

Environment Protection Authority

Environment Protection Authority Annual Report

1 July 2012 to 30 June 2013

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LETTER OF TRANSMITTAL

The Hon Ian Hunter, MLC
Minister for Sustainability, Environment and Conservation
Parliament House
North Terrace
ADELAIDE SA 5000

Dear Minister

It is with pleasure that I present you with the Annual Report of the Environment Protection Authority for the period 1 July 2012 to 30 June 2013. This report has been prepared in accordance with the requirements of the *Environment Protection Act 1993* and the *Public Sector Act 2009*.

The two annual reports, representing the carriage of the *Environment Protection Act 1993* and the administration of the *Radiation Protection and Control Act 1982*, are combined as one in this annual report.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Campbell Gemmell', with a stylized flourish at the end.

Dr Campbell Gemmell
Chief Executive
Environment Protection Authority

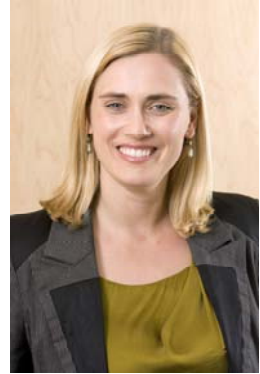
25 September 2013

STATEMENTS FROM THE PRESIDING MEMBER AND THE CHIEF EXECUTIVE

From the Presiding Member

This report provides me with an opportunity to update you on the activities and initiatives of the Environment Protection Authority (EPA) Board during the 2012–13 financial year.

Since taking on the role of Presiding Member in October 2012, it has been apparent that the current financial climate requires the EPA, like all other agencies across government, to rethink the way it does business and find more effective and efficient ways of operating; doing more with less. In addition to this, significant leadership changes have presented the EPA with timely opportunities for reform and renewal. Prior to my appointment, the EPA welcomed a new Chief Executive, Dr Campbell Gemmell in January 2012 and a new Minister for Sustainability, Environment and Conservation, the Hon Ian Hunter MLC, was appointed in January 2013.



During the past 12 months, the EPA has undergone a significant Change Program to ensure that the organisation is responsive to changing external circumstances, better equipped to deal with the increasing complexity of environmental challenges while still meeting the expectations of industry and community. The Program has involved an organisational restructure, careful consideration about how we operate financially as well as how we can best fulfill our core role as a regulator even more effectively. More detail about our change program can be found in this report. The Board also recognised that we must lead the way in identifying efficiencies and embracing reform. As a result, a board governance and membership renewal program will be ongoing in 2013–2014.

Quality engagement has once again been one of the Board's key priorities and this year I introduced a series of boardroom lunches with representatives from various industry and community groups. These high-level sessions provided us with an excellent opportunity to hear first-hand, in an informal setting, the challenges that organisations face, their experience of the EPA and how we can best maintain engagement that benefits all parties.

We listened carefully to the ideas of our stakeholders over the last 12 months. Feedback received through the 2012 Round-table and stakeholder survey in particular is reflected in the [2012–15 Strategic Plan](#). Released in November, the plan sets the direction for the EPA over the next three years as well as identifying six key environmental challenges upon which we will be focusing our core business.

At the Board's annual Round-table in May 2013, we launched our new [Communications and Engagement Framework](#). We also sought feedback from a diverse range of stakeholders, including industry representatives, community groups and government agencies on the EPA's work in relation to the six environmental challenges identified in the Strategic Plan.

As part of the Board's commitment to engagement, we hosted a range of sessions with stakeholders throughout the year in addition to the Round-table. These included a site visit to the Adelaide Desalination Plant, a consultation in the southern metropolitan area and a visit to Clare and Gilbert Valleys Regional Council. We toured the impressive Cooperative Research Centre for Contamination and Remediation of the Environment (CRC CARE) at Mawson Lakes and, as Presiding Member, I also travelled to Mannum and Whyalla to visit key sites and learn about important EPA initiatives. Issues raised at these sessions and visits included illegal dumping, soil contamination, mining waste, licensed sites, local nuisance issues and general waste management.

In the year ahead, we will continue to reform our organisation to ensure we have the appropriate expertise, systems and culture to effectively tackle the big environmental issues facing our state. We will aim to make a solid contribution to the economic and social wellbeing of SA while ensuring strong and consistent regulation of human activities.

South Australia and the EPA have a proud track record of leading the way nationally through regulation of the state's container deposit legislation, the ban on plastic shopping bags, and progressive landfill bans on TVs, whitegoods, tyres, green waste and a number of other recoverable resources.

In 2013–2014 we will continue to identify innovative approaches for protecting and preserving our environment. Engaging the community will again be a priority. We look forward to strengthening our relationships with local government and industry and we will continue to improve the way we communicate with the clear objective of instilling in South Australians a genuine confidence in their EPA.

A handwritten signature in black ink, appearing to read 'Mia Handshin', is positioned above the name and title.

Mia Handshin
Presiding Member
EPA Board

From the Chief Executive

I am pleased to present the Annual Report for the Environment Protection Authority for 2012–13.

The 2012–13 financial year presented an outstanding opportunity for change and growth in the EPA. We have welcomed a number of new faces to our leadership team and said farewell to others. We have also undertaken a change program, which has sought to strengthen the framework of the agency, assist us in becoming a more flexible and robust regulator, and provide the mechanism to enable us to continue to improve our engagement with key stakeholders.



We welcomed our new Presiding Member of the EPA Board, Mia Handshin, in October 2012. In the engagement forums undertaken in 2012–13, Ms Handshin's commitment and experience in engaging communities has already proved to be an asset to the Board and to the organisation.

I would like to take this opportunity to acknowledge the work of our former Presiding Member, Ms Cheryl Bart AO, who retired from the EPA Board on 3 August 2012. Ms Bart was instrumental in overseeing key reforms and initiatives throughout her four-year tenure on the Board.

On 1 July 2012, we initiated an organisational change program, composed of 10 major project elements which led to a new corporate structure as well as a great deal of consideration of how we undertake our business. The implementation of the new structure commenced in May 2013 and combined four divisions into two, with the organisation now structured into the Strategy and Business Directorate led by Deputy Chief Executive Tony Circelli, and a new Operations Directorate. We welcomed Andrew Wood as our new Executive Director of Operations. Mr Wood's expertise in overseeing a large and diverse environment department in England and Wales will assist in the day-to-day operations of the new directorate, ensuring that it is well equipped to deal with the demands of industry across the state, while focusing on the key elements that support operational outcomes, including sound and relevant science.

In the financial year ahead as the findings and recommendations of the Change Program are implemented operationally, we will focus our constrained resources on tackling particular environmental challenges in the state. These challenges include major point sources of pollution and waste; South Australia's legacy issues, such as site and groundwater contamination and the interface between industry and residential dwellings; increasing urban and infrastructure development and renewal; inappropriate and illegal management of wastes and resource recovery; and the continuing expansion of mining in South Australia. For the agency, we will also seek out new ways to service regional areas better and where possible, in collaboration with other parties.

In recognising these challenges, the EPA has developed an [Annual Compliance Plan 2013–14](#), which will be a key contributor in helping us to manage these challenges in the coming year.

