



Tasmania

DEPARTMENT *of*
HEALTH *and*
HUMAN SERVICES

Radiation Advisory Council

Annual Report for 2004/2005




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This document is available on-line at:
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17th October 2005

The Hon. David Llewellyn MHA
Minister for Health and Human Services
Deputy Premier

Dear Minister/Deputy Premier

In accordance with Section 4(4) of the Radiation Control Act 1977, the Radiation Advisory Council submits the 2004-2005 Annual Report for presentation to each House of Parliament.



Dr Avner Misrachi
Chairman
Radiation Advisory Council

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The Radiation Advisory Council

Responsibility of the Council

The Radiation Advisory Council was established under Section 4(1) of the Radiation Control Act 1977. The Act further specifies the operation and responsibilities of the Council in Sections 4, 12 and 13.

The primary duty of the Radiation Advisory Council is to keep under review all matters connected with electronic products and radioactive material. The particular aim is to advise the Minister on the measures to be taken to prevent or reduce a risk of injury to, or a danger to the health of, any person arising from any such products or material.

Specifically, the Council is to give such advice to the Minister as it considers necessary with respect to the administration of the Radiation Control Act 1977. This includes the making of regulations and the granting and cancellation of licences. The Council is to report to the Minister as soon as is practicable on any matter referred to it.

The Council also has certain responsibilities with respect to the issue of licences. Not all licences need to be referred to the Council before being approved. However, the Act specifies procedures to be followed in those situations where referral to the Council is appropriate.

In particular, if the Minister has referred an application for a licence to the Council for its advice, and the Council recommends that a licence, or a licence of a particular kind, should not be granted or should be granted only on specified conditions, then the Minister must not grant a licence contrary to that recommendation.

Before it makes such a recommendation in respect of an application for a licence the Council is to notify the applicant that it is of the opinion that it may be necessary to make such a recommendation, specifying the grounds on which it bases its opinion. The Council must then consider any representations that the applicant may make with regard to the matters set forth in the notification.

The applicant is provided with an opportunity of appearing before the Council and presenting to it relevant evidence with respect to the matters in the notification.

If the Council deems it necessary to recommend to the Minister that a licence should be cancelled or suspended in order to prevent or reduce a risk of injury to, or a danger to the health of, any person, then the Minister must comply with that recommendation.

Although the Council is not required to approve each licence, Section 17 of the Act requires that the Minister notify the Council of the grant, renewal, cancellation or suspension of any licence, and the variation of the conditions of any licence.

Constitution of the Council

The constitution of the Council is discussed in Sections 5 to 8 of the Act.

The members of the Council must be appointed by the Minister and must consist of a chairman and such other members as the Minister may determine.

The chairman of the Council must be a medical practitioner who is an employee within the meaning of the *Tasmanian State Service Act 1984*.

The Act allows the Minister to appoint a deputy for each member, except the chairman. The deputy has all the powers of that member during the absence of the member from a meeting of the Council or a committee of the Council.

Before appointing a person as a member or as deputy of a member of the Council (other than the chairman), the Minister must consult such authorities, or such scientific, professional, or technical organisations, or such other persons, as the Minister considers appropriate.

Council members are appointed for a term of up to 3 years, but may resign office by notice in writing addressed to the Minister.

The Minister must ensure that there is always at least one scientist proficient in the practice of protection against radiation available to advise and assist the Council.

