THE ANNUAL REPORT OF

THE RADIATION ADVISORY COMMITTEE

FOR THE FINANCIAL YEAR ENDING JUNE 2021

RADIATION ADVISORY COMMITTEE

Melbourne, Australia

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The Hon Martin Foley MLA
Minister for Health

Dear Minister

Pursuant to Section 110 of the *Radiation Act 2005*, the Radiation Advisory Committee submits the 2021 annual report of the Committee for presentation to Parliament.

Yours faithfully

Dr Joanna Lia Wriedt
Chair
RADIATION ADVISORY COMMITTEE

CONTENTS

RADIATION ADVISORY COMMITTEE

The Radiation Advisory Committee (the Committee) is established under Part 10 of the *Radiation Act 2005*. The term of appointment for the Committee was for the period from 17 August 2017 to 16 August 2020. A new Committee was appointed for the period 17 August 2020 to 16 August 2023.

(i) Composition

The Committee met on 6 occasions from July 2020 to June 2021.

The members of the Committee from 1 July 2020 to 16 August 2020 are listed in Table 1. The Committee met once during this period.

Table 1	
Dr Joanna Lia Wriedt **(Chair)** Physiologist, Epidemiologist and Lawyer **Meetings attended: 1**	**Dr David Bernshaw** Consultant Radiation Oncologist Peter MacCallum Cancer Centre **Meetings attended: 1**
Dr Ken Joyner Director Joyner and Associates Telecommunications Consultancy **Meetings attended: 1**	**Dr Roslyn Drummond** Radiation Oncologist Peter MacCallum Cancer Centre **Meetings attended: 1**
Associate Professor Eddie Lau Radiologist and Nuclear Medicine Specialist Austin Health **Meetings attended: 1**	**Mr Geoffrey Dick** Deputy Chief Radiographer and CT Supervisor Medical Imaging Angliss Hospital Eastern Health **Meetings attended: 1**
Dr Zoe Brady Chief Physicist Alfred Radiology and Nuclear Medicine Department Alfred Health **Meetings attended: 1**	**Ms Min Ku** Professional Standards Manager Australian Society of Medical Imaging and Radiation Therapy **Meetings attended: 1**
Dr Stephanie Keehan Medical Physics Registrar Alfred Radiation Oncology Department Alfred Health **Meetings attended: 1**	**Mr Simon Toomey** Business Manager/Consultant Health Physicist SGS Australia Pty Ltd **Meetings attended: 1**

Dr Fiona Charalambous Waste Safety Australian Radiation Protection and Nuclear Safety Agency **Meetings attended: 1**	**Dr Tomas Kron** Director of Physical Sciences Peter MacCallum Cancer Centre and University of Melbourne **Meetings attended: 1**

Dr Keehan resigned from the Committee in November 2020.

The members of the Committee from 17 August 2020 to 30 June 2021 are listed in Table 2. The Committee met five times during this period.

Table 2	
Dr Joanna Lia Wriedt (Chair) Physiologist, Epidemiologist and Lawyer **Meetings attended: 5**	**Dr David Bernshaw** Consultant Radiation Oncologist Peter MacCallum Cancer Centre **Meetings attended: 5**
A/Prof Ken Karipidis Assistant Director Assessment and Advice Australian Radiation Protection and Nuclear Safety Agency **Meetings attended: 5**	**Dr Roslyn Drummond** Radiation Oncologist Peter MacCallum Cancer Centre **Meetings attended: 5**
Associate Professor Eddie Lau Radiologist and Nuclear Medicine Specialist Austin Health **Meetings attended: 5**	**Mr Geoffrey Dick** Deputy Chief Radiographer and CT Supervisor Medical Imaging Angliss Hospital Eastern Health **Meetings attended: 5**
Dr Zoe Brady Chief Physicist Alfred Radiology and Nuclear Medicine Department Alfred Health **Meetings attended: 4**	**Ms Min Ku** Professional Standards Manager Australian Society of Medical Imaging and Radiation Therapy **Meetings attended: 3**
Dr Tomas Kron Director of Physical Sciences Peter MacCallum Cancer Centre and University of Melbourne **Meetings attended: 5**	**Dr Peter Francis** Head of Nuclear Medicine / PET Royal Children's' Hospital **Meetings attended: 5**
Dr Fiona Charalambous Waste Safety Australian Radiation Protection and Nuclear Safety Agency **Meetings attended: 5**	

(ii) Responsibilities

The Committee is to advise the Minister for Health or the Secretary of the Department of Health and Human Services (the Department), on any matters relating to the administration of the *Radiation Act 2005*, referred to it by the Minister or the Secretary including the following:

(a) The promotion of radiation safety procedures and practices.