During the year, we dealt with a range of key compliance activities, some of which directly responded to community concerns. Of particular note was concern about noise from the Waterloo Wind Farm and the impact on nearby residents. In response, the EPA undertook a study into the perceived noise impacts the wind farm was having on nearby residents, which involved monitoring and working with residents to complete noise diaries and the company operating the farm. This study is expected to be finalised in the 2013–14 financial year.

The issue of industry and residential dwellings existing in close proximity to each other has been a well-documented challenge for the government. The EPA established a Planning Review Committee in 2011 to consider the EPA's role in South Australia's planning system. The committee released its [report](#) in March 2013. Into 2013–14, we will contribute to the government's Expert Panel on Planning Reform which was established by the Minister for Planning, the Hon John Rau MP, to review the state's planning system and provide advice to the Government and Parliament for potential reform.

As always, it has been a very busy and challenging year for the EPA. This is my second annual report for the EPA and I am pleased with the progress we have made to date. We look forward in 2013–14 to continuing to build on the excellent work we have begun.

A handwritten signature in black ink, appearing to read 'Campbell Gemmell', written in a cursive style.

Dr Campbell Gemmell
Chief Executive
Environment Protection Authority

Reconciliation statement

The EPA acknowledges the traditional custodians on whose ancestral lands it carries out its business, and that it respects their spiritual relationship with their country. The EPA also acknowledges the deep feelings of attachment and the relationship that Aboriginal peoples have to the country.

In fulfilling its functions, the EPA is cognisant of the cultural and natural heritage of the traditional owners and strives to achieve positive outcomes wherever these matters are concerned.

EPA PERFORMANCE DURING 2012–13

During 2012–13, the Environment Protection Authority(EPA) revised its Performance Measurement Framework and Reporting System. Below is a snapshot of some of the EPA's key performance outcomes. Each area is also discussed in more detail in the pages referenced.

780 entries were made to the on-line Public Register regarding site contamination	Page 27
258 media enquiries were received by the EPA	Page 28
843 occasions the EPA was mentioned in the media	Page 28
103 site contamination authorisation notifications were processed	Page 44
32 site contamination audit reports were processed	Page 44
393 container deposit inspections were undertaken	Page 47
80.8% of containers were returned for a refund in South Australia	Page 47
74% of environmental incidents occurred in metro areas while 26% occurred in regional South Australia	Page 62
11,802 enquiries and 3,298 environmental complaints were received by the EPA	Page 62
253 development application referrals were received	Page 63
99% of development applications responses were delivered on time	Page 63
31 referred aquaculture licence applications processed	Page 65
21 investigations were conducted regarding illegal dumping activities	Page 68
242 inspections were undertaken on high-risk sites	Page 68
45 requests under the Freedom of Information Act were received	Page 71

Through the government budget process, the EPA is required to provide information against performance targets to the government as part of the annual Agency Statement.

HIGHLIGHTS AND MAJOR INITIATIVES

EPA highlights and major initiatives during 2012–13 include:

- Release of the new [2012–15 Strategic Plan](#)
- Development of the EPA's first [Annual Compliance Plan for 2013–14](#)
- Introduction of the EPA's Organisational Change Program to review, simplify, streamline and strengthen EPA business
- Extensive review of Nyrstar's operations, which resulted in new licence conditions for the company
- Launch of a second set of [Aquatic Ecosystem Condition Reports](#) on the EPA website
- Launch of a refreshed EPA intranet system, The Hub, which will improve internal communication and knowledge management
- Release of the [Communications and Engagement Framework](#), which will guide the EPA's communications and engagement activities over the next three years and support the organisation in meeting its strategic priorities in the 2012–15 Strategic Plan
- Launch of [real-time beach water advice](#) to the public via email alerts
- Initiation of a study on the impact of perceived noise at [Waterloo Wind Farm](#)
- New licence conditions dealing with [noise management for rail operators](#)
- Review and continued development of the EPA's Performance Measurement Framework
- First major review of the EPA website since its redevelopment in 2009
- Continued implementation of the [Environment Protection \(Waste to Resources\) Policy 2010](#), whereby on 1 September 2012, materials produced in metropolitan Adelaide such as fluorescent lighting, television and computers were banned from direct disposal to landfill
- [Planning Review Committee's final report](#) on the EPA's involvement in the South Australian planning system released via the EPA website
- Significant progress on the Licensing Administration Modernisation Project (LAMP), which will have important efficiency gains for the EPA, including improved online services for licensees
- EPA involvement in a 90-day project to streamline tuna industry regulation. The project aims to streamline referrals processed under the *Aquaculture Act 2001* by enhanced access to information and a reduction in referral requirements.

INTRODUCTION TO THE ORGANISATION

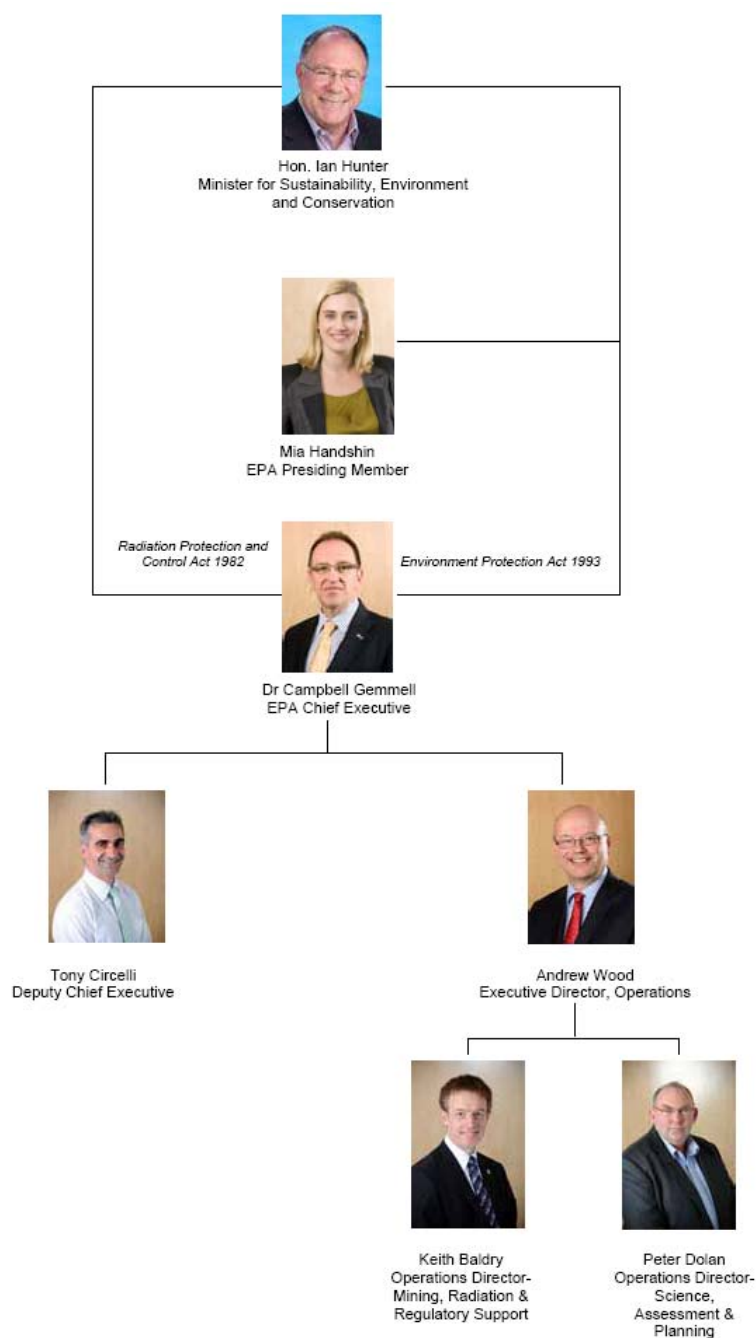
Role

The EPA is South Australia's leading environment protection regulator and is responsible for the protection of air and water quality and the control of pollution, waste, noise and radiation. The EPA influences and regulates human activities in order to protect, enhance and restore the environment.

