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See also www.epa.nsw.gov.au

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Executive summary

Our vision
We envision a safe, consistent radiation protection system that puts communities first and protects the environment.

Achieving this is our most basic commitment, and our licensing, community engagement and compliance activities all revolve around it.

We aim to support the many beneficial uses of radiation through strong regulation that ensures:

- users are competent and appropriately supervised, where necessary
- sources of radiation have proper oversight.

Our strategy to achieve this will align with international principles of radiation protection (justification of practice, optimisation of protection, and dose and risk limitation), expressed in the Objects of our principle legislation the Radiation Control Act 1990.

Our priorities
Our roadmap for the next six years includes four key priorities that will help us achieve our vision:

1. Harmonise the NSW radiation framework with international standards, in partnership with other Australian agencies
2. Support organisations to adopt and maintain quality systems
3. Improve stakeholder relationships and the customer experience
4. Develop and enact an evidence-based, risk-aware compliance program.

Our case for action
The EPA successfully oversees thousands of radiation licences in NSW. But we still face challenges:

- Approaches are not consistent between jurisdictions – consistent approaches simplify, improve oversight and ensure that all people enjoy the same level of protection
- The burden of medical radiation exposure on the community is increasing
- Radiation accidents are rare but can have serious, even fatal consequences
- Gaps in our life cycle management allow some regulated material to fall out of regulatory oversight.

Acting now will make radiation use safer for regulated communities and the general public.

Our approach
The NSW Government’s approach to radiation protection aligns with international standards. Under the Radiation Control Act 1990 and Radiation Control Regulation 2013, we make radiation use safer by:

- licensing and accrediting users to ensure they are competent
- learning from accidents to promote radiation safety within a culture of continuous improvement
- working towards our radiation goals with a range of state and national partners
- addressing threats and opportunities as they arise with integrated risk management.

Our action plan
Our action plan for 2020–2026 will help us achieve specific outcomes for each of our priorities in our roadmap. We will monitor, evaluate and report on this each year.
We envision a safe, consistent radiation protection system that puts communities first and protects the environment. We support beneficial radiation use while following national and international principles.
Our vision

We protect the community and environment

Our most basic commitment is to protect communities of people and the environment as much as possible from exposure to harmful radiation. We protect the natural and built environment and living organisms, including animals.

We safeguard sources of radiation to minimise the chance of incidents.

Our vision includes:
  • managing our licensing scheme to keep people safe
  • responding to the community and emerging issues
  • doing targeted compliance.

Radiation practices benefit the community

Radiation is used predominantly in two sectors: medical and industrial. It is also used in research, agriculture and mining. We balance social and economic factors when supporting these beneficial uses.

Most radiation exposure occurs in healthcare, where the community expects safe radiation use for diagnosing and treating illness. Diagnostic and therapeutic medicine are the most significant sources of exposure. Radiation use in dentistry is more widespread, but the doses are usually lower.

Industry also uses radiation for essential tasks, such as:
  • measuring in manufacturing
  • civil works and agriculture
  • non-destructive testing (radiography) of built structures and objects
  • mineral processing and exploration

We base our radiation protection system on international standards

We base our radiation protection system on the standards published by international agencies and the approved Australian codes and guides and policies based on these standards.

We aim to follow the recommendations of the International Atomic Energy Agency’s (IAEA) International Radiation Review Service Mission to Australia, a peer review against international standards. The mission’s report was published in February 2019 and highlighted the need for effective coordination and harmonised implementation of standards to ensure that radiation protection is consistent.

We will also look to the 2017 World Health Organisation (WHO) Joint External Evaluation. This highlighted the need to better coordinate across jurisdictions to prevent a national radiological emergency, and to prepare for and respond if one occurs.

Industrial uses of radiation

Radiation is a non-destructive way to test:
  • soil moisture and density
  • internal structures, such as bottle filling and hidden steel fractures
  • the composition and thickness of matter, from minerals to paper to eggshells.