Current Composition of the Council

<i>Name</i>	<i>Title</i>	<i>Meetings attended</i>	<i>Profile</i>
Dr Avner Misrachi, Senior Medical Advisor, Public and Environmental Health Service, DHHS	Chairman	5	Public Health Physician Member of a range of state and national committees relating to public and environmental health
Dr Fiona Murton, Nuclear Medicine Specialist, Hobart Isotope Imaging and Royal Hobart Hospital	Member	5	Expertise and specific training in theoretical and practical issues relating to the use of unsealed radioactive sources in medical diagnosis and therapy
Dr Frank Cattell, Manager Environmental Operations, Environ- mental Planning and Scientific Services Division, DPIWE	Member Nominated representa- tive of the Department of Primary Industries, Water and Environment (DPIWE)	2	Chemist, with expertise in radiation chemistry. Worked with the Australian Atomic Energy Commission for 5 years. Also has experience and expertise in dealing with environmental issues
Ms Carinda Rue	Deputy member for Dr Frank Cattell		
Dr Geoff Fenton, Honorary Research Associate in Physics, University of Tasmania	Member	6	Gained experience in nuclear radiation detection and measurement, both theoretical and experimental, during teaching and research at the universities of Birmingham and Tasmania
Dr John Ward, Radiation Oncology Specialist, W P Holman Clinic, Royal Hobart Hospital	Member Nominated representative of the Royal Australian and New Zealand College of Radiologists (RANZCR)	5	Expertise and specific training in theoretical and practical issues relating to the use of radiation for therapy
Mrs Ann McDevitt, Senior Radiation Therapist, W P Holman Clinic, Royal Hobart Hospital	Member Radiation Therapy representative of the Tasmanian Branch of the AIR	5	Radiation therapist with over 20 years experience in the United States of America and Australia. Enthusiastic member of the AIR both nationally and internationally

<i>Name</i>	<i>Title</i>	<i>Meetings attended</i>	<i>Profile</i>
Dr Merl de Silva, Radiologist, Royal Hobart Hospital (resigned January 2005)	Member Nominated by the Royal Australian and New Zealand College of Radiologists (RANZCR)	2	Expertise and specific training in theoretical and practical issues relating to diagnostic medical imaging
Mr Andrew Boon, Senior Engineer Mobile Network Engineering Telstra	Member Nominated by the Institution of Engineers, Australia	5	Professional engineer with over 30 years experience in radio communications and broadcasting transmitters. Also lectured on antennas and radio wave propagation at the University of Tasmania. Conducted independent assessment of RF radiation levels for several cellular base station sites
Mr Michael Green	Deputy member for Mr Andrew Boon		
Dr Barbara Shields, Senior Health Physicist, Health Physics Branch, DHHS	Secretariat Scientist proficient in radiation protection and able to advise Council	3	Senior Health Physicist, DHHS. Member of national committees on radiation protection including the Radiation Health Committee and the Nuclear Safety Committee
Dr Stephen Newbery, Health Physicist, Health Physics Branch, DHHS	Deputy for Dr Shields	3	Health Physicist, with the Health Physics Branch, DHHS
Ms Joy Batchelor, Clerk, Health Physics Branch, DHHS	Secretariat	6	Clerk with the Health Physics Branch, DHHS, responsible for the preparation and issue of licence documents

Chairman's Review



*Dr Avner Misrachi,
Chairman of the Radiation
Advisory Council*

This year has been another interesting and important one for Council, marked by the development of the Radiation Protection Bill, formulated along national uniformity guidelines and incorporating security matters.

Members continued to address the complexities of licensing x-ray practices for dental auxiliaries and on-going policy matters relating to radiology training needs and radiological work practices of health workers.

Another important on-going area under consideration has been the control and use of applications of lasers and other forms of non-ionising radiation in cosmetic applications as we become aware of the cosmetic industries' continual growth and innovation.

These are only some highlights of a very active year and I would once again like to acknowledge the valuable support provided by members of Council. Special thanks to the Health Physics team for their contribution and on behalf of Council, I extend my appreciation for the expert support provided by Barbara Shields, the Senior Health Physicist.

A handwritten signature in black ink that reads "Avner Misrachi". The signature is written in a cursive style.

Dr Avner Misrachi
Chairman
Radiation Advisory Council

Topics Reviewed by the Council

Health Physics Branch, Progress Reports

The Health Physics Branch, within the Department of Health and Human Services (DHHS), is responsible for the day-to-day administration of the Radiation Control Act 1977. The Branch has three professional health physicists, assisted by two recent graduates during the summer months and one administrative officer. The health physicists are authorised officers under the Radiation Control Act 1977 and carry out quality assurance assessments and other surveillance and monitoring activities to ensure that the requirements of the Act are being met. They also participate in the assessment of licence applications, provide advice on all radiation matters, including advice to the Council and participate in the emergency response to incidents involving radiation.

The Health Physics Branch provided a brief progress report on its activities at each meeting of the Council. In this manner, the Branch kept Council up to date about general administrative matters and quality assurance assessments being conducted as required under the Radiation Control Act 1977. These reports also provided an opportunity for the Branch to keep the Council informed of local, national and international issues in radiation protection.