Vision

A better environment – protected for all South Australians

Governance structure



The EPA is a statutory authority, with a Board responsible for the carriage of the [Environment Protection Act 1993](#) (EP Act). The Board must comprise between seven and nine appointed members, whose skills, knowledge and experience collectively meet the requirements of Board membership, as defined by the EP Act. The Board delegates specified powers to others in order to achieve the objectives of the EP Act. While the EP Act is committed to the Minister for Sustainability, Environment and Conservation, the Minister does not have the power to direct the Board in making decisions in relation to licensing and environmental authorisations or enforcement of the EP Act, or in making recommendations to the Minister.

The EPA is also an administrative unit created under the *Public Sector Act 2009*, through which it performs other functions for government, including administration of the [Radiation Protection and Control Act 1982](#) (RPC Act).

Under the EP Act, the chief executive of the administrative unit is also the chief executive of the statutory authority and a member of the Board ex officio, although not entitled to vote at a meeting of the Board. The chief executive is responsible to the Board for giving effect to its policies and decisions, making the services of staff and facilities of the administrative unit available to the EPA for the performance of its functions. These are reflected in the 2012–15 Strategic Plan, which is linked to the South Australian Government's seven strategic priorities, providing a framework for the work of the EPA.

EPA Change Program

In mid-2012, the EPA Change Program was introduced, with the aim of transforming the EPA into a sharper and more effective modern regulator. While considerable knowledge, talent and commitment is already held within the EPA, a number of reforms were required to improve the organisation's working style and practices, and to better serve the organisation's corporate outcomes. These reforms will ensure that the EPA is best positioned to deal with emerging pressures and environmental challenges.

The first stage of the Change Program involved developing a series of reforms to tackle our weaknesses, build upon our strengths and increase our effectiveness, credibility and expertise. The 10 key areas of reform are identified below as well as some of the initiatives we have undertaken during the financial year to support these reform areas.

Reform area	Objective	Projects undertaken during 2012–13 which support reform area
Strategic priorities	<ul style="list-style-type: none"> Clarifying our purpose: for staff, the community, business and government Providing a refreshed and clear strategic direction that will enable the EPA to focus available resources on key environmental challenges 	<ul style="list-style-type: none"> Development of Corporate Plan 2013–14 Development of the EPA Strategic Plan 2012–15 Further progression of the EPA's performance measurement system (with continued work to be undertaken in 2013–14)
Leadership and management	<ul style="list-style-type: none"> Ensuring that the EPA is effectively structured to support the delivery of strategic outcomes, alignment of functions and succession planning 	<ul style="list-style-type: none"> Implement a new organisation structure
Organisational development	<ul style="list-style-type: none"> Identifying priority areas and strategies for organisational development Strengthening our systems, skills and capacity to meet environmental, 	<ul style="list-style-type: none"> Established processes to audit EPA inspection and regulatory decisions Continued implementation of the Licence Administration Modernisation Project (LAMP)

Reform area	Objective	Projects undertaken during 2012–13 which support reform area
	<p>regulatory and financial challenges as well as the needs and expectations of our stakeholders.</p> <ul style="list-style-type: none"> Finding opportunities for working more effectively and efficiently 	<ul style="list-style-type: none"> Furthered implementation of the new format for EPA job descriptions template and process. Continued rollout of the new Performance and Development Review Program
Governance	<ul style="list-style-type: none"> Reviewing the most suitable governance model for the organisation 	<ul style="list-style-type: none"> Support the EPA's organisational change agenda by investigating opportunities for implementing the SA Government's High Performance Framework
Regulatory practice	<ul style="list-style-type: none"> Focusing our attention on minimising key environmental harms using a 'harms-based' approach Driving ongoing and concentrated effort towards regulatory reforms and best practice regulatory tools and approaches Reforming/streamlining areas of crossover with other agencies to ensure that the EPA and government regulates more effectively and efficiently 	<ul style="list-style-type: none"> Continued implementation of Environment Protection (Waste to Resources) Policy 2012 Establishment of the first Annual Compliance Plan 2013–14 Worked with the Department of Planning, Transport and Infrastructure to establish a framework for the assessment of site contamination at all levels of the planning system Continued development of harms approach
Integration	<ul style="list-style-type: none"> Being a more effective and influential agency through more active involvement in whole-of-government policy and programs 	<ul style="list-style-type: none"> Continued to support SA Government Strategic Priorities through partnership and cross-government participant with a focus on site contamination and better regulatory practice and tools
Relationship with local councils	<ul style="list-style-type: none"> Developing an agreed strategy with local government for the management of local nuisance issues 	<ul style="list-style-type: none"> Progressed collaboration with local government for the management of environmental nuisance issues
Sustainable funding model	<ul style="list-style-type: none"> Identifying a simplified and more flexible model to enable the EPA to respond to emerging challenges and opportunities 	<ul style="list-style-type: none"> Continued to research and develop a model in collaboration with the EPA Board, Department of Treasury and Finance, and the Minister

Reform area	Objective	Projects undertaken during 2012-13 which support reform area
Community and stakeholder engagement and public information	<ul style="list-style-type: none"> Increasing our physical footprint and accessibility, particularly in regional/rural areas Providing information in a coordinated and integrated way Broadening direct engagement with our stakeholders and using more contemporary and effective communications tools 	<ul style="list-style-type: none"> Continued to enhance and improve accessibility and transparency of EPA information and engagement with stakeholders, including adding to the online public register index Developed a Communications and Engagement Strategy 2012–15
Planning Review Implementation	<ul style="list-style-type: none"> Ensuring that the EPA exercises appropriate influence over the decisions made within the planning system consistent with our charter Ensuring that the EPA is appropriately resourced and able to operate in an effective and efficient manner to exercise its responsibilities within the planning system 	<ul style="list-style-type: none"> Commenced implementation of the findings of the Planning Review Committee to improve the EPA's influence in the planning system Actively participated in the Government's Planning Review Expert Panel

