

**Radiation Safety Advisory
Council:
Annual Report 2024**

Citation: RSAC. 2025. *Radiation Safety Advisory Council: Annual Report 2024*.
Wellington: Radiation Safety Advisory Council (RSAC).

Published in May 2025
by the Radiation Safety Advisory Council
PO Box 5013, Wellington 6145, New Zealand

HP: 9122

This document is available on the Radiation Safety Advisory Council website:
health.govt.nz/regulation-legislation/radiation/radiation-safety-advisory-council-rsac

Foreword

This is the 2024 annual report of the Radiation Safety Advisory Council (the Council), produced in accordance with section 85 of the Radiation Safety Act 2016 (the Act).

Section 85(1) of the Act requires the Council to provide the Minister of Health (the Minister) with a report at least once each year, setting out advice provided to the Director for Radiation Safety (the Director), the Director-General of Health and the Minister over that period.

This annual report covers the Council's activities for the period 1 January 2024 to 31 December 2024.

The Council was established by section 80 of the Act and has the functions set out in section 81 of the Act.

For the reporting period, no formal advice was provided to the Director under section 81(b)(ii) of the Act on adopting recommendations, policies, codes of practice or standards relating to radiation safety.

No recommendations and no advice were provided under sections 81(a), (b)(i), (b)(iii) or (c) of the Act.

The Council's activities for the reporting period are set out in this report.

The Council's next annual report is due by 30 May 2026.



Brian Lunt
Chairperson
Radiation Safety Advisory Council

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Background

The Radiation Safety Act 2016

The Radiation Safety Act 2016 (the Act) came into force in March 2017 to establish a framework to protect the health and safety of people and the environment from the harmful effects of ionising radiation while allowing for the safe and beneficial use of ionising radiation. The Act also enables Aotearoa New Zealand to meet its international obligations relating to radiation protection, radiation safety and security, and nuclear non-proliferation.

Administration of the Act

The Minister of Health (the Minister) is the Minister responsible for the Act, and the Ministry of Health (the Ministry) administers the Act. The Ministry's Office of Radiation Safety (ORS) conducts the day-to-day administration of the Act, and ORS is managed by the Director for Radiation Safety (the Director). Most of the duties and functions of the Act rest with the Director. The Director-General of Health has some duties under the Act in relation to appointing and employing the Director. The Minister has powers and duties under the Act to:

- appoint Radiation Safety Advisory Council (Council) members
- request advice from the Council
- grant authorisations with respect to nuclear material (currently delegated to the Director)
- recommend fees and some exemptions made in regulations
- recommend the setting of acceptable levels of radioactivity and dose limits specified in the Act.

Besides the Act, other radiation safety requirements are specified in the Radiation Safety Regulations 2016 (the Regulations) and codes of practice (the Codes) issued under the Act. The Codes specify the technical requirements that individuals and organisations must comply with when they deal with radiation sources.

ORS provides secretariat support to the Council.

The Radiation Safety Advisory Council

The Act requires the Council to have four members to constitute a quorum. The Council must consist of at least:

- two members who have appropriate knowledge, expertise or interest in radiation and nuclear safety and
- two members who have appropriate knowledge and experience in the use of radiation and radiation sources and
- one lay member.

The Council is funded to comprise up to seven members. The Act requires the Council to appoint a member as the chairperson and provides discretion for the Council to appoint another member as the deputy chairperson. Members are appointed within the terms and conditions specified by Cabinet for this type of committee.

Council members for the 2024 annual report year were as follows.