The following topics were of particular interest.

Quality Assurance Assessments

The financial year 2004–2005 was a productive year for quality assurance (QA) assessments by the health physicists, who are authorised officers under the Radiation Control Act 1977. Despite one physicist being on long service leave for three months, assessments were conducted of medical x-ray units, including fixed radiography units and image intensifiers (including interventional radiography), veterinary and dental x-ray units, BreastScreen Tasmania mammography units and also x-ray fluorescence (XRF) units, which are mainly located in industry. Some assessments of radioactive materials used in industry were made.

The protocols for dental and medical x-ray units were amended to be in line with the current Australian Standards.

In addition, a non-ionising radiation matter (EMF) within the Department of Health and Human Services was investigated and only low fields were found in the immediate work area, alleviating the concerns of the affected workers.

Results of the questionnaires, issued by the Physicists at the time of QA assessments towards the end of the 2003/2004 financial year, indicated general satisfaction with the conduct of inspections, and a report was issued to all survey participants. One outcome of

the survey was a recommendation to focus on providing as much relevant information as possible about the QA process at the time inspections were booked.

During this year, the Health Physics calibration rig was relocated from the St John's Park campus to the Repatriation Centre. The rig comprises a collimated source container and marked rails that enable a survey meter to be placed at known distances from the source. Hence the dose rates can be calculated and compared with the reading on the survey meter. This move made it easier for staff undertaking calibration of survey meters and enabled the provision of a more efficient service.

Paediatric Radiography

The Branch had purchased a dose area product meter that allowed assessment of patient dose during diagnostic imaging. Initial discussions with the Chief Radiographer at the Royal Hobart Hospital (RHH) indicated an interest in conducting a study of doses associated with paediatric radiography, using the European Union guidelines. This study was to be conducted in the next financial year.

Radioactive Materials Management, Storage and Disposal

On the Tasmanian scene, Dr Shields reported that materials were moved from 34 Davey Street to a new site on 28 June 2004, with the associated costs paid by Treasury, and that Port Latta was now an approved disposal site following the closure of the one at McRobies Gully on 30 June 2004.

Council agreed that Dr Shields provide comment on a draft Department of Primary Industries, Water & Environment (DPIWE) document - *Approved Management Method for Clinical and Related Waste*. The document included reference to radioactive waste and allowed for such waste to be disposed to landfill until the end of 2007, although no mention is made of disposal pathways after 2007. Council recognised that this could create future difficulties for licence holders when disposal was required.

Council was also made aware of other relevant DPIWE documents, namely:

Proposed Controlled Waste Tracking System for Tasmania – Policy Paper for Comment, Classification & Management of Contaminated Soil for Disposal and the National Environment Protection Measure for the *Movement of Controlled Waste Between States & Territories* – a nationally agreed measure requiring implementation in Tasmania.

Council also discussed the issue of disposal of organs recovered from deceased patients who had recently undergone low dose rate brachytherapy.

On the national scene, Dr Shields advised Council that, in a media statement on 14 July 2004, the Prime Minister announced that the National Repository would not be constructed in South Australia and that the Australian Government Department of Education, Science & Training (DEST) intended to withdraw its application to ARPANSA for licences to site, construct and operate the repository.

Further, the Australian Government indicated that it would deal with its own waste independently of the States, who would be left to manage their own waste, which in the case of Tasmania would predominantly be radioactive material that has been in storage for some years due to a lack of disposal opportunities.

Other national developments regarding radioactive waste management of interest to the Council included a study of a waste classification scheme based on the International Atomic Energy Agency (IAEA) scheme for radioactive material and a suggestion by the Radiation Health Committee (RHC) that each State/Territory should follow the line of South Australia and conduct, as a first step, an audit of radioactive material held by licensees and miscellaneous organisations (eg museums).

Dr Newbery informed Council of a possible disposal pathway for the return to the United States (US) of US manufactured sources, using special form containers where required for transport. The information obtained by the Branch had been passed on to the Commonwealth who may investigate preparing a national inventory of US manufactured sources.

A licence holder had informed the Branch that they were close to negotiating a disposal pathway for radium. If successful, this pathway may be useful for hospitals that are still holding old brachytherapy needles.