(b) Recommendation of the criteria for the licensing of persons and the qualifications, training or experience required for licensing.

(c) Recommendation of which radiation sources should be prescribed as prescribed radiation sources.

(d) Recommendation of the nature, extent and frequency of tests to be conducted on radiation apparatus and sealed radioactive sources.

(e) Codes of practice, standards or guidelines with respect to particular radiation sources, radiation practices or uses.

Section 110 of the Radiation Act requires that the Committee must give the Minister a report on its activities during a financial year no later than 1 November following that year.

On 1 February 2021, the Department of Health and Human Services was separated into two new departments: The Department of Health (DH) and the Department of Families, Fairness and Housing (DFFH). This report describes the work of the Committee over the 2020-21 financial year, which was largely unaffected by the splitting of the Department of Health and Human Services.

The terms of reference for the Committee are provided in Appendix 1.

1. Introduction

Throughout the year a number of issues were considered by the Committee including:

- National uniformity of radiation legislation in Australia.
- The regulatory requirements for various ionising radiation practices, including:
    a) Shielding assessments for medical radiation practices.
    b) Radiation Management Plans
    c) The implementation of the national Code for Radiation Protection in Planned Exposure Situations (2020).
- Non-ionising radiation matters.

The Committee continues to pay close attention to the use of and developments in the use of ionising radiation in the medical and the non-medical fields due to the risks associated with exposure to ionising radiation. These risks need to be balanced by the positive benefits associated with the use of ionising radiation.

The Committee would like to thank the Radiation Team of the Department of Health, in particular Mr Morrie Facci, for its continuing assistance and support.

2. Ionising radiation

2.1 COVID-19

Some of the activities of the Radiation Team were restricted or put on hold during the earlier part of the financial year. Some staff members were assigned to work as part of the Department's COVID 19 response effort and the numbers of site inspections were significantly impacted by movement restrictions.

2.2 Additional resources for regulation of radiation sources

The Department advised the Committee that the Department had received additional funding in the November 2020 state budget for additional staffing and resources for the regulation of environmental hazards including radiation.

The funding was used to:

- Boost the number of specialist radiation safety staff.
- Create a new Operations Team to support the work of the Radiation Team and the other two regulatory teams in the Environmental Health Regulation and Compliance Unit.
- Engage a specialist work health and safety consultant to assist in setting up tools and a consistent training regime to help field staff perform risk assessments in relation to field-based work.
- Purchase specialist radiation monitoring equipment to allow the Radiation Team to undertake more inspections and be better prepared for emergency response.

A new structure for the Radiation Team was created with a number of smaller teams and advisers focussing on more specific tasks. The committee welcomed the additional resources for radiation safety in Victoria

2.3 Radiation policy governance

The Department advised the Committee that there have been discussions on new radiation policy governance arrangements that could take place in Australia in the near future between the Radiation Health Committee of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and the Radiation Health Expert Reference Panel, which reports to the Environmental Health Standing Committee (enHealth), a standing committee of the Australian Health Protection Principal Committee (AHPPC). The Department advised the Committee that the National Cabinet Reform Committee – Health, has replaced the former Council of Australian Governments (COAG).

2.4 Implementation of the ARPANSA Code for Radiation Protection in Planned Exposure Situations (2020).

The Department advised the Committee that it is currently developing a proposal to implement the ARPANSA Code for Radiation Protection in Planned Exposure Situations (2020) (the Code). This proposal includes the foreshadowing of the Department's intention to make variations to all management licences to require compliance with this Code from 1 January 2023. Some of the key elements of the Code are the universal nature of the applicability of the Code and the requirement for the

development of a safety assessment to be conducted that is either generic or specific to the radiation source or facility (a “graded approach”) and submitted to the regulator before the granting of an authorisation.