- Brian Lunt (chairperson), medical physicist in the public and private Aotearoa New Zealand health care sectors.
- Lois Hutchinson (deputy chairperson), former chief executive of the Transport Accident Investigation Commission.
- Dr Casey Davies, Compliance Manager for Faculty of Science | Te Kaupeka Pūtaiao at the University of Canterbury | Te Whare Wānanga o Waitaha.
- Dr Iain Ward, radiation oncologist at Canterbury Regional Cancer and Haematology Service.
- Lynne Greig, former chief medical physicist and current principal medical physicist at the Blood and Cancer Centre, Wellington Regional Hospital.
- Dr Pooja Yadav, radiation safety advisor at the University of Auckland | Waipapa Taumata Rau.
- Sally McMillan, practising medical imaging technologist in Central Otago.

Functions

The Council is part of the established radiation safety framework, contributing to the protection of people and the environment from the harmful effects of ionising radiation. The Council achieves this by carrying out the functions set out in section 81 of the Act. It provides independent advice to the Director, the Minister or the Director-General of Health on matters and standards relating to radiation safety.

The Council may also make recommendations to:

- the Minister, on exercising the Minister's powers under the Act,
- the Director, on adopting recommendations, policies, codes, or standards relating to radiation safety,
- the Director, in respect of authorisations the Director has referred to the Council.

In carrying out its functions, the Council may appoint advisory or technical committees under section 82 of the Act, regulate its procedure in any manner it thinks fit under section 83 of the Act and consult any person or body it considers appropriate under section 84 of the Act.

Council Activities in 2024

The Council held four meetings over the 2024 reporting period with the support of the secretariat. Matters considered by the Council were progression of the two outstanding recommendations made to the Director of Radiation Safety in 2022, general matters on radiation safety, and codes of practice for naturally occurring radioactive material (NORM) in industrial by-products as described below.

- General matters:
 - Considering emerging radiation safety issues:
 - regulatory oversight of cyclotrons and related technologies
 - authorisation and the safe provision of theranostic services under the Act.
 - Disposal of Radiation Sources.
 - Reporting of incidents.
- Considering progression of previous recommendations and letters to Director:
 - Personal dosimetry monitoring requirements.
 - Survey meters – equipment to detect and measure ionising radiation.
 - Standardizing the form and language used in technical codes by adopting the ISO/IEC Directives, Part 2. Principles and rules for the structure and drafting of ISO and IEC documents, section 7: Verbal forms for expressions of provisions.
 - Considering whether Aotearoa New Zealand’s radiation safety legislation adequately addresses the International Atomic Energy Agency’s (IAEA’s) standards for Naturally Occurring Radioactive Material (NORM), with reference to bulk material.

The matters raised in this reporting period remain under consideration and form part of the 2025 work programme.

Advice and Recommendations

The Council received no requests for advice from the Director or the Minister on general matters relating to or affecting radiation safety or standards relating to radiation safety under s81(a) of the Act.

The Council provided no advice or recommendations to the Minister on the exercise of the Minister’s powers under s81(b)(i) of the Act.

Follow-up on Recommendations

The Council made no new recommendations in 2024. However, the Council considered the Director's responses to two letters of recommendations made under s8(b)(ii) of the Act in 2022 (as described below).

1. Letter of recommendation (LOR#3-22/1) 'Equipment for the detection and measurement of ionising radiation (survey meters)'.
 - Aotearoa New Zealand's regulatory environment requires the use of equipment for detecting and measuring ionising radiation. However, the Council has expressed a concern on variations in user knowledge about the correct selection and use of radiation measuring equipment for monitoring.
 - In March 2024 the Director published an information sheet Guidance for Radiation Monitoring and Instrument Selection on the Ministry website. The Council considers that this new publication addresses the Council's concerns raised on the matter. Topic 3-22 has now been closed.
2. Letter of recommendation (LOR#5-22/1) 'Adoption of the ISO/IEC Directives, Part 2 Principles and rules for the structure and drafting of ISO and IEC documents – Section 7 Verbal forms for expressions of provisions in the writing of Codes'.
 - The Council has identified that the Codes of practices issued by the Director are written with some variations in style and that there would be benefit in using internationally accepted standardised terminology when defining technical standards. The Council understands that a standardised terminology has advantages in the application and interpretation of Codes.
 - The Council has been advised that a statutory review of the Codes is in progress with the Director expecting the review of all codes to be completed by 30 June 2025. The Council acknowledged that the adoption of IEC directives has been completed. Topic 5-22 has now been closed.