Radiation is also used to sterilise raw products like wool, timber and animal feed, and medical supplies like dressings and artificial heart valves.
Section 2: Our priorities

These actionable initiatives will help us achieve our vision of a credible and effective people-focused radiation protection system.
We will improve harmony in the national approach to radiation protection through existing frameworks by:

- working closely with other agencies, jurisdictions and industry contacts to coordinate approaches
- proactively implementing the National Directory for Radiation Protection
- following the recommendations of the IAEA International Radiation Review Service Mission and the 2017 WHO Joint External Evaluation.

We will take part in forums and Radiation Health Committee (RHC) working groups to build:

- a national background check scheme for people who deal with high-risk radiation and its sources
- a national register of sealed radioactive sources.

Regulators have agreed on national uniformity priorities for 2019. These include developing:

- standard competencies for user licences to better implement the Mutual Recognition Act 1992
- standard compliance testing standards and criteria for accredited assessors to use.

A statutory review of the NSW radiation legislation is due to commence in late 2020. This is an excellent opportunity to assess whether the licensing scheme can deliver outcomes that realise our vision.

In 2020, we will do a strategic review of our own radiation regulatory framework to assess if it is being used well, is fit for purpose, and reflects international standards and practice. This will inform statutory reviews of radiation legislation that the law requires over the next three years.

We will also identify and address emerging challenges; for example, managing non-ionising radiation sources such as cosmetic lasers and intense pulsed light (IPL) devices.

**Outcomes**

A more harmonised national approach means consistent standards for equipment, user competencies and other system components. It gives licensees certainty in regulation and makes licences portable.

By reviewing our own regulatory framework, we can also make sure we continue to enjoy strong, productive relationships with government, industry and the community.
2. Support organisations to adopt and maintain quality systems

We will encourage all organisations responsible for sources of radiation to adopt and maintain quality management systems, based in a culture of continuous improvement. This puts into practice lessons learned from experience, and includes:

- analysing and reporting on accidents
- recording and learning from near misses.

Organisations must document their quality system in radiation management plans. We will audit this requirement.

To help organisations meet their obligations, we will work with stakeholders to develop a program ensuring all organisations responsible for radiation sources have suitable plans. This aligns with quality management principles, and some national radiation standards describe what these plans should address.

We will work with NSW Health colleagues in the Clinical Excellence Commission (CEC) to leverage existing incident management processes to improve radiation accident reporting and monitor outcomes.

We recognise the importance of the principle of optimisation of protection to ensure that medical radiation exposures are kept as low as reasonably achievable (ALARA principle) and will work with the health sector to manage medical exposure to minimise the burden to the community.

**Outcomes**

Quality management systems formalise the activities and procedures that help users to meet quality standards and continuously improve. For radiation, these include:

- implementing radiation management plans
- reporting and reducing the number of radiation accidents and near misses
- avoiding unnecessary exposure and optimising necessary exposures.

Doing this will drive efficiency and improve customer confidence and safety monitoring.

3. Improve stakeholder relationships and customer experience

We will improve our relationships with stakeholders and the customer experience, in line with our strategic priorities and those of the government.

We will:

- identify our stakeholders in regulated and unregulated communities
- build effective engagement strategies and communication pathways.

This will involve:

- understanding licence holder needs, including how emerging technology will shape policies and practices and challenge the radiation protection framework
- reviewing current licensing processes and cut red tape where possible
- building collaborative relationships

We will map our customer experience to find gaps and areas for improvement. We will then develop approaches and guidance to address these gaps and monitor and evaluate our progress.

**Outcomes**

A collaborative approach will help us develop sound regulatory controls that address new technical and policy challenges.

This will allow us to adapt to technology advances and develop innovative approaches to regulation; to identify the problems we need to solve and then solve them.
Our priorities

4. Develop and enact an evidence-based, risk-aware compliance program

In line with our Compliance Policy (2013), we take a responsive and risk-based approach to our regulatory functions. This helps us make informed decisions so that our compliance and enforcement program will:

- focus on the biggest risks to public health and the environment
- target businesses and people least likely to comply, in line with the Australian/New Zealand Joint Standard on Risk Management (AS/NZS ISO 31000:2009) and internal risk management policies.

We will develop a fresh compliance and regulation strategy, targeting high or unplanned radiation doses and legacy sources at the end of their useful life. Using data from inspections, action reports and incidents, we will:

- identify evidence, knowledge gaps and emerging risks
- develop and enact targeted, coordinated compliance campaigns
- take prompt and appropriate follow-up action in line with our Compliance Policy (2013).