National Meetings

Dr Shields provided reports to the Radiation Advisory Council about ARPANSA's Radiation Health Committee, of which she is a member, and Nuclear Safety Committee (NSC), which she chairs. These reports were based on the summaries of the committee proceedings, which are available on the internet.

Of particular note was the development of various documents by the RHC which could have consequences for conditions of licences issued under the Radiation Control Act, particularly in the areas of radiotherapy, dentistry and radiology. The finalisation of the recommendations for intervention following radiation emergencies was viewed with interest by the Council members, who appreciated its relevance to many more areas than the visits by nuclear powered warships.

Council was also kept informed of the development of the National Directory for Radiation Protection, which was approved by the RHC in May 2004 and that would be used in the drafting of the new Tasmanian radiation protection legislation.

Dr Shields kept Council informed of the deliberations of the NSC about the application for licence to operate the replacement research reactor at Lucas Heights and Council was particularly interested in the issues regarding radioactive waste management.

Dr Shields reported on the 3-day National Conference on Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing in April 2005. One item discussed was the impact of introducing a 1Bq/g limit for large quantities of material, which could affect some industries in Tasmania that are exporting material overseas.

Industry representatives at the conference were not too perturbed about the 1Bq/g limit. They forecast a few complications, depending on the level of regulation that might be imposed, and would prefer to see a risk assessment conducted so that the level of regulation was dependant on the level of risk.

The 1Bq/g limit could also affect projects such as the mining of mineral sands. However, Council recognized that, if introduced in Tasmanian legislation, it might clarify the requirements for a licence.

Provision of Training Sessions

In late July, Dr Newbery and Dr Shields conducted what proved to be a very useful exercise with Tasmania Fire Service (TFS) for transport of radioactive material. This exercise was part of on-going training provided for TFS officers by the Health Physics Branch.

Nuclear Powered Warship Visits

Council was informed that there had been no visits of nuclear powered warships to Tasmania. However, ARPANSA's Radiation Health Committee had resolved the intervention level for iodine prophylaxis with agreement on 30 mGy, and this was included in the intervention guidelines that were available on the web. The Tasmanian Plan for Nuclear Powered Warship Visits then required revision to include this intervention level and other national recommendations, mainly relevant to changes in terminology.

Licence Activities under the Radiation Control Act 1977

As required by Section 17 of the Radiation Control Act 1977, Council was provided with information on all licence matters including new applications, renewals and amendments to licences. A new licence was issued authorizing the use of low dose rate brachytherapy (I^{125} seeds) for treatment of prostate cancer. In preparation for the new legislation, the Health Physics Branch was aiming to have all premises formally approved for the storage (and use) of radiation sources. To this end, application forms were sent to all dental practices in which some surgeries required approval. Proposed fees were likely to be higher under the new legislation.

Legislation

This year saw considerable advance in the development of the Radiation Protection Bill. The bill had been prepared under the umbrella of national uniformity guidelines and was based

around the recently revised legislation in Queensland and Northern Territory. Council was advised that the Bill was also in accordance with the requirements of the National Directory for Radiation Protection. Council was kept informed of developments and provided advice at relevant points.

Members noted that licensing requirements under the new bill would not require significant changes to the current licensing administrative practices and procedures of the Health Physics Branch but that some dealings such as transport and disposal would require a licence under the new Act rather than being dealt with solely in Regulations.

More significant changes related to the strengthening of powers for authorized officers, mainly powers of entry and enforcement powers. In addition, the issue of abandonment of radiation sources has been addressed, together with cost recovery for dealing with abandoned items.

Council was particularly interested in the proposed differences in the role and responsibilities of Council under the new bill, particularly that Council's role would be solely an advisory one. Currently, Council has the power to veto a licence being issued by the Minister. However, this power has been removed in the new bill and in addition, the Minister may direct the actions of the Director of Public Health. Council members raised no objection to the proposals.

The Bill also addressed the issue of conflict of interest of Council members. This was not seen by members as a major issue but some discussion was held about the impartiality of the current Chair while being both a member of Council and the Chair, considering that his Departmental position requires that on occasions he take on the role of Acting Director of Public Health. Council agreed that although the new Act will allow the status quo to continue, it might be opportune to review the matter of the level of independence of the chair required by Council.