Requests for Information from the Director

In 2022, the Council requested further information from the Director on the following two matters under consideration.

1. Letter to the Director (LD#1-22/1) 'Inclusion of IAEA recommendations for bringing bulk materials under the Radiation Safety Act'. This request seeks advice on the appropriate mechanism to ensure regulatory oversight of bulk materials such as NORM in mining in Aotearoa New Zealand.
 - The Council received a letter dated 25 July 2024 from the Director setting out his views on the options that are available to incorporate IAEA Basic Safety Standards for NORM into the New Zealand regulatory infrastructure.
 - The Director expressed a view that any amendments to the Act would need to be applicable to NORM in all reasonably foreseeable scenarios (not just mining and extraction activities) to be amenable to IAEA Basic Safety Standards for the regulation of NORM.
 - The Council agreed to progress this matter with a formal recommendation to the Director and the Minister of Health regarding the Council's position on regulation of NORM in Aotearoa New Zealand.

2. Letter to the Director (LD#4-22/1) 'Clarification on the requirement to obtain previous dose records.' This request seeks information about the intent of existing requirements to do with record keeping in Codes issued under section 86 of the Act.
- The Council received a letter of reply dated 16 June 2023 from the Director in response to this request for information.
 - The Director considers that if the holder of a source licence has taken all reasonable steps to obtain the records, then the requirement to obtain an employee's previous dose records has been met.
 - In his letter the Director also acknowledged the inconsistencies noted by the Council in wording between the Codes for radiation monitoring requirements. The Director states that this will be addressed by revising the Codes during the normal statutory review process.

Work programme for 2025

The Council considered a wide range of potential topics for its work and developed a work programme for the 2025 reporting period. Areas under active consideration for the next reporting period are described below.

General matters

- Statutory registration for medical physicists
- Consultation on guidance material issued by the Director
- National occupational dose register
- Standards for Naturally Occurring Radioactive Material (NORM)
- Disposal of Radiation Sources
- Reporting of incidents

Next annual report

The Council's next annual report will be for the period 1 January 2025 to 31 December 2025 and is due by 30 May 2026.

Appendix 1: Membership

Pursuant to section 80 of the Radiation Safety Act 2016, former Minister of Health Hon Dr Ayesha Verrall re-appointed Brian Lunt as a non-layperson member and Lois Hutchinson as a layperson member to the Council for terms of office that commenced on 11 September 2023.

In accordance with section 80 of the Radiation Safety Act 2016, the Minister appointed five new non-layperson members (Dr Casey Davies, Dr Iain Ward, Lynne Greig, Dr Pooja Yadav and Sally McMillian) for three-year terms of office, which commenced on 11 September 2023.

Biographical profiles for the current members of the Radiation Safety Advisory Council are provided immediately below.

A full list of Council member attendance is provided in Appendix 2.

Brian Lunt (Chairperson)

Brian Lunt has worked as a medical physicist involved in the safe and effective application of radiation in diagnostic radiology, nuclear medicine, cardiology, dentistry, and veterinary medicine in the public and private health care sectors in Aotearoa New Zealand.

Lois Hutchinson (Deputy chairperson)

Lois Hutchinson is the former chief executive of the Transport Accident Investigation Commission. She has 30 years' experience in senior executive roles across the state sector, working in health delivery, regulatory services, and transport. She developed expertise in delivering both domestic and international mandated services that operate to avoid or reduce harm to people and organisational operating environments. Lois holds master's degrees in public policy (Victoria University of Wellington) and managing organisational performance (Cranfield University, United Kingdom). She was made a Fellow of the Australian Institute of Health and Safety (Hon.) in 2019 and was appointed to the WorkSafe New Zealand board in 2022.