We will also crack down on unlawful UV tanning services. NSW banned commercial UV tanning in 2014 due to the growing body of research that shows a link between tanning units and skin cancers in young adults, including fatal melanoma.

We will aim to:

- resolve solarium complaints quickly – within 100 days
- educate the public on the dangers of UV tanning units
- work with state and national stakeholders to end their use.

Outcomes

Developing an evidence-based, risk-informed regulatory program will help us:

- minimise radiation exposure
- manage the radiation life cycle
- address the use, storage, transport and disposal of regulated material.

This will ensure that the regulated community understands its obligations and uses radiation safely.

We aim to improve user awareness of safe radiation practice. We will benchmark this and report on it each year against our monitoring, evaluation and reporting framework.
Section 3:

Our case for action

Safe radiation practices benefit the community. Australia’s regulations are working well but we can still improve.
We currently oversee thousands of sources of radiation in NSW

Our licensing system lets us monitor and ensure the safe sale, possession, storage and disposal of regulated material. We currently license more than:

- 15,000 radiation users
- 13,000 radiation devices
- 4,000 work locations
- 3,000 radiation management licenses.

80% of all regulated radiation material in NSW is for diagnostic imaging. 75% of user licences are for medical or dental purposes. The 29% increase in diagnostic radiation procedures from 2010-2018 represents a greater increase in dose burden.

Radiation was used in 6.3 million Medicare funded procedures performed in NSW in 2018 (DHS)

>50% of population annual exposure in Australia is from medical sources (reproduced from ARPANSA)
Our case for action

There is growing demand for diagnostic imaging using radiation in Australia (DHS)

Approaches are not consistent between jurisdictions

In Australia, the principles for uniform regulatory frameworks have existed since 2004 in the National Directory for Radiation Protection. Jurisdictions have agreed to adopt its elements and follow its best practice guidance, but states and territories have done this inconsistently.

It is vital that the EPA continue to strategically engage in national processes. We will work with state partners, particularly NSW Health and its agencies, and actively influence national forums and decision-making. We will encourage the proactive application of the Mutual Recognition Act 1992 so that practices licensed in one jurisdiction are more easily portable to others.

A harmonised approach benefits everyone:

- The regulated community enjoys improved safety and potentially lower business costs
- Licensees have more portable qualifications, due to shared user competencies and standards
- Businesses can more easily move their equipment between Australian jurisdictions
- The whole Australian community benefits from having equal levels of protection.

These new programs align with the Premier’s Priority of ‘Improving government services’ and relevant focus areas in our Strategic Plan 2017–2021.
Unnecessary radiation exposure is to be avoided

Radiation exposure is linked to higher rates of cancer. Therefore, NSW radiation legislation has embedded within it the basic radiation protection principles of justification, optimisation and dose limitation.

We can make this simpler for radiation workers by consistently applying the principles and giving clear information on avoiding unnecessary medical exposure. This will improve outcomes for people and the environment.

Maladministration is an error in planning and dose administration due to a lack of quality assurance.

**Case 1:** Hospital B treated Child C for cancer on the right side of her brain over four months. For the first month, the radiation treatment targeted the left side of her brain by mistake. When the error was caught, Child C received ten more treatments to the right side of her brain over the next three months.

**Case 2:** Hospital C gave Mr S radiation therapy for a metastatic squamous cell carcinoma. Mr S was due for 25 treatments, but after receiving 22 over five weeks he showed signs of excessive radiation exposure. It emerged that he had received 67 per cent more radiation than prescribed.

Source: Health Care Complaints Commission

**Case 3:** A patient received radiation treatment to the wrong side of the groin due to an incorrect treatment plan entry. The patient received an estimated radiation dose of 30 Gray. Gray is a unit of measurement describing ionizing radiation absorption.

**Case 4:** A patient treated for Hodgkin’s disease died after receiving 20 radiation doses totalling 36 Gray over four weeks, with no shielding to non-targeted organs.