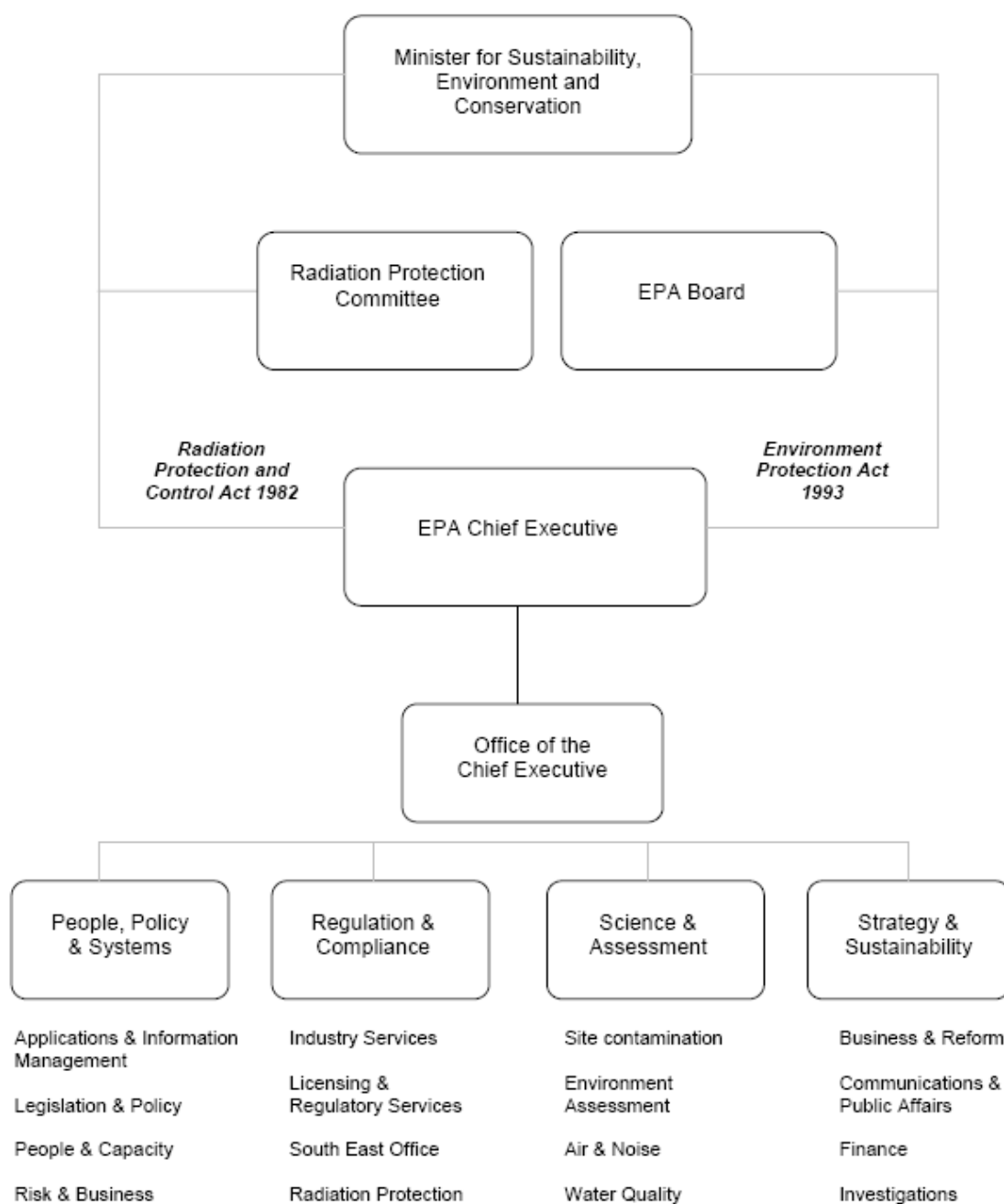
During Stage 1 project teams were established from across the organisation to develop improvement strategies for each of the key reform areas. In late 2012 and early 2013, these project teams presented their findings to the Change Management Board of the EPA. These findings are being reviewed and prioritised for incorporation into Stage 2 of the Change Program and the 2013–14 business planning process.

EPA organisational structure

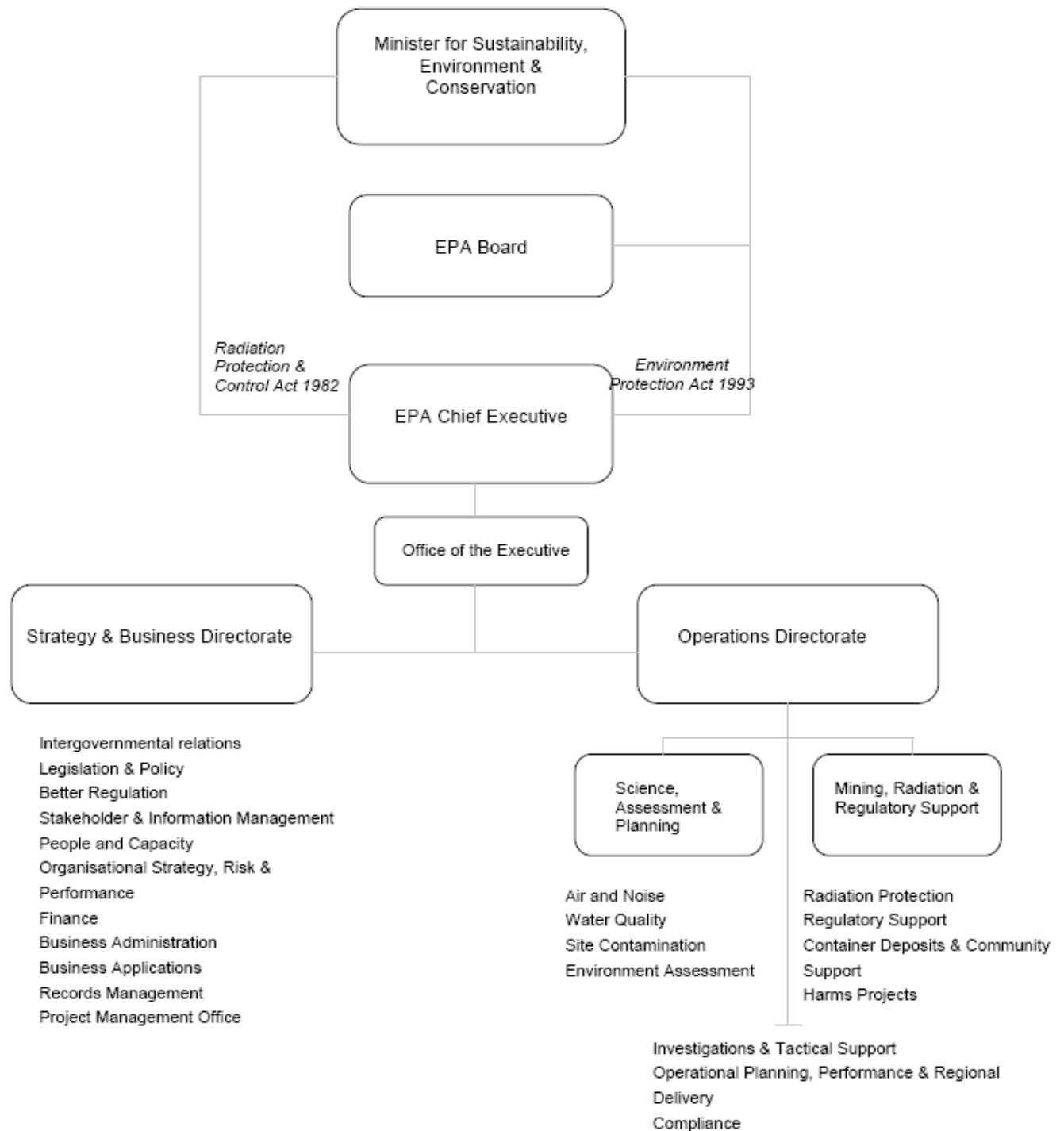
In May 2013, a new organisational structure was introduced. The new structure was developed after staff consultation and an initial assessment of the agency's functions to identify what we do, what we are obliged to do, and the synergies and connections that exist within the organisation. Consideration was also given to the recommendations from the various Change Program project teams in relation to areas of the organisation that needed increased focus or support.