Dr Casey Davies

Dr Casey Davies has worked in the tertiary research sector within Aotearoa New Zealand for the past 10 years as a radiation safety officer and hazardous substances specialist. Casey is currently the Compliance Manager for Faculty of Science | Te Kaupeka Pūtaiao at the University of Canterbury | Te Whare Wānanga o Waitaha and is working with several governing bodies to develop improvements in laboratory health, safety, and compliance. He has a PhD in biophysical chemistry and a postgraduate diploma in health sciences and is a professional member of the New Zealand Institute of Safety Management and the Health and Safety Association of New Zealand.

Dr Iain Ward

Dr Iain Ward is a radiation oncologist who has practised in Christchurch for 20 years in both the public and private sectors. He has an interest in promoting quality in radiation therapy and in systems that enable clinicians to learn from radiation incidents and near-miss events. He is a Fellow of both The Royal Australian and New Zealand College of Radiologists and The Royal Australasian College of Physicians.

Lynne Greig

Lynne Greig has over 20 years' experience as a chief medical physicist and radiation safety officer in Aotearoa New Zealand and Australian hospitals. She is the current principal medical physicist at the Blood and Cancer Centre, Wellington Regional Hospital, an examiner for the Australasian College of Physical Scientists and Engineers in Medicine and has been a member of state and national radiation oncology advisory groups. Her qualifications include bachelor's and master's degrees, and she is a registered radiation oncology medical physicist.

Dr Pooja Yadav

Dr Pooja Yadav is an experienced radiation chemist with a demonstrated history of working in the tertiary education sector. She has over 17 years of experience in radiation research at various international universities. She did her PhD in radiation chemistry, and, through fellowship work, she gained knowledge of relevant International Atomic Energy Agency safety standards and fundamentals. Her primary area of expertise is pulse radiolysis using linear accelerators, electron spin resonance and Raman spectrometry. Pooja is currently working as radiation safety advisor at the University of Auckland and holds an honorary academic position with the university's School of Chemical Sciences.

Sally McMillan

Sally McMillan is a practising medical imaging technologist in Central Otago and has 40 years of clinical experience. She has significant experience at the managerial level in radiation safety and was the radiation safety officer at Te Whatu Ora – Waikato for several years, also serving as a member of their Radiation Safety Committee (expert advisory group). Sally is fluent with the ORS Code of Practice for Diagnostic and Interventional Radiology, ORS C1.

Appendix 2: Council Member Attendance 2024

Member	14 th Meeting (21 February)	15 th Meeting (8 May)	16 th Meeting (7 August)	17 th Meeting (27 November)
Brian Lunt	✓	✓	✓	✓
Lois Hutchinson	✓	✓	✓	✓
Casey Davies	✓	✓	Apol	✓
Iain Ward	✓	✓	✓	✓
Lynne Greig	✓	✓	Apol	✓
Pooja Yadav	✓	✓	✓	✓
Sally McMillan	✓	✓	✓	✓

✓ Present
 Apol Apologies
 × Not a Council member at the time of meeting

Appendix 3: Table of Topics

Reference ¹	Topic	Action	Stage ²	Closing action
1-22	NORM in mining	Letter to Director (LD#1-22/1)	The Council received a response from the Director	
2-22	I-131 treatment of thyrotoxic cats	Recommendation – LOR#2-22/1	Closed	Director has published guidance
3-22	Survey meters: Equipment for detecting and measuring ionising radiation	Recommendation – LOR#3-22/1	Director to publish guidance	Director has published guidance
4-22	Personal dosimetry	Request for information – Letter to Director (LD#4-22/1)	The Council received a response from the Director	
5-22	Adopting ISO/IEC directives	Recommendation – LOR#5-22/1	The Council received a response from the Director	

¹ File reference for year item activated

² As at end of reporting period