Source: Radiation Advisory Council

We have found gaps in the life cycle management of sealed radioactive sources

Managing the full life cycle of sealed radioactive sources is an integral part of any radiation protection system. This includes relevant legislative controls, and guidance and enforcement.

The cycle starts in the overseas reactors that make the sealed radioactive sources we use in Australia. The commonwealth manages import controls. State and territory governments oversee sources’ working life and authorise disposal. Transport controls apply nationally, but sources can move between jurisdictions for use or storage. When they reach the end of their life the Commonwealth controls export for final disposal.

While regulation exists across this life cycle, there have been several failures to maintain regulatory oversight of a sealed radioactive source. Often this occurs towards the end of the life cycle, when a source has outlived its useful life and needs to be securely stored or disposed.

Radioactive sources that fall out of regulatory oversight can harm people, contaminate the environment and have large costs for businesses and the community.

Authorities accept that high-activity sources need special regulatory oversight to prevent:

- malicious use in chemical, biological, radiation and nuclear security
- hazardous radiological incidents.

About 10 per cent of the radiation equipment we regulate contains a sealed radioactive source.
Case study: Life cycle management
If radioactive sources fall out of regulatory oversight, they can cause harm, contamination and large cost.

Case 1: A scrap metal yard detected a radiation source at its weigh station. Our investigation found that a textile company had negligently disposed of the source during a site demolition. We learned that this source had been imported without permit, was never registered with us, and did not have safety compliance certification. The company disposed of it without our consent.

We prosecuted the company, which was ordered to pay for the source’s disposal in an overseas facility.

EPA v Universal Dye Works Pty Ltd (2016)

Case 2: Thai authorities found that an export shipment of scrap metal from Australia contained a radioactive source. We determined that the source was likely from an industrial gauge that had been accidentally disposed of, but we could not identify the original owner. The exporter had to pay a $350,000 recovery bill and we incurred steep investigation costs.

Accident reporting helps build a culture of ongoing improvement
Radiation accidents are rare, given the millions of planned exposures that occur each year in NSW. But accidents unfortunately do occur. Licensees must have a process to learn from accidents and tell us what happened and what they have learned. We rely on licensees to understand the need for continuous improvement.

Reporting is an important regulatory tool to improve management systems. It shows that the licensee has a quality management system, is committed to continuous improvement and supports our vision of robust radiation protection.

We can improve compliance by engaging with stakeholders, educating them and promoting ourselves as a trusted regulator. We can also enhance reporting by working with NSW Health on how its incident reporting systems might inform or improve radiation accident reporting. By promoting this culture of ongoing improvement, we can reduce the risk and impacts of future radiation accidents.

Improving customer experience helps achieve our safety priorities
Along with the government, we prioritise improving our services, communicating effectively and delivering innovative services.

By improving our focus on stakeholder management, including government and non-government organisations, we can better achieve our safety priorities.

Given the large number of licensees who regularly work with us, it is important that:

- we find opportunities to improve their experience
- they can engage with us on policies that impact them and have clear guidance on their obligations.

We can do this by reducing the red tape around licensing and compliance.
Section 4: Our approach

The NSW Government’s approach to radiation protection aligns with national and international standards. Anyone who owns or uses a radiation source must be authorised, and employers must meet their obligations.
Our frameworks prioritise work health and safety

National and state radiation protection frameworks are based on nearly a century of international cooperation.

The philosophy and principles of protection include:

- A universal consensus on the science of radiation dose and its effects through the UN Scientific Committee on the Effects of Atomic Radiation (UNSCEAR)
- The recommendations and guidance of the International Commission on Radiological Protection (ICRP)
- The International Atomic Energy Agency’s (IAEA) extensive regulatory practice standards.

We draw our regulatory framework for radiation protection from two main sources:

- Radiation Control Act 1990
- Radiation Control Regulation 2013.

We administer both of these.

The legislation focuses on competency, equipment safety, and work health and safety obligations for the employers of radiation workers. This includes limiting the doses exposed workers receive and monitoring radiation.

We are also aware of non-ionising radiation risk. We regulate the recognised risk of UV tanning units by prohibiting this as a commercial practice and collaborate with the Cancer Institute (NSW) on the Skin Cancer Prevention Advisory Committee on natural UV exposure. We are committed to examining the risk of light-based therapies (laser and intense pulsed light) and the case for action.