The proposal to implement the code includes a requirement that a Radiation Management Plan (RMP) be submitted with applications for new management licences, variations to existing management licences and for applications to transfer an existing management licence to another person or body corporate.

The Committee commended the Department on the implementation of the Code and the mandating of the RMP into the regulatory system. The Committee noted that the timeframes proposed by the Department for the implementation of the various stages seemed reasonable.

2.5 Integrated Regulatory Review Service mission of International Atomic Energy Agency (IAEA)

The Committee was reminded that the IAEA Integrated Regulatory Review Service (IRRS) mission visited Australia during 5–16 November 2018. IRRS reviewed the legal and governmental framework of Australian States and Territories and the Commonwealth for nuclear and radiation safety against the IAEA’s Safety Standards. A follow-up mission will be conducted in 2021-22.

The IRRS report on the mission has been published on ARPANSA’s website and is available at:
https://www.arpansa.gov.au/sites/default/files/irrs_australia_report_2018.pdf

The IRRS report made four notes of good practice, 23 recommendations and 12 suggestions for improvement. The primary focus of the recommendations centred on issues of national uniformity, with emphasis given to the importance of ensuring a consistent level of protection of people and the environment through effective coordination and harmonized implementation of codes and guides by the Commonwealth, States, Territories and regulatory bodies.

The Environmental Health Standing Committee (enHealth) of the Australian Health Protection Principal Committee (AHPPC) led the development of an IRRS action plan to address the IRRS recommendations. EnHealth is supported in this by the work of the Radiation Health Expert Reference Panel (RHERP).

A number of projects addressing some of the recommendations in the report were in progress, including:

- The development of a national model of authorisations.
- Uniform incident reporting requirements.
- Financial assurance for radioactive sources to ensure appropriate disposal of a radioactive source in the event of the bankruptcy of a company possessing the source, for example.

The Department advised the Committee that it expected that Australian jurisdictions would have substantially addressed the observations, recommendations and suggestions in the IRRS mission report by the time of the follow-up IRRS mission expected to occur in 2021-22.

2.6 National Directory for Radiation Protection (NDRP)

The Department advised the Committee that the draft National Directory for Radiation Protection (2nd Edition) (NDRP2) is intended to provide an overall agreed framework for radiation safety, for both ionising and non-ionising radiation, together with clear regulatory statements to be adopted by the Commonwealth, states and territories. The Committee noted its adoption by the Commonwealth and the states and territories will go a long way towards addressing the recommendations in the IRRS report. NDRP2 is intended to be published in late 2021.

2.7 Remote control platform for CT and MRI scanners

The Committee advised the Department of a remote control platform for computed tomography (CT) and magnetic resonance imaging (MRI) scanners which would be able to be used for remote operation of scanners, standardising and monitoring of scanner equipment and training of medical personnel. One medical imaging technologist would be able to collaborate with up to three scanning workplaces simultaneously.

The Committee advised that the aspect of remote use of scanners could pose some issues in relation to the licensing and oversight of users. The Department acknowledged that it may have to address those issues in the future.

2.8 Radiation shielding assessments

The Department advised the Committee that it had identified deficiencies in the quality of radiation shielding assessments and the adequacy of installed radiation shielding in three key areas:

1. Insufficient shielding being specified at initial shielding design stage.
2. Insufficient shielding being installed or shielding being installed incorrectly.
3. Lack of regular review to ensure that the shielding parameter values (e.g. workload, occupancy and distances from radiation sources) on which the shielding design was based are not exceeded.

The Department was developing a shielding standard prescribing the requirements for a shielding assessment and specifying the information that must be provided in the shielding requirements report, including how the shielding will be installed.

In conjunction with the standard, the Department was proposing to introduce an approval framework for shielding assessors. This approval framework would require assessments to be performed by an approved shielding assessor and approved shielding assessors to comply with the shielding design standard.

The Department is also proposing to introduce an on-line shielding self-assessment tool for low risk practices (e.g. small animal veterinary radiography) where standard building construction materials usually provide sufficient shielding.

The Committee noted that a similar document was available in New South Wales and commended the Department on this work.