Council also debated the need to include security issues in the Bill and Dr Misrachi pointed out that security matters are on the national agenda. Council noted the national interest in security matters, including the incorporation of such issues into RHC documents. Members noted that the Bill had sufficient provision for security issues.

Dr Shields also kept Council informed of the drafting of the regulations and the consultation processes. A list of exemptions proposed for inclusion in the new regulations together with the proposed licence fee structure was circulated to licensees and other stakeholders for comment.

Council was informed that the majority of comment received related to the proposed fees, with respondents expressing concern at the increase over current fees. Those individuals contacted by the Health Physics Branch and provided with an explanation of the fee derivation were generally more accepting of the proposed fee structure. A regulatory

impact statement for the proposed regulations was being prepared and would further explain and assess the impact of the proposed changes.

Personal Information Protection Act 2004

Council was briefed on the introduction of the *Personal Information Protection Act 2004* and recognised the need for Council to be mindful of the management of personal information in accordance with the Act.

Other Agenda Items - Ionising Radiation

Licence Application – Low Dose Rate (LDR) Brachytherapy

Council had considered, at the last meeting prior to the new financial year, licence applications from a private nuclear medicine practice and a private medical physicist to undertake low dose rate brachytherapy for the treatment of prostate cancer. The procedure involves the permanent implantation of I^{125} seeds in the prostate gland. Council had resolved to support the applications in principle and the development of licence conditions had been commenced.

Early this financial year, licence conditions and pre-licence considerations were completed in consultation with relevant stakeholders, including the Australian Brachytherapy Group and other jurisdictions, and the relevant licences were issued. The treatment of patients began in September 2004.

Licence Conditions for Dental Therapists, Hygienists and Dental Assistants

Council considered and approved an application from a Dentist wishing to conduct practical x-ray training for Dental Assistants who were undertaking a Certificate IV Radiography course externally from a mainland TAFE college.

A further application was made by another Dentist asking for the Dental Hygienist in his employ to be authorised to take extra oral radiographs. A similar application had been considered by Council some years earlier and had been rejected on the basis that there was insufficient evidence of the availability of relevant training courses for Dental Therapists, Dental Hygienists and Dental Assistants.

However, it was identified that several institutions are now offering radiography courses, and competencies relevant to the dental radiography courses offered by these mainland training institutions were reviewed by Council. Council also noted that the courses had

been accepted by other states for licensing to include extra oral radiography, as well as there being a requirement for continuing professional development in this skill area. Council recognised an increasing trend in the employment of Dental Hygienists in particular, and accepted the nominated training courses as suitable for licensing purposes. The inclusion of extra oral radiography in licence conditions was made conditional on training via an approved course and refresher training to maintain skill levels.

Following consultation with stakeholders, new licence conditions were developed for Dental Therapists, Dental Hygienists and Dental Assistants to include extra oral radiography.

In addition, Council considered the matter of licensing both undergraduate dental students and undergraduate radiography students. While licensing of all users of electronic products is required under the current Act, it was considered that, for undergraduate students, exemption from the need for a licence to use should be considered for incorporation in the new legislation, and that details regarding the supervision of such groups of students be recorded in the relevant practice's Radiation Management Plan.

General Practitioners - Radiology Training Needs

For several years the radiographer representative on the Council, most recently Mr Kenworthy, had provided radiography training for GPs in rural areas who were required to take radiographs due to the lack of a resident radiographer on site. Although Mr Kenworthy was no longer a member of the Council, he was interested in continuing to provide training, possibly on-site at relevant regional medical centres where film-processing facilities were available and where the GPs would be working. All major hospitals had moved to digital radiography, rendering these locations unsuitable for training. Council formally thanked Mr Kenworthy for his offer of continuing to conduct x-ray training for GPs and is awaiting a paper regarding the options for the continuation of the training program.

Nurse Initiated X-rays

During the year, some enquiries were received as to whether Council had any policy regarding nurse-initiated x-rays. These enquiries derived from the project officer for a Nurse Practitioner Scoping Project, who was examining guidelines for future accreditation, and from one of the hospitals seeking to determine whether Council supported nurse-initiated x-rays.

Council was informed of available information about the issue Australia wide.

In June 2000 Council had determined that "it was not necessary to form an official policy on this matter immediately but to be aware of the happenings in other States and for the Secretariat to obtain a copy of the Queensland legislation once it is available".