Our regulatory actions in 2017 (based on EPA records)

![Circle chart showing regulatory actions]

We license people who are competent to use radiation

In NSW, we administer a licensing scheme for radiation users to make sure people who use radiation are competent. Sources of radiation must be held under a management licence that we issue to the organisation responsible for the sources – usually the owner.

We set licence conditions that include relevant national standards and police these with targeted compliance campaigns and complaint responses. Our officers have investigative powers as authorised officers under the Protection of the Environment Operations Act 1997.

As part of our oversight, we:

- Investigate and act on complaints, incidents, accident reports and potential offences
- Respond to questions about radiation from stakeholders and the public – in 2018, we answered around 250 written queries
- Formally consult the Radiation Advisory Council on our regulatory activities and programs.
Licensees must report all radiation accidents

Under the legislation, licensees must give the EPA a detailed report of any accident. This must describe:

• what happened and why
• what harm or other effects resulted
• what steps have been taken to prevent a similar accident occurring.

We encourage open disclosure. Accidents are chances to learn from operational mistakes and share those lessons with the regulated community to prevent them reoccurring.

Most accidents are preventable – they are often caused by human- or system errors.

We received 139 accident reports in 2017–2018 compared to 106 reports in 2016–2017. This increase is likely due to better reporting compliance, not more accidents. But the overall low number of reports may still be a result of underreporting.

Radiation accidents >1 mSv reported in NSW (Radiation Advisory Council Annual Reports, 2014–17)

Case study: Intentional unnecessary exposure

We successfully prosecuted a mobile dental practice after untrained and unlicensed employees x-rayed 30,000 NSW school children.

The company was fined $198,000. The court found the breach was ‘systemic and widespread’ for financial gain.

EPA v Australian Aged Dental Care (2018)

Most radiation accidents are caused by human error (Australian Radiation Incident Register Annual Report 2017)
Our approach

We partner with other state and national government agencies

The Australian federal system gives different roles to commonwealth and state governments:

- The commonwealth manages imports and exports, national health policy and telecommunications, as well as nuclear policy and reactor regulation
- States and territories regulate frontline medical practice and industrial uses in their jurisdiction.

Together, the governments aim to achieve nationally uniform outcomes in radiation protection. They are setting uniform standards and competencies through legislation, agreements and joint forums.

We are the main body that administers and enforces NSW radiation legislation. Our state partners include:

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW Radiation Advisory Council (RAC)</td>
<td>A statutory body, advising us and the NSW Minister for Energy and the Environment on:</td>
</tr>
<tr>
<td></td>
<td>• radiation legislation and its administration</td>
</tr>
<tr>
<td></td>
<td>• broad measures to prevent or reduce the dangers of radiation.</td>
</tr>
<tr>
<td></td>
<td>Members include representatives of professional, government and community interests. We will include the RAC in our work by developing a strategic annual work program with it.</td>
</tr>
<tr>
<td>Department of Planning, Industry and Environment (DPIE)</td>
<td>Sharing responsibility for radioactive ores.</td>
</tr>
<tr>
<td>SafeWork NSW</td>
<td>Administering the Work Health and Safety Act 2011 (WHS Act). Work health and safety requirements in the radiation legislation are on top of WHS Act obligations.</td>
</tr>
<tr>
<td>NSW Health</td>
<td>Delivering public health services. Collectively, its local health districts employ the most radiation users and are the largest licensees under our scheme. It also represents the state at a national level on the Standing Committee on Environmental Health (enHealth) and the Australian Health Protection Principals Committee (AHPPC). Other key NSW health partner agencies include the Clinical Excellence Commission (CEC) and the Agency for Clinical Innovation (ACI).</td>
</tr>
</tbody>
</table>
Our approach

We partner with Commonwealth agencies

We work with the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), including through the RHC, to develop:

- national radiation safety codes and standards
- import and export authorisation for licensees
- security and emergency planning.

The EPA is developing a memorandum of understanding (MoU) arrangement to cover strategic and operational engagement.