2.9 Nurses administering radiopharmaceuticals to humans

The Department advised the Committee that a nurse from a major health service was attempting to apply for a use licence under the Radiation Act 2005 to administer positron emitting radiopharmaceuticals to humans for research purposes. The nurse and the director of the research unit where the nurse is employed provided information in support of the licence application that stated, among other things, that Nuclear Medicine Technologists at the health service are “running an extensive clinical list, and do not necessarily have the time required to spend with this fragile group of patients” (patients with onset of some type of dementia).

The Committee noted that, although nurses were trained in injection techniques, their substantive training was not likely to involve instruction in handling unsealed radioactive materials. The positron emitting radiopharmaceuticals proposed to be administered have shielding requirements and handling considerations beyond those necessary for most radionuclides administered for the purpose of nuclear medicine imaging. Although the nurse had completed a radiation safety training course, this training did not seem adequate for the purpose of administering unsealed positron emitting radiopharmaceuticals.

The Committee considered that a nurse should not be required to administer positron emitting radiopharmaceuticals in a metropolitan setting where a number of nuclear medicine technologists would be available. The Committee considered that the administration of radiopharmaceuticals for research purposes should be well planned, allowing sufficient opportunity to engage nuclear medicine technologists.

The Committee considered, however, that the situation was complicated by the fact that two other nurses had been granted a licence for such purposes in the past. The Department advised that it would need to review these existing licences if it decided not to grant a licence to the first nurse currently seeking a use licence. The Committee further noted that the Department may need to place conditions on the existing licences of the two other nurses.

The Committee also advised that the Department may wish to consider how other jurisdictions handle the licensing of nurses administering positron emitting radiopharmaceuticals.

The Department advised that it would take the Committee’s advice into consideration in coming to a decision regarding the granting of the licence.

2.10 Medical assessment following high extremity dose

The Department advised the Committee of an individual who had received an extremity dose over a period of time in excess of the dose limit prescribed in the Radiation Regulations 2017. The exposure is believed to have resulted from excessive manual dispensing of radiopharmaceuticals. The Department asked the Committee what medical assessment the individual concerned should undergo.

The Committee advised that there was no need to undergo any medical treatment but, due to the possible increased risk of tissue atrophy and skin cancer, the individual should undergo periodic, independent and documented assessment of the hands by a clinician specialising in radiation damage to tissues.

2.11 Medical assessments following radiation exposures

The Department advised the Committee that it was considering the introduction of a condition on management licences requiring management licence holders to provide health assessments for each person, for whom the licence holder is responsible, who has received a radiation exposure in excess of a dose limit prescribed in the Radiation Regulations 2017.

The Committee considered that effective doses associated with stochastic effects and absorbed doses associated with tissue reactions should be treated differently. The Committee also acknowledged that, for some exposed persons, a medical assessment when the annual effective dose limit is exceeded may give rise to undue concern.

The Committee expressed concern that workers classified as not occupationally exposed, to whom an annual dose limit of 1 mSv is applied, may be required to undergo a medical assessment whereas other staff carrying out work in a similar environment who are classified as occupationally exposed and to whom an annual dose limit of 20 mSv is applied, would not be required to undergo an assessment, despite working in the same environment.

The Committee also considered the clinical expertise required to carry out an assessment and noted that this also needed to be contemplated further by the Department. The Committee advised that the assessment should include some form of counselling.

The Committee pointed out that the medical assessment required in the United Kingdom was more a determination of a person's fitness for work and overall mental health and considered whether the radiation exposure was ongoing.

The Committee also advised that the Department may wish to determine what medical assessments, if any, other jurisdictions require and that it may wish to seek input from WorkSafe.

The Department noted that radiation dose limits do not define a boundary between safe and unsafe doses and that "health assessments" should not create needless fear or anxiety. The Department would take the Committee's advice into consideration in coming to a decision regarding the imposition of this condition on licences and added that the Department would need to seek legal advice as to whether it could require a medical assessment of exposed persons.

2.12 Death due to anaphylactic reaction to contrast administered for a CT scan

The Committee was advised that the Department had been observing the coronial inquest conducted into the death of a patient following a cardiac CT procedure. The patient underwent a CT coronary angiography (CTCA) scan with intravenous (IV) contrast administration. Following the administration of contrast the patient had a severe anaphylactic reaction and was transferred by ambulance to hospital. The patient's condition deteriorated further and she died several days later.