The current discussion on the matter highlighted several concerns, namely: appropriate training for nurses; requirements of the Health Insurance Commission; indemnity issues; distribution of the policy (e.g. Chief Nursing Officer, hospital licensees, departmental web site); restricting the initiation of an x-ray by a nurse to only those occasions when a doctor could not be contacted; level of support of the policy by relevant hospitals and radiography staff; and follow-up to assess the efficacy of such a program in a hospital.

Council agreed to seek input from various stakeholders including the Royal Australian and New Zealand College of Radiologists (RANZCR), who may already have a policy on nurse-initiated x-rays. As an interim measure, Council determined that adoption of the practice of nurse-initiated x-rays should be a policy matter for individual hospitals or community health centres, particularly in rural or remote areas.

Course in Densitometry – Operators of DXA Scanners

Dr Shields advised Council of a proposed course in densitometry developed by the Australian and New Zealand Bone and Mineral Society (ANZBMS), for which the Chairman of the Course Development Committee sought consideration as being suitable for operators of dual energy x-ray absorptiometry (DXA) scanners who were seeking a licence under the Radiation Control Act. Dr Shields reported that the radiation safety component of the course looked satisfactory.

A similar course, jointly prepared by the International Society of Clinical Densitometry (ISCD) and the ANZBMS, had been considered and approved by Council in 2004, provided that entry to the course be dependent on prior satisfactory completion of a university degree in the field of science, nursing or one of the medical imaging modalities.

The newly proposed course appeared to be similar to the previous one, apart from the omission of a post exam supervisory period (i.e. no practical component after the course).

Council agreed that specification of arrangements for the interpretation and reporting of images by a radiologist should be a condition of any licence to take bone densitometer scans (as is currently the case).

A compact disc of the course was given to the radiographer member of the Council to review for Council.

Hybrid Nuclear Medicine/CT Licence Conditions

Council agreed to a licence condition that required that Nuclear Medicine Technologists undertake computed tomography (CT) training within 9 months of their application for licence to use the unit. This provision took into account that the relevant training course was provided twice a year. All nuclear medicine practices in Tasmania had previously been consulted and had accepted this condition.

Disposal of Smoke Detectors

Following the release of a statement about disposal of domestic smoke detectors containing radioactive sources (Am^{241}) by the RHC and the recent amendment of the corresponding

Australian Standard so that it no longer required the return of domestic smoke detectors to the supplier or Department of Health, Council prepared a statement indicating that individual smoke detectors could be disposed of with normal household rubbish or returned to the supplier; that suppliers be encouraged to accept the return of smoke detectors which they have sold, prior to return to the manufacturer; and that larger quantities of smoke detectors be returned directly to the manufacturer.

This statement was issued as a media release, with a copy sent to local government Environmental Health Officers for their information.

Council was also advised that a working group of the Tasmania Fire Service's Building Safety Unit was looking at the effectiveness of different smoke alarm technologies. The Unit was investigating the effects of fire on smoke alarms and had passed on some alarms recovered from fires to the Health Physics Branch for testing for residues of radioactive material. Initial analysis of the damaged detectors indicated that the Am²⁴¹ sources were still inside the ionisation chambers.

RHC Statement on Veterinary Investigations for Yearling Sales

Early in the 2004-2005 financial year, Council requested that all veterinary surgeons be advised of the RHC statement that the practice of holding x-ray units or film cassettes during radiography was inappropriate and should cease immediately and be replaced by appropriate practices. This was particularly relevant for yearling sales and the taking of the associated numerous x-rays. Although these sales were not occurring in Tasmania at that time, the matter was brought to the attention of the Veterinary Board of Tasmania.

This issue recurred later in the year, when concerns of the thoroughbred breeding industry in NSW about particular work practices where veterinarians and their assistants may hold x-ray cassettes during x-ray screening of yearling horses were again brought to national attention. The industry had urged that the practice cease, thereby reducing the risk of unnecessary exposure of workers. The holding of x-ray units was another matter and the industry sought national agreement to allow this practice to occur, in certain circumstances.

In early March 2005, the first yearling (Magic Millions) sales were held in Tasmania, for approximately 150 horses.

Discussions with a Tasmanian veterinary surgeon confirmed that approximately 30 to 40 x-rays are required per horse, with some shots being quite difficult (oblique). Although the veterinary surgeon used a support for the x-ray unit where possible, there could be times when all components could be mobile – the cassette, the horse and the x-ray unit.