The Commonwealth Department of Health and enHealth are important strategic and policy partners. We work actively with enHealth representatives through NSW Health to influence discussions on the future governance of our national uniform radiation protection.

We also use ANSTO’s technical expertise and collaborate in emergency planning around the Lucas Heights reactor.

Managing risk is part of our strategy

This roadmap aims to clarify how we commit resources and direct our efforts to reduce harm and reach our goals. To do this, we must focus on the right risks.

Risk can be both a threat and an opportunity. It is a basic factor in delivering this roadmap successfully. Aligning our strategy to our risk management framework is a key part of good governance.

We promote a risk-aware culture to support and improve decision-making. We identify risks through integrated risk analysis, then manage them to protect the community and environment.

To support this, we will do our risk analysis using the principles set out in the International Standards for Risk Management (AS/NZ ISO 31000:2009).

We use a three lines of defence model of risk management, from the Audit Office of New South Wales. This model is described in an NSW Auditor-General’s Report to Parliament released in 2018 on managing risks in the NSW public sector: risk culture and capability.

As part of delivering this strategy, we will review our risks and management measures annually and report to the EPA Board and Executive.

The ‘three lines of defence’ risk model (Audit Office of NSW)

1. First line of defence
   - Management controls
   - Internal control measures

2. Second line of defence
   - Financial control
   - Risk management
   - Quality
   - Inspection
   - Compliance

3. Third line of defence
   - Internal audit

Senior management

Governing body/Board/Audit committee

The NSW radiation protection strategy complements ARPANSA’s vision: ‘a safe radiation environment for the Australian community’. Six strategic objectives guide this:

- identify, assess and communicate health, safety and environmental risks from radiation
- promote radiological and nuclear safety, security, and emergency preparedness
- promote the safe and effective use of ionising radiation in medicine
- ensure risk informed and effective regulation
- enhance engagement with community, industry and government
- enhance organisational innovation, capability and resilience.

ARPANSA Corporate Plan 2019-2023
Section 5: Our action plan

We will work with stakeholders to achieve our vision and set our priorities in action.
Our action plan

This plan links priorities and outcomes
To make our work effective, valuable and meet the needs of the people of NSW, we have created a plan to link our four priorities, the outcomes we want to achieve and the actions we will take to achieve them.

We will update the action plans in the following table annually through to 2026.

Our stakeholders include:
• the Minister, and the EPA Board and Executive
• the Radiation Advisory Council
• the regulated community
• the general public
• professional bodies and consulting experts
• state, territory and commonwealth government agencies and NGOs.

An industrial radiation gauge.
## Radiation action plan 2020–26

### 1. Harmonise the NSW radiation framework with international standards, in partnership with other Australian agencies

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Actions</th>
<th>Strategic Review</th>
<th>Statutory Review</th>
<th>Key Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>The legislation is fit for purpose</td>
<td>Establish an MoU with ARPANSA (by 2020)</td>
<td>Develop an issues paper to consult stakeholders about the issues holding back our vision and develop options (2020)</td>
<td>Review the Radiation Control Regulation, then remake it (by 1 September 2023)</td>
<td>Minister</td>
</tr>
<tr>
<td>Community expectations are met</td>
<td>Review licence competencies and conditions for harmony with national standards (by 2021)</td>
<td>Actively participate in and influence RHC and enHealth decision-making (ongoing)</td>
<td>Review the Radiation Control Act policy objectives and whether the Act is securing them (start by the end of 2020)</td>
<td>EPA Board and Executive and RAC</td>
</tr>
<tr>
<td>Outcomes are more uniform</td>
<td>Proactively implement the National Directory for Radiation Protection</td>
<td>Identify and address emerging challenges (e.g. oversight of cosmetic lasers and IPL)</td>
<td>Amend the Act (by 1 September 2023)</td>
<td>Regulators</td>
</tr>
<tr>
<td>User practices and equipment become more portable</td>
<td>Follow the recommendations of the IAEA and WHO reviews (by 2021)</td>
<td>Develop reference tools (with NSW Health partners) to minimise unnecessary exposure (by 2022)</td>
<td>Implement the revised Act and Regulation (by 2025)</td>
<td>Regulated community</td>
</tr>
<tr>
<td></td>
<td>Develop, strengthen and maintain interagency and national cooperation through RHC and enHealth (ongoing)</td>
<td>Develop reference tools (with NSW Health partners) to minimise unnecessary exposure (by 2022)</td>
<td></td>
<td>Professional bodies</td>
</tr>
</tbody>
</table>