The EPA's new structure will strengthen the organisation, more effectively support the delivery of the strategic outcomes identified, deal with key environmental pressures and ensure the alignment of functions. It will also assist in supporting the delivery of the key focus areas that emerged from Stage 1 of the Change Program, such as project management, regional presence, organisational development, stakeholder engagement and regulatory practice.

Previous EPA organisational structure (until April 2013)



New EPA organisational structure (from May 2013)



EPA Board membership

The Board is the governing body of the EPA for matters related to the Environment Protection Act 1993 and provides strategic direction, develops environmental policy and monitors performance.



Ms Mia Handshin
Presiding Member



Mr Stephen Hains
Deputy Presiding
Member



Mr Allan Holmes
Member



Ms Linda Bowes
Member



Mr Rob Fowler
Member



Dr Campbell Gemmell
Member

Members of the EPA Board are appointed by the Governor of South Australia and are chosen for their qualifications, experience and expertise. The members are:

Presiding Member

- Mia Handshin (current)
- Cheryl Bart AO (until 3 August 2012)

Environmental protection and management or
natural resources management

- Allan Holmes

Industry, commerce or economic development

- Cheryl Bart AO (until 3 August 2012)
- Linda Bowes

Local government

- Stephen Hains

Reduction, reuse, recycling and management of
waste or the environmental management industry

- Stephen Hains

Management generally, and public sector
management

- Allan Holmes
- Campbell Gemmell

Environmental law

- Megan Dyson (until 20 April 2013)

Environmental conservation and advocacy on
environmental matters on behalf of the
community

- Rob Fowler
- Jane Yuile (until 20 April 2013)
- Terry Groom (until 20 April 2013)

Various prescribed bodies are consulted in the appointment process for Board members. The wide spectrum of expertise on the Board gives the EPA the capacity to make integrated and balanced decisions on the complex problems and issues threatening the environment.

Outgoing members of the Board

Ms Cheryl Bart AO, Ms Megan Dyson, Ms Jane Yuile and Mr Terry Groom

Ms Bart was appointed as Presiding Member of the Board on 7 August 2008 and her term expired on 3 August 2012.

Ms Dyson was appointed to the Board for her 'legal qualifications and experience in environmental law'. Her term on the Board commenced 10 April 2003 and concluded on 20 April 2013.

Ms Yuile was appointed to the Board for her finance expertise. Her term on the Board commenced 5 March 2009 and concluded on 20 April 2013.

Mr Groom was appointed to the Board for 12 months on 21 April 2012 and his term concluded on 20 April 2013.

The EPA thanks Ms Bart, Ms Dyson, Ms Yuile and Mr Groom for their extremely valuable contribution to the Board and their enormous commitment to the protection of the environment of South Australia.

Appointment of Presiding Member

On 25 October 2012, Ms Mia Handshin was appointed Presiding Member of the EPA Board and embarked on a 100-day program of 'meet and greet' sessions with individuals and stakeholder groups. This year, Ms Handshin has continued to be actively engaged with EPA stakeholders including through a series of Boardroom lunch consultations that she has instituted.

EPA Board Committee listing

Section 17 of the EP Act allows the EPA Board to establish committees or subcommittees to advise or assist in carrying out the functions of the Board, or as required by the Regulations.

Four committees reported to the Board during 2012–13:

- Finance Committee
- Audit and Risk Management Committee
- Planning Review Committee
- Site Contamination Auditor Accreditation Committee.

Finance Committee

The Finance Committee was established by the Board in June 2009. This committee was set up to oversee the financial reporting and budget management of the EPA and work towards the continuous improvement of the monthly financial information provided to the Chief Executive and the Board. The Finance Committee was dissolved on 13 May 2013, with its functions integrated into the Audit and Risk Management Committee.

Audit and Risk Management Committee

The Audit and Risk Management Committee was established by the Board in March 2009. This committee oversees implementation of the risk management framework, which was set up to identify activities of high risk, monitor systematic controls to mitigate risks and achieve overall compliance with Board and agency policies. The committee meets at least quarterly.

Planning Review Committee

The Planning Review Committee (PRC) was established in August 2011 to review the EPA's involvement in the South Australian planning system and to report to the Board on the need for any adjustments to current procedures, approaches and resourcing within the EPA, given its statutory and whole-of-government obligations. The PRC was dissolved on 12 February 2013 and the [PRC final report](#) is available on the EPA website.

Site Contamination Auditor Accreditation Committee

The Site Contamination Auditor Accreditation Committee was established in August 2008 to advise the Board on the accreditation of site contamination auditors. The committee is required to meet annually.

General and special meetings

Eleven general meetings were held during the 2012–13 period.

Consultation program

During 2012–13, the EPA Board undertook the activities listed below as part of its consultation program:

- conducted a community and stakeholder consultation in the southern metropolitan region on 13 November 2012
- conducted a visit to the Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE) on 20 November 2012
- held a consultation session with Natural Resources Management (NRM) and local government stakeholders in Clare on 13 May 2013
- conducted its annual Round-table on 24 May 2013.

As in previous years, these sessions gave the Board an opportunity to hear directly from its stakeholders about the environment protection issues considered important by them.

Consultation session in the southern metropolitan area and site visit to the Adelaide Desalination Plant – 13 November 2012

On 13 November 2012, the Board travelled to the southern metropolitan region, where a consultation session was held with industry, community, and NRM and local government stakeholders from the area. This was followed by an information session and tour of the Adelaide Desalination Plant.

Topics raised and discussed at the consultation included:

- dust, noise and vibration emanating from the Linwood Quarry
- alignment of strategic priorities between NRM boards and the EPA
- mining waste, particularly disposal of whole earthmover tyres
- salinity of groundwater on the northern Adelaide Plains
- adaptation of methods to accommodate new forms of urban development. For example, noise issues from new and more dense urban development, construction requirements near transit routes and building specification requirements
- the Dredging Guidelines and how they will be implemented
- the cost of gaining an understanding of the requirements of regulatory compliance (that is, the need to use expensive consultants)
- groundwater contamination: how does the EPA identify it; should the EPA be undertaking increased community engagement; and the accuracy of the Department of Environment, Water and Natural Resources (DEWNR) bore water database
- greater certainty of where the waste levy is going and more visibility of its use
- illegal dumping, penalties, the EPA Illegal Dumping Unit and its role
- soil contamination and mapping of sites (including the possibility of mapping the entire state)
- the introduction of waste tracking.