The procedure was performed as part of an employee cardiac health screening assessment program. The referring medical practitioner was contracted to provide a

service as part of the cardiac health assessment. Prior to the CTCA scan being performed, the practitioner had not seen or otherwise assessed the patient's health record.

The Department was investigating the compliance of the management licence holder with the requirements pertaining to justification and approval of procedures as specified in the ARPANSA Code of Practice for Radiation Protection in the Medical Applications of Ionizing Radiation (2008). Compliance with appropriate clauses of this code of practice is currently a condition of licence for medical practices.

The Committee advised the Department that guidelines of the Society of Cardiovascular Computed Tomography regarding the use of CTCA state that it may be appropriate to perform CTCA in selected symptomatic low to intermediate risk individuals, especially in those who have a higher likelihood of having a large amount of non-calcified plaque, but that it is rarely appropriate to perform CTCA in low risk asymptomatic subjects. Nevertheless, the Committee considered that CTCA screening has great negative predictive value

The Department may need to determine whether there should be some restriction placed on the type of health care professional permitted to refer patients for computed tomography coronary angiograms.

The Department advised the Committee that it would review the transcript of the coroner's inquest and await the findings of the coroner before deciding what action to take.

2.13 Mineral sands activities in Victoria

The Department advised the Committee on the mineral sand mining activities in the west of Victoria and Gippsland. The Department had sought clarification regarding the intention by the Commonwealth to apply "nuclear action" requirements contained within the Environment Protection Biodiversity and Conservation (EPBC) Act to mineral sand projects with a view to ensuring that the Victorian Radiation Act controls imposed on such projects retain primacy. The Committee advised that EPBC Act was under review. ARPANSA provided comment to the EPBC Act review regarding the duplicative processes in dealing with NORM with other jurisdictions and the need to reflect best practice radiation protection.

2.14 Artificial intelligence in radiation oncology

The Committee also noted that an advanced artificial intelligence (AI) based diagnostic platform was being developed internationally to aid in the creation of AI-developed models for organ segmentation for the modelling of treatment volumes - a labour-intensive step in radiation oncology that can be a bottleneck in the cancer treatment clinical workflow.

The Committee advised that the use of AI in radiation oncology could pose some issues in relation to the licensing of users, e.g. who would be held to account if something went wrong and how the AI would be "supervised". The Department acknowledged that it may have to address those issues in the future.

2.15 Multi-energy CT scanners

The Committee noted the paper *Principles and applications of multienergy CT: Report of AAPM Task Group 291, Med. Phys. 47 (7), July 2020*. This paper describes multienergy CT, where measurements are made at two or more X-ray energies. This allows the differentiation of at least two materials, making possible new clinically relevant CT applications. The authors indicate that dual and multienergy CT is moving firmly into the mainstream of clinical CT imaging.

2.16 Radiation incident reporting

The Department reminded the Committee of the Integrated Regulatory Review Service (IRRS) Mission Report recommendations regarding incident reporting. ARPANSA acts as a national point of contact for radiation incidents that are reported to it either by its licence holders or from states and territories through national agreements.

The Committee noted that the establishment of a nationally consistent framework for the reporting of incidents is currently hampered by a number of problems that need to be addressed first. These problems include the lack of alignment between the National Directory for Radiation Protection and the Australian Radiation Incident Register (administered by ARPANSA), the need for a review of incident reporting categories and dose thresholds, whether mandatory or voluntary incident reporting should be adopted and inconsistency of reporting requirements across Australia.

Potential solutions to the above problems would need to be addressed at a national level.

2.17 Radiation Act Annual Report for the financial year ending 30 June 2020

Section 134 of the Radiation Act requires that the Secretary publish a report for each financial year that:

- describes the activities of the Secretary under the Radiation Act 2005
- includes a summary of all authorities issued, renewed, suspended, cancelled, varied, transferred or surrendered during that year
- includes all radiation incidents investigated in that year
- includes a summary of all prosecutions for offences against the Radiation Act or the Radiation Regulations commenced in that year.

The Committee was provided with a copy of the Radiation Act Annual Report for the financial year 2019 -2020 for information.

The Committee advised the Department that inclusion of a table showing the numbers of incidents in the various categories would aid in the identification of any trends. The Department stated that it would include such a table in future Radiation Act annual reports.

