>
<td>IAEA</td>
<td>International Atomic Energy Agency</td>
</tr>
<tr>
<td>mSv</td>
<td>milliSievert</td>
</tr>
<tr>
<td>NCP</td>
<td>National Competition Policy Review</td>
</tr>
<tr>
<td>NHMRC</td>
<td>National Health and Medical Research Council</td>
</tr>
<tr>
<td>NIR</td>
<td>Non Ionising Radiation</td>
</tr>
<tr>
<td>NUIP</td>
<td>National Uniformity Implementation Panel</td>
</tr>
<tr>
<td>PDY</td>
<td>Professional Development Year</td>
</tr>
<tr>
<td>PMD</td>
<td>Personal Monitoring Device</td>
</tr>
<tr>
<td>RA</td>
<td>Radiation Assessor</td>
</tr>
<tr>
<td>RC</td>
<td>Radiation Consultant</td>
</tr>
<tr>
<td>RAC</td>
<td>Radiation Advisory Council</td>
</tr>
<tr>
<td>RHC</td>
<td>Radiation Health Committee</td>
</tr>
<tr>
<td>RHSAC</td>
<td>Radiation Health and Safety Advisory Council</td>
</tr>
<tr>
<td>RSO</td>
<td>Radiation Safety Officer</td>
</tr>
</tbody>
</table>