Board visit to CRC CARE – 20 November 2012

On 20 November 2012, at the invitation of Professor Ravi Naidu, Managing Director and CEO of CRC CARE, Board members travelled to the Mawson Lakes Campus of the University of South Australia for a tour of the CRC CARE laboratories and to learn about the various pieces of equipment used by its team of scientists.

The Board also received an informative presentation and participated in an interesting field trip in which the CRC CARE work for the Department of Defence was explained; this work was related to wastewater treatment, specifically wastewater contaminated with aqueous fire-fighting foams.

Consultation session with NRM and local government stakeholders – 13 May 2013

On 13 May 2013, the Board travelled to Clare to consult with representatives of the Northern and Yorke Board; the local NRM Lower North and Yorke Peninsula Groups; Central Local Government Region of SA; Regional Development Australia Yorke and Mid North; Primary Industries and Regions SA (PIRSA) Regional Office; Clare and Gilbert Valleys Council; Northern Areas Council; the District Council of Mallala; and the Barossa, Yorke Peninsula, Wakefield, Port Pirie and Light Regional councils.

The Manager of the EPA South East Office, Naomi Grey, gave a presentation on the EPA's Regional Presence Project and identified options for increasing its regional presence, emphasising the importance of interacting face to face with its stakeholders.

An open discussion was held, during which a number of key issues in the area were examined, including wind farm development; waste management and landfill bans; illegal dumping; and the discussion paper relating to the proposed Local Environmental Nuisance Bill. Further issues raised covered the allocation of NRM funds; EPA and whole-of-government regional presence; use of funds from the Waste to Resources Fund, re-zoning land and the cost of site contamination audits; e-waste and the increased cost of gate prices; hazardous waste facilities; and the concept of an integrated government agency to service the region.

To conclude the session, Clare and Gilbert Valleys Council Mayor Allan Aughey hosted an informal afternoon tea in the council chambers. The EPA Board's presence was well received, with guests enjoying the opportunity to discuss regional issues and areas of concern directly with Board members.

Round-table Conference – 24 May 2013

The annual EPA Round-table Conference is a legal requirement under the EP Act (section 19) and is an important part of the Board's engagement and consultation with its stakeholders.

The conference was held on 24 May 2013 and attended by 43 representatives from industry, the community, and local and state government.

The group was welcomed by the Board's Presiding Member, Ms Mia Handshin, and both Minister Hunter and EPA CE Dr Campbell Gemmell addressed attendees on the work of the EPA.

During his speech, Dr Gemmell spoke about his efforts to re-energise the EPA as a modern, respected and effective regulator and adviser. He also discussed the implementation of a change program whose aim is to refine the EPA's organisational structure as well as facilitate a different approach to work in our staff and our partners.

Ms Handshin also officially launched the EPA's Communications and Engagement Framework on behalf of the EPA Board.

Part 1 of the facilitated session involved 'World Café' style table discussions, with each table focusing on one of the six key environmental pressures in the EPA's 2012–15 Strategic Plan. Attendees were grouped into sector/interest areas for each of the environmental pressures. Two questions were posed: What is the EPA doing well in regard to your table's particular environmental challenge? What opportunities are there for specific step change improvements?

Part 2 of the facilitated session involved table discussions on three questions: What engagement between you and the EPA currently makes a difference? Where might there be improvements in terms of engagement? What can your organisation/industry do to help facilitate the step changes identified this morning?

Information received at the conference will inform the EPA's corporate planning processes and priorities. A [full report on the Round-table](#) can be found via the EPA website.

EPA contributing to the seven strategic priorities of the South Australian Government

The seven strategic priorities outline specific areas in which the government will focus its efforts. The EPA plays an integral role in helping the government to achieve these priorities. The EPA contributes to the seven strategic priorities as listed.

Premium food and wine from our clean environment

The EPA has a number of monitoring programs in place that measure and assess the quality of South Australia's air and water resources (marine and inland):

- The EPA has improved its capability to monitor and assess the quality of the state's water resources, which are fundamental to marine and inland food production.
- The EPA recognises good environmental performance with the capacity to provide businesses with a competitive edge.
- The EPA continues to work with the food industry to reduce emissions and waste and to incorporate new technologies.
- The EPA provides early advice and direction at the planning phase for developments, including for key food sectors like the aquaculture industry.
- South Australia is recognised as a leader in resource recovery, including through the EPA's regulation of the state's container deposit legislation, the ban on plastic shopping bags, and progressive landfill bans on television sets, whitegoods, tyres, green waste and a number of other recoverable resources.

Creating a vibrant city

Poor and variable ambient air quality (including noise, dust, odour and vibration issues), proximity to an incompatible land use, contaminated land and groundwater, inadequate flood and surface stormwater management and under-managed water abstraction can all detract from good-quality environments and living conditions. The EPA:

- provides advice to planning authorities on the management of urban interface issues as early as possible during the planning phase
- influences the planning conditions relating to development to mitigate/avoid environmental pressures
- holds significant air quality data and is planning to expand monitoring and public reporting of air quality, including in the CBD, to complement the existing metropolitan air monitoring network
- oversees the remediation of contaminated land to enable historically polluted and often abandoned land to be safely developed, increasing the available supply of land for housing and other uses
- regulates water quality, since clean water is crucial to a vibrant city. Water quality is also influenced by the related areas of land contamination, waste issues, water allocations and groundwater conditions.

Realising the benefits of the mining boom for all South Australians

Mining activity has the potential to affect surface waters and hydrogeologic conditions as well as impact upon air quality, the management of wastes and radioactivity in the environment. The EPA:

- regulates mining and associated activities, working closely with the Department for Manufacturing, Innovation, Trade, Resources and Energy (DMITRE) and others to manage environmental and radiation issues, and minimise ongoing legacy issues
- seeks to expand regional service delivery, including in areas affected by the expansion of mining activities, and will be exploring how additional mining revenue (through EPA licensing and other cost-recovery sources) may contribute to funding these services.

Growing advanced manufacturing

Deployed effectively, the EPA's regulatory function helps to support both the future sustainability of South Australia's economy and its environment.

- The EPA encourages best practice from licensed manufacturers, this being an essential part of its overall regulatory compliance approach. Regulatory practices give rise to technologies for process management, and pollution and resource control that may have innovation and technology transfer potential.
- Associated with this, the EPA ensures swift, firm enforcement for those who choose not to comply, who otherwise undermine better operators and who can damage the green credentials for the industry as whole.
- The EPA regulates in a targeted, proportionate, consistent manner to provide predictability for businesses and potential savings for consumers. For more mature and progressive licensees, EPA uses an outcome-focused approach that encourages innovation, while adopting a more prescriptive approach for those with a culture of non-compliance.
- The EPA provides (up to 50%) fee discounts for licensees who demonstrate outstanding environmental performance.

Safe communities, healthy neighbourhoods

Effective environmental and radiation regulation that targets important pollution (air and water) and waste and resource use issues helps to protect our communities and improve quality of life. The EPA:

- uses a range of tools (legislative and other) to ensure the protection of the community from pollution and waste
- oversees a system to identify, assess and remediate historically contaminated sites, to protect communities from the harmful effects of pollution, and to ensure that new urban developments are suitable for housing and other sensitive land uses
- undertakes air and water monitoring, along with broader state of the environment reporting, to identify pressures and emerging trends that threaten our environments and people
- oversees and assists councils wherever possible to manage local environmental nuisance issues.