2.18 DRAFT Australian Radiation Incident Register (ARIR) Annual Summary Report 2019

The draft Annual Summary Report of the ARIR was provided to the Committee for information.

The Committee noted that the report highlighted incidents involving malfunction of imaging equipment. The Department advised the Committee that there were a larger number of these types of incidents in the financial year 2020-2021 than in previous years.

The Department provided the Committee with details of the incidents involving malfunction of equipment reported to the Department.

The Committee advised that suppliers are automatically sent reports when CT scanners experience a failure. The Department stated that it would look at requesting these reports as a condition of licence.

The Committee advised that other factors may also merit consideration, including matters pertaining to manufacturing history, service contracts or the type of radiology practice.

The Committee noted the importance of the incident register for tracking trends and further noted that the number of these incidents to date is very small in comparison with the procedures carried out and not of undue concern.

2.19 The Department's new radiation licensing database

The Committee was updated on the Department's new radiation licensing database, RALPH. The new database was launched in October 2019. Currently it is only used for use licences, approved testers and approved assessors but is being developed to include management licences.

The system verifies the details of licence holders, approved testers and approve assessors when they are registered. They are then be able to:

- Download a copy of their licence.
- Apply for variations to an existing licence or approval.
- Make credit card payments.
- Update their contact details.

The development of RALPH to include management licences has been delayed as a result of the COVID-19 pandemic.

2.20 Safety reflections

The Committee meetings have a standing agenda item entitled Safety Reflections. This agenda item provides an opportunity for the members of the Committee to contribute reflections on broader safety considerations in order to place radiation safety considerations into a wider perspective on matters relating to safety.

3. Non-ionising radiation

3.1 Regulation of lasers and intense pulse light (IPL) sources

The project was put on hold as a result of the diversion of departmental staff to duties in relation to the Department's response to the COVID-19 pandemic.

3.2 Scientific Papers

The followed four scientific papers were considered by the Committee during the year.

A Wood and K Karipidis. Radiofrequency Fields and Calcium Movements Into and Out of Cells. Radiat. Res. 195, 000–000 (2020).

This study found that, overall, experimental studies have not validated that radiofrequency radiation affects calcium ion transport into or out of cells.

Karipidis K, Mate R, Urban D, Tinker R and Wood A. 5G mobile networks and health—a state-of-the-science review of the research into low-level RF fields above 6 GHz. Journal of Exposure Science & Environmental Epidemiology, https://doi.org/10.1038/s41370-021-00297-6.

This review assessed 107 experimental studies that investigated various biological effects including genotoxicity, cell proliferation, gene expression, cell signalling, and membrane function and 31 epidemiological studies that investigated exposure to radar, which uses radio waves similar to 5G. The authors concluded that this review provided no substantiated evidence that low-level radio waves, like those used by the 5G network, are hazardous to human health.

Wood A, Mate R and Karipidis K. Meta-analysis of in vitro and in vivo studies of the biological effects of low-level millimetre waves. Journal of Exposure Science & Environmental Epidemiology, https://doi.org/10.1038/s41370-021-00307-7.

This paper is a meta-analysis of the experimental studies and presented little evidence of an association between millimetre waves and adverse health effects.

Ken Karipidis, Rohan Mate, Masoumeh Sanagou, Chris Brzozek, David Urban and Mark Elwood. Mobile phone use and trends in the incidence of cancers of the parotic and other salivary glands. Cancer Epidemiology, https://doi.org/10.1016/j.canep.2021.101961.

The authors state that results of this study do not indicate that mobile phone use increased the incidence of parotid or other salivary gland cancers. They state that an increase in parotid gland cancer observed in females since 2006 may be attributable to other possible risk factors specific to this gender.

3.3 ARPANSA Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz

The Committee was advised that the ARPANSA Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz was published in February 2021.

The new standard was developed after a thorough review of all relevant scientific literature and an extensive public consultation process. The standard provides protection against all scientifically substantiated adverse health effects due to electromagnetic field exposure in the 100 kHz to 300 GHz range.

The new standard provides better and more detailed exposure guidance in particular for the higher frequency range, above 6 GHz, which is of importance to 5G and future technologies using these higher frequencies.