### 2. Support organisations to adopt and maintain quality systems linked to continuous improvement

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Actions</th>
<th>Strategic Review</th>
<th>Statutory Review</th>
<th>Key Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulated material remains under regulatory control and is quality compliant</td>
<td>Engage relevant stakeholders in high-priority accident practices (Nuclear medicine, CT and therapy)</td>
<td>Assess current quality systems in radiation practices (2020)</td>
<td>Identify potential gaps in life cycle source management using data and consulting our stakeholders (by 2020)</td>
<td>RAC</td>
</tr>
<tr>
<td>Licensees adopt quality systems</td>
<td>Develop an accident prevention plan, combining regulatory and information approaches (by 2021)</td>
<td>Engage stakeholders in our plans to require that licensees show radiation management plans and other quality assurance systems (by 2022)</td>
<td>Develop regulatory procedures to bridge gaps in our life cycle management and maintain regulatory control, including where sources cross jurisdictions such as for import, export or disposal (by 2022)</td>
<td>The regulated community</td>
</tr>
<tr>
<td>Accident reporting improves</td>
<td>Expand third party certification requirements to all sources of radiation and premises shielding, and improve certification standards and assessor accreditation (by 2023)</td>
<td>Develop a risk register (by 2020)</td>
<td>Review the information we give the public to improve understanding of radiation risk and beneficial uses (by 2020)</td>
<td>Professional bodies and consulting experts</td>
</tr>
<tr>
<td>Accidents are prevented</td>
<td></td>
<td>Develop reference tools (with NSW Health partners) to minimise unnecessary exposure (by 2022)</td>
<td></td>
<td>EPA Board and Executive</td>
</tr>
</tbody>
</table>

### 3. Improve stakeholder relationships and the customer experience

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Actions</th>
<th>Strategic Review</th>
<th>Statutory Review</th>
<th>Key Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships with stakeholders improve</td>
<td>Work with licensees to identify and reduce excess red tape (by 2020)</td>
<td>Create a stakeholder register that maps the regulated community and its interests (by 2020)</td>
<td>Review the information we give the public to improve understanding of radiation risk and beneficial uses (by 2020)</td>
<td>EPA Board and Executive</td>
</tr>
<tr>
<td>Customer experience improves</td>
<td>Survey the regulated community on their customer experience to identify issues (by 2021)</td>
<td>Provide stakeholders with regular chances to interact with us and document their discussions and concerns (ongoing)</td>
<td>Add specific information aimed at potential solarium users to our public information (by 2021)</td>
<td>RAC</td>
</tr>
<tr>
<td>We reduce red tape</td>
<td></td>
<td>Review the EPA Radiation webpage to make it customer-focused and accessible (by 2020)</td>
<td></td>
<td>The regulated community</td>
</tr>
</tbody>
</table>

### 4. Develop and enact an evidence-based, risk-aware compliance program

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Actions</th>
<th>Strategic Review</th>
<th>Statutory Review</th>
<th>Key Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance improves</td>
<td>Identify priority compliance targets using data and stakeholder consultation (by 2020)</td>
<td>Run a compliance inspection program of companies that provide a disposal service for radioactive sources (by 2021)</td>
<td>Use data to find illegal operators (ongoing)</td>
<td>EPA Board and Executive</td>
</tr>
<tr>
<td>Regulatory decisions are sound</td>
<td>Develop and run compliance campaigns, such as those for industrial radiography, new facilities/RMLs and CREs (ongoing)</td>
<td>Run a compliance program to confirm the status of licensed industrial sources</td>
<td>Resolve complaints about illegal operators within 100 days by taking any necessary regulatory action (ongoing)</td>
<td>RAC</td>
</tr>
<tr>
<td>People and the environment are protected</td>
<td></td>
<td></td>
<td></td>
<td>The regulated community</td>
</tr>
</tbody>
</table>