An affordable place to live for everyone

Through regulation of industrial pollution, the EPA reduces the risk of harm to the health of communities, which in turn lowers pressure on health costs.

- The EPA's effective deployment of good regulatory practice assists in reducing the cost of goods and services, as well as business risk and uncertainty.
- The EPA oversees the remediation of contaminated land, providing greater certainty for development and the opportunity for affordable housing developments, and the realisation of urban consolidation objectives.
- The EPA regulates in a targeted, proportionate and consistent manner to provide predictability for businesses and potential saving of on-costs to consumers.
- The EPA has reduced fees to Public Register information.
- The EPA provides (up to 50%) fee discounts for licensees who demonstrate outstanding environmental performance.

Every chance for every child

Effective environmental regulation ensures that children in South Australia are protected from the harmful effects of pollution and radiation exposure. It also provides children with safe and healthy residential and recreational areas.

- EPA management of environmental issues contributes to children having safe and healthy living and recreational areas.
- Industry is regulated to manage the long-term impacts on health and the environment.
- Through the planning system, the EPA encourages the proper assessment of any historically contaminated sites, particularly where a change of use to a more sensitive use is sought, such as a residence, child-care centre, pre-school and primary school. This ensures that vulnerable groups in our community, such as children, are adequately protected from exposure to pollution and chemicals.

Strategic priorities

EPA contributing to South Australia's Strategic Plan

The EPA contributes to the revised 2011 priorities of [South Australia's Strategic Plan](#) (SASP) in the following ways:

- **Our community:** the EPA continues to strengthen its engagement with regional and local communities, business and governments in order to share information and deliver high-quality programs and services that contribute to strong and vibrant communities.
- **Our prosperity:** good environmental regulation can enhance business competitiveness and reduce business risk. The EPA supports economic development through cost-effective environmental regulation and by reducing the administrative burden on business, while promoting the efficient use of environmental resources to ensure both cost savings to business and a reduced impact on the environment.
- **Our environment:** in managing the impacts of pollution and waste, the EPA considers the principles of sustainability in decision making, developing and implementing policy, and delivering regulatory and non-regulatory programs. It uses a risk-based and outcome-focused approach to support the transition to more sustainable practices on the part of business, government and the community.
- **Our health:** through its regulatory and non-regulatory programs and services, the EPA identifies environments or communities under threat or pressure from unacceptable pollution and waste impacts and develops strategies to mitigate identified risks.
- **Our education:** the EPA offers broad education to provide guidance and supports licensees and others in understanding compliance requirements. The EPA also supports local government in environment protection matters.
- **Our ideas:** better environmental regulation has a vital role to play in correcting market failure, promoting fairness and stimulating innovation in meeting environmental standards. The EPA will consider all innovative approaches to achieving the required environmental standards.

SASP targets for EPA (targets 32, 33, 67)

The EPA contributed to the following targets in 2012–13 through the following projects:

- **Target 32 Customer and client satisfaction with government services**
 - The EPA 2012 stakeholder survey results demonstrated that stakeholder satisfaction has remained stable, with a slight improvement since the 2008 survey.
 - A review of the EPA website throughout 2012–13 has included user testing to ensure that it is well structured and accessible.

- **Target 33 Government planning decisions**

The EPA works with other government agencies on the [30-Year Plan for Greater Adelaide](#) and [Water for Good](#). The EPA also finalised a report by its Planning Review Committee to improve the EPA's influence in the planning system and will implement the first tranche of recommendations in 2013–14.

- **Target 67 ZeroWaste**

The EPA implements and monitors policies and programs that aim for the continued reduction of waste to landfill, including the new landfill bans and resource recovery provisions outlined in the Environment Protection (Waste to Resources) Policy 2010.

Information on each of these projects can be found later in this report.

EPA strategic priorities

The EPA [2012–15 Strategic Plan](#) was released in November 2012 and provides the framework for the organisation's direction in supporting the achievement of South Australia's Strategic Plan targets as well as the seven strategic priorities of the SA Government.

The EPA's strategic priorities for 2012–15 are:

- **Robust regulation:** as a respected and effective advisor and regulator, the EPA will employ best practice regulatory principles and tools, and robust processes to:
 - support and enable the willing
 - tackle the important issues through taking a proportionate, risk and evidence-based approach
 - withstand challenge
 - be decisive and timely in taking strong enforcement action when needed.
- **Sound science:** to ensure the EPA's activities and decisions are appropriate and evidence-based, sound science will be applied to:
 - monitor and evaluate the condition of the environment
 - assess potential environmental impacts to inform development assessment, licensing and compliance
 - support legislation, policy, planning and management measures to mitigate environmental impacts.
- **Strategic influence and partnerships:** the EPA will create effective partnerships and influence good environmental outcomes for all South Australians by:
 - influencing planning and government strategy at an early stage
 - strategically partnering with other organisations, industry and community
 - promoting South Australia's environment at local, state, national and international levels.
- **Genuine engagement:** the EPA will listen, acknowledge, consider and respond to the voices of those who have an interest in our actions by:
 - expanding opportunities for engagement across industry, community and government
 - making environmental information more accessible and easier to understand
 - demonstrating good processes and a clear rationale for our decisions and policies
 - delivering excellent service.
- **Adaptive organisation:** being a well-run and high-performing organisation is achieved by making the best use of available resources and by:
 - recruiting, supporting and retaining focused, effective staff
 - deploying strong leadership and building management capacity

- developing systems capability and maximising benefits from integrated functioning.

As the primary regulator responsible for protecting South Australia's environment, the EPA shares the values and environmental goals with the broader community. A collective community effort is required to ensure that our environment is well protected and preserved for future generations.

These environmental goals are:

- **Good quality land:** protect land from the adverse impacts of pollution and waste by addressing historical site contamination, advising and regulating industry and promoting sustainable waste management (through the waste hierarchy).
- **Good quality water:** protect the quality of surface, ground, coastal and marine waters from pollution by monitoring water quality, advising and regulating industry and supporting water quality improvement projects.
- **Good quality air:** protect air quality from atmospheric pollutants by monitoring air quality, including odour, advising and regulating industry and supporting community based air quality improvement initiatives.
- **Protection from radiation:** protect the environment and the community from the health risks associated with ionising and non-ionising radiation by advising and regulating sites, mines, equipment and users of radiation.
- **Protection from noise:** protect the community from exposure to unacceptable noise levels by advising and regulating industry and supporting local government and police with community-based noise management.

Challenges for a better environment

The EPA delivers environmental and public health protection by identifying, prioritising and addressing the most significant potential or actual environmental harms. These harms are identified through ongoing assessment of the state of the environment and analyses of global, national and local environmental trends and ongoing pressures. The diagram below reflects the key inputs and linkages that support our vision, which is achieved through multiple goals and priorities and by working with key partners, while continuing to identify and address pressures with specific, efficient and effective interventions.