The standard can be accessed at:
https://www.arpansa.gov.au/sites/default/files/rps_s-1.pdf

3.4 The Committee's view on possible health effects of radiofrequency radiation

The publication of the new ARPANSA standard and the scientific studies considered by the Committee during the year has not altered the Committee's position that there is no substantive evidence linking exposure to radiofrequency radiation at levels below the limits of the standard to an increased risk of cancer or other adverse health outcomes in humans. In light of ongoing public interest and concerns over mobile phones, base stations, smart meters and 5G technology, the Committee will continue to maintain a watching brief.

3.5 The Committee's view on possible health effects of power frequency electromagnetic fields.

The Committee's position, based on its scrutiny of the literature, is that epidemiological evidence is lacking for a consistent and reproducible association between exposure to power frequency electromagnetic fields and adverse health outcomes in humans. Research in this area is complex in regard to exposure measurement and disease type studied and, as a result, the research outcomes can vary from study to study. The Committee will continue to maintain a watching brief.

Appendix 1 - Terms of reference of the Radiation Advisory Committee

Role

The Radiation Advisory Committee is established under the Radiation Act 2005 (the Act). The committee's function is to consider, advise and report to the Minister for Health or the Secretary of the department on any matters relating to the administration of the Act and Radiation Regulations 2017, including:

a) the promotion of radiation safety procedures and practices;

b) recommending the criteria for the licensing of persons to use radiation sources and the qualifications, training or experience required by those persons to do so;

c) recommending which radiation sources should be prescribed as prescribed radiation sources;

d) the radiation safety standards to be specified under section 29 of the Act;

e) the nature, extent and frequency of tests to be conducted on prescribed radiation sources and the specification of radiation safety tests under section 30 of the Act;

f) codes of practice, standards or guidelines with respect to particular radiation sources, radiation practices or uses.

Responsibilities and functions

The Committee may provide advice to the Department in relation to:

- the administration and amendments of the Radiation Act 2005 and the Radiation Regulations 2017;
- the licensing of persons and companies to use radiation sources and conduct radiation practices;
- the inspection and testing of radiation sources;
- new radiation sources and technologies;
- the development, implementation and review of state and national codes, standards and guidelines;
- the transportation, storage and disposal of radioactive materials;
- the security of radioactive sources;
- radiation incidents;
- non-ionising radiation matters including:
    - health effects of radiofrequency electromagnetic fields (including mobile communications);
    - health effects of extremely low frequency (ELF) electromagnetic fields (including power frequency fields); and
    - lasers and intense pulsed light (IPL) sources.
- the promotion and improvement of radiation safety in Victoria;
- developments that impact on best practice for radiation safety; and
- any other matter put to it by the Minister.

In addition to this the Committee may deliberate on other matters that are relevant to its objectives. This includes identifying opportunities, issues of concern including resource constraints and research needs.

Membership

Requirements

Under the Radiation Act 2005, the Committee will consist of at least 5 members appointed by the Minister for Health.

It is government policy that the membership of committees accurately reflect the composition of the Victorian community, including gender balance.

A member is appointed for the term, not exceeding 3 years, specified in the instrument of appointment, but is eligible for re-appointment.

Expressions of interest are sought towards the end of the outgoing Committee's three-year term from persons wishing to apply for membership of the Committee for the next three years.

Chairperson

The Chairperson is elected by the consensus of the Committee. A Chairperson is appointed for the term, not exceeding 3 years, specified in the instrument of appointment, but is eligible for re-appointment.

Expressions of interest are sought towards the end of the outgoing Committee's three-year term from members wishing to apply for Chairperson of the Committee for the next three years.

Conduct

Members will act in accordance with legal requirements, ethical standards, relevant policies including conflict of interest, codes of conduct and the Department of Health' values.

Induction of new members

The Chairperson, supported by the Secretariat, will provide newly appointed members with all necessary and relevant information regarding the Committee's responsibilities and any other background information to enable them to understand the scope of operations and duties and responsibilities. This includes the Terms of Reference as well as the minutes of the past three meetings.

Observers

The Chairperson or the Minister may invite any person who is not appointed as a member to attend meetings to act as an observer and who may participate in discussions. Such a person may include a technical subject expert.

Observers are to receive all relevant information provided to members of the Committee except that designated confidential.