Council viewed a visual presentation prepared by South Australia's Radiation Protection Division and delivered at the Australian Radiation Protection Society (ARPS) 2004 conference that highlighted these problems. The principal areas of concern included the use of lead aprons & thyroid collars, and the use of cassette holders & tube stands. All these points were mentioned in subsequent correspondence from the Council to Tasmanian equine veterinarians. It was also noted that the *Draft Code of Practice for Safe Use of Radiation in Veterinary Science* recently circulated for comment prohibited the holding of the x-ray tube.

Council resolved to provide further advice once the code had been finalised.

Hastings Caves Radon Monitoring

Council was asked for advice on the need for the continuation of radon monitoring for guides working in the Hastings Caves. Results of monitoring for the past 12 months were submitted to Council for consideration. Council took into account the current ICRP guidelines, which recommend some form of monitoring where persons are receiving above 1mSv per year and agreed that the Site Coordinator be advised that radon monitoring should continue for all the full-time guides, unless site management could advise of a more effective means of radon monitoring.

Other Agenda Items - Non-Ionising Radiation

Dental Lasers

Council reviewed draft licence conditions for the use of lasers in dentistry. During the review Council queried some terminology in the draft conditions that was taken from an Australian Standard. A note that incorrect terminology was used in the Standard was forwarded to Standards Australia, and the revised draft conditions were accepted by Council.

Intense Pulsed Light Sources (IPLs)

Intense Pulsed Light sources (IPLs), like class 4 lasers, may be used for hair depilation and other skin treatments. However, since IPLs are not lasers, they fall outside the scope of regulation under the Radiation Control Act 1977.

Throughout 2004 and 2005 Council maintained an interest in the issue of IPL use, and in particular developments that were happening at a national level. Council was informed that ARPANSA had extended the terms of reference for its laser working group to include IPL devices. Several reports, produced by ARPANSA's class 4 laser working group, that

showed the type of skin damage that can arise when IPLs are used inappropriately were tabled for information.

Council was advised of the draft ARPANSA recommendations for the use of class 4 lasers on humans that have recommended that IPL devices be regulated in the same manner as class 4 lasers.

Standards on Solaria

Council discussed the issue of solarium operation, and whether there was a need for regulation, on various occasions during the year.

Explanatory notes for the Australian Standard on *Solaria for Cosmetic Purposes*, developed conjointly by the Department of Health and The Cancer Council of Western Australia, were brought to Council's attention as was the RHC statement on solarium operation.

The issue of regulation was discussed and Council noted that, while various agencies and groups had an interest in promoting the safe use of solarium and requiring adoption of the Australian Standard by all operators, no single agency or group had the resources to conduct, for example, public education campaigns, quality assurance assessments or compliance checks. Council recognized that consideration was also required of the need for regulation or industry self-regulation.

Results of a Tasmanian survey of businesses operating solarium were presented to Council. A questionnaire had been issued to approximately 140 businesses and approximately 60 replies had been received. Of these, about 30 indicated that they operated a solarium/solaria, and all but two of these had indicated that they operated under the Australian Standard. An information package was sent to businesses requesting it, providing them with information on the application of the Australian Standard (West Australian Health Department document) information from the ARPANSA website regarding ultraviolet radiation, a copy of a recent media release relating to the action taken against a Tasmanian business for false and misleading advertising, and a copy of an example of a consent form as recommended by the Australian Standard; in addition to the web address of the Cancer Council.

Council concluded that greater public awareness of the hazards of solarium use was required. Although acknowledging various recent media articles, Council agreed that a person with some professional authority (e.g. a dermatologist or plastic surgeon) be encouraged to speak publicly on the matter. Council could provide encouragement and information to dermatologists or plastic surgeons in the form of a letter reinforcing comments made by the Director of Public Health in a recent press article.

Induction Heater

Council was briefed on electromagnetic field (EMF) levels measured around induction heaters at a manufacturing plant in northern Tasmania.

Workers at the plant had noticed heating of a metal floor near an induction heater, and had raised the matter of heating and potential EMF exposure through their Occupational Health & Safety representative who contacted the Health Physics Branch. The Branch performed a series of EMF measurements near 3 induction furnaces and heaters at the plant and presented a report to Council.