Removal and resignation from office

A member may resign from office by notice in writing signed by that person and delivered to the Minister and the Department.

The Minister and the Department may remove a member from office at any time for any reason.

Acting appointments

The Minister may appoint a person to act in the place of a member who is absent from duty or who, for any other reason, is unable to perform the duties of the office.

An acting member is appointed for the term, and on such other terms and conditions, as are specified in the instrument of appointment and may perform all the duties, of the member for whom he or she is acting.

The Minister may at any time terminate an acting appointment.

Conflict of interest

Committee members have a responsibility to avoid conflicts of interest and to notify other members when a conflict arises.

A conflict of interest occurs when a person's interests conflict with their responsibility to act in the best interests of the Committee.

A conflict of interest may be actual, potential, or perceived, and may be financial or non-financial. A conflict in itself does not imply wrongdoing but managing conflicts of interest is essential to maintain the integrity of the Committee. Management of a conflict of interest will be on a case by case basis but may at times require a member to recuse themselves from a discussion and/or decision.

The onus for declaration of any conflict of interest rests with each member.

If members are in doubt as to whether they have a conflict of interest, they should speak with the Chairperson prior to any meetings, discussions or decisions on the relevant issue.

Meeting procedure

Frequency of meetings

Meetings will be scheduled for the first Thursday of every second month, starting February. If required, additional meetings will be scheduled as determined by the Department.

Attendance and quorum requirements

A minimum of five members constitutes a quorum for meetings of the Committee. Members are expected to commit the required time and attend a minimum attendance of 75% of meetings. Members may participate in the meeting by telephone or video links.

Committee recommendations and decision making

A decision as to a recommendation to be made by the Committee is determined by a majority of votes of members who are present and voting on the question. In the event of a deadlock, the Chairperson shall have a casting vote. Prior to making a decision, the Committee will give due consideration to all the relevant information, issues, options and implications.

Members may be required to provide advice to the Department out-of-session.

Sub-committees

The Committee may, with the consent of the Minister, request a person to assist the Committee with the Committee's work or a sub-committee of the Committee with the sub-committee's work.

The Department selects and appoints members to the sub-committees.

The Chairperson of the sub-committee will provide regular reports to the Committee and refer matters of relevant importance to the Committee.

Secretariat support

Secretariat support to the Committee and any sub-committees is provided by the Department. The Secretariat is nominated and overseen by the Manager, Environmental Health Regulation and Compliance Unit within the Department of Health Victoria.

Agenda, papers and minutes

Agendas and meeting papers will be prepared by the secretariat of the Committee in consultation with the Chairperson and distributed no later than one week prior to the meeting.

Agendas and papers may be circulated to members of the Committee by hard copy or electronic methods.

The Secretariat will minute all meetings and will distributed to the Committee within three weeks following the meeting. Minutes will be ratified at the next Committee meeting.

Confidentiality

Members of the Committee must not discuss any deliberations or circulate any meeting agendas, minutes, papers or other materials publicly, or in any other forum, without the consent from the Minister for Health.

Communication with the media

Committee members must not communicate with the media regarding discussions held in committee meetings. Media enquiries regarding such matters must be directed to the Department.

Remuneration

A Committee member is entitled to be paid the fees and allowances from time to time determined by the Governor in Council. Under the *Appointment and Remuneration Guidelines for Victorian Government Boards, Statutory Bodies and Advisory Committees* (2018), the Committee is classified as a group C organisation, band 1 and Committee members are entitled to receive remuneration consistent with the guidelines. This also applies to any sub-committees of the Committee

A person who assists the Committee or a subcommittee of the Committee is entitled to be paid the fees and allowances from time to time determined by the Governor in Council.

Evaluation

Annual Report of the Committee

The Committee must give the Minister a report on its activities during a financial year no later than1 November following that year.

Committee performance

The Committee will conduct an annual collective and individual evaluation of its performance (performance metrics to be determined). The evaluation will be presented to the Committee and to the Department.

The purpose of performance assessment is to enable performance areas that require improvement to be identified and addressed.

Review process for Terms of Reference

The Terms of Reference will be reviewed by the Committee at least every three years or as required jointly lead by the Committee and the Department. Changes to the Terms of Reference will be put to the Committee after considering any recommendations that come forward after a review.