Measurements indicated that all EMF levels at distances exceeding 1 metre from any of the induction heaters complied with current exposure guidelines.

Appendices

Licence Activities 2004-2005

Licences issued for dealings with	
Electronic Products	261
Radioactive Materials	72
<i>Total Licences Issued</i>	333
Cancellation of licences	
	21
Variations to Licences	
To authorised radioactive materials	18
To authorised electronic products	41
To authorised persons	117

Approval of Storage Accommodation	
Electronic Products	48
Radioactive Materials	2

Quality Assurance Assessments of Electronic Products

Number of quality assurance assessments conducted between 1st July 2004 and 30th June 2005 compared with the number of electronic products, by category.

Electronic Product Category	Practice			
	Medical	Dental	Industry & Research	Veterinary
Fixed radiography	48 of 57 (2y) *			
Mobile radiography	7 of 25 (2y)			9 of 56 (4y)
Mobile capacitor discharge	1 of 3 (2y)			
Fixed radioscopy	10 of 18 (2y)			
Mobile radioscopy	4 of 25 (2y)			
Simulator			+	
Superficial			+	
Linear Accelerator	+			
Bone mineral densitometer	+			
Intra Oral		12 of 269 (4y)		
Orthopantomograph		+		
Computed Tomography	0 of 13 (2y)			
Mammography	6 of 10 (1y)			
MRI	0 of 3 (3y)			
NMR	+		0 of 1 (4y)	
X-ray analysis			3 of 18 (4y)	
On-stream X-ray analysis			+	
Baggage X-ray			+	
Mobile security X-ray			+	
Enclosed special X-ray			+	
Industrial Radiography			0 of 8 (2y)	
Lasers	6 of 44 (3y)			

* (#y) where # indicates the intended assessment frequency in years

+ not rostered for assessment in current year

Quality Assurance Assessments of Radioactive Materials

Number of quality assurance assessments conducted between 1st July 2004 and 30th June 2005 compared with the number of radioactive materials, by category.

Sealed Radioactive Material	Number of Sites Inspected	Number of Sources Inspected
Density Gauge	4 of 10 (2y)*	138 of 165
Level Gauge	1 of 3 (2y)	2 of 8
Soil Density and Moisture Gauge	+	+
On Stream Analysis Probe	2 of 4 (2y)	37 of 41
Bulk Mineral Analyzer	+	+
Mobile Bore Hole Logging	0 of 1 (4y)	0 of 3
Mobile Industrial Radiography	1 of 1 (1y)	1 of 1
HDR Brachytherapy	+	+
Irradiator	1 of 1 (1/2y)	1 of 1

Unsealed radioactive material in the following practices	Number of Sites Inspected
Pathology	+
	(4y)*
Nuclear Medicine	0 of 5 (2y)

* (#y) where # indicates the intended assessment frequency in years
 + not rostered for assessment in current year

Training Courses

Radiography for General Practitioners:

1 General Practitioner provided with training, in sessions at the LGH

Examination Results

Persons proposing to use unsealed radioactive materials:

1 student sat and passed, from the University of Tasmania

General Practitioners proposing to perform limited radiography:

1 sat and passed

Persons proposing to use soil density and moisture gauges containing radioactive material:

No applicants

Abbreviations

AIR	Australian Institute of Radiography
ANZBMS	Australian and New Zealand Bone and Mineral Society
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency
ARPS	Australian Radiation Protection Society
Bq/g	Becquerel per gram
CT	Computed Tomography
DEST	Department of Education Science and Training
DHHS	Department of Health and Human Services
DPIWE	Department of Primary Industries, Water and Environment
DXA	Dual energy X-ray Absorptiometry
EMF	Electromagnetic fields
GP	General Practitioner
IAEA	International Atomic Energy Agency
ICRP	International Commission on Radiation Protection
IPL	Intense Pulsed Light
ISCD	International Society of Clinical Densitometry
LDR	Low dose rate
mGy	Milli Grey
mSv	Milli Sievert
NSC	Nuclear Safety Committee
NUIP	National Uniformity Implementation Panel
QA	Quality Assurance
RANZCR	Royal Australian and New Zealand College of Radiologists
RHC	Radiation Health Committee