In this context, the EPA's short-to-medium term pressures are the environmental and human health risks and impacts associated with:

- major point sources of pollution and waste
- South Australia's legacy issues, particularly site and groundwater contamination and the interface between industry and residential dwellings
- increasing urban and infrastructure development and renewal
- inappropriate or illegal management of wastes and resource recovery
- broader issues of statewide significance, for example management of the River Murray, potential impacts of renewable energy, and impacts of climate change
- expansion of mining in South Australia and its associated infrastructure.

Agency statement targets

Each year the EPA publishes targets for selected key projects in the EPA Agency Statement, which forms part of the South Australian Government's annual budget papers. Achievements in relation to the Agency Statement targets for 2012–13 are presented below:

- Develop the South Australian Government Statement on Air Quality to replace the State Air Quality Plan as the overarching framework for local air quality action plans.
 - The South Australian Government Statement document *Framework for Air Quality* was finalised and released for consultation.
- Finalise procedures to allow for the implementation of water restriction and prohibition zones under the EP Act.
 - Procedures have been finalised to allow for the implementation of water restriction and prohibition zones under the EP Act. The first water prohibition area was established in Allenby Gardens/FlindersPark.
- Continue to enhance and improve the accessibility and transparency of EPA information and the organisation's engagement with stakeholders, including adding to the online Public Register Index and reviewing the EPA website.
 - Information being added to the online Public Register Index. To date, a further 312 documents and 87 web pages have been added to the website. The review of the EPA website has commenced. The EPA also released a Communications and Engagement Framework document to support the EPA 2012–15 Strategic Plan.
- Implement the new obligations for resource recovery of waste under the Environment Protection (Waste to Resources) Policy 2010 (W2R Policy), which came into effect 1 September 2012.
 - Implementation of the new obligations for resource recovery of waste under the W2R Policy has continued, including development of guidelines for local government use on approvals for resource recovery facilities, guidelines on resource recovery processing and education materials related to television and computer disposal.

Information on each of these projects can be found later in this report.

State of the Environment Reporting

The EPA publishes a report on the state of South Australia's environment every five years. The previous report was produced in 2008 and the next one has been prepared and is expected to be released in late 2013.

The 2013 State of the Environment (SoE) report makes use of existing reporting under state and national environmental policies, strategies and plans that drive the responses to the environmental conditions and trends given in the report. In addition to closer alignment with existing reporting, other features include a

reduced number of reporting themes, from seven to five, which is generally consistent with the current legislative framework for environmental management in the state, and the arrangement of information in a more logical and accessible structure. The report will also include 'report card' type assessment summaries for each theme.

A senior-level intergovernmental reference group ensured the integration and coordination of reporting information, while lead agencies with expertise in the environmental issues and who are the custodians of relevant reporting information coordinated content for specific themes, based on guidelines prepared by the EPA. The content was reviewed by external peer reviewers and edited by science information specialists.

The report's assessments were prepared based on the driving forces, pressures, state, impact, response, outlook (DPSIRO) reporting framework. In this framework the state of the environment (S) is the result of specific drivers (D) and pressures (P) which impact (I) on the environment. The response (R) represents the policies, programs and projects of government agencies to improve or maintain the state, while the outlook (O) considers what is expected to happen to the environment into the future.

In parallel with the preparation of the 2013 report, the EPA developed a plan for improving state of the environment reporting into the future. The EPA consulted on a draft of the plan with relevant government departments and the State Natural Resources Management Council. The plan comprised strategic, system and process improvements aimed at meeting the needs for good-quality environmental information.

Stakeholder engagement

In May 2013, the EPA reconfirmed its commitment to improved communications and engagement with the release of a new [Communications and Engagement Framework](#). This document sets out the role that communications and engagement will play in supporting the work of the organisation in meeting the strategic priorities identified in the 2012–15 Strategic Plan.

Importantly, the framework will guide how we interact with diverse communities and specific stakeholders, embed best practice communications and engagement as 'business as usual' across the EPA and develop the internal capabilities to deliver our various commitments.

Three priority objectives are identified as essential for best practice communications and engagement:

- awareness and understanding
- active relationships
- organisational capability.

These objectives are aligned with each of the strategic priorities of the 2012–15 Strategic Plan, to clearly demonstrate how the associated commitments (actions and key initiatives) support and contribute to the EPA achieving its corporate strategic priorities.

The framework is based on the International Association for Public Participation's (IAP2) Public Participation Spectrum, which is widely used across the South Australian public sector to assist in determining the appropriate level of engagement with stakeholders. This spectrum forms the basis of the South Australian Government's [Better Together: Principles of Engagement](#) (March 2013), with six guiding principles providing the foundation for better and more effective engagement.

In preparing the framework the EPA consulted with a diverse range of stakeholders, including industry representatives, community groups, and government agencies (Round-table Communications and Engagement Workshop, October 2012) as well as internally across the EPA. The framework has also been informed by market research on community perceptions of EPA site contamination communications (Harrison Research, April 2012); stakeholder perceptions of EPA service delivery (Ehrenberg-Bass Institute, University of South Australia, May 2012); and EPA customer service desk data and feedback.

The framework will guide EPA communications and engagement activities over the next three years and its commitments will be incorporated into the EPA's annual corporate plan and associated business plans for implementation, monitoring and reporting on progress.

Transparency and access to information

Throughout 2012–13 the EPA continued to improve transparency and public access to information and documents, with the addition of two new sections to the Public Register Index on the EPA website.

In August 2012, an index of environment protection orders (EPOs) was added to the directory. An EPO is a written statutory order that requires a person or company to undertake actions to remedy a risk or prevent further environmental harm. Interested members of the public can now search the index for details relating to all orders issued by the EPA. Copies of orders and any reports provided by the company or a person as a consequence of the order can be obtained upon request to the EPA.

The EPA will progressively increase the information available in the online Public Register Index, according to the level of public interest, demand and ease of implementation and as resources become available to build better information management systems. The EPA's next significant reform is the Licensing Administration Modernisation Project (LAMP), which is currently in progress for implementation during 2013–14. More information on LAMP can be found later in this report.

Website improvements

The EPA website was redesigned in October 2009 and has been instrumental in providing public access to important environmental information. For example, the Public Register Index and Aquatic Ecosystem Condition Reports (AECR) were created in the last two years.

After four years and significant advances in online communications, a review of the website was undertaken to ensure that it remains accessible and relevant to current external users and able to meet the EPA's future communications and engagement requirements.

The review included navigation-testing with five main user groups (members of the public, licensed and unlicensed businesses, local government and state government departments) and a series of workshops with EPA staff to identify and prioritise organisational and business needs. The findings of the review will inform website improvements relating to navigation, functionality and capability and will be implemented over the next two years.

Participation in community events

The EPA values opportunities to partner with key stakeholders and throughout 2012–13 the organisation continued a program of sponsorship and participation in exhibits, displays and conferences to strengthen strategic partnerships. Highlights included:

- ENVIRO 2012 Conference and Exhibition (Australian Water Association, Waste Management Association of Australia and the South Australian Government)
- Boating Industry Association's Boat Show 2012
- Local Government Association Annual Showcase Conference 2013.

Community groups

Community groups associated with key licensed sites provide the EPA with the opportunity to engage with members on a range of local environmental issues. EPA representatives frequently attend meetings with these groups to present EPA information on how the monitoring of licence conditions impacts on local residents. Groups met over the past 12 months include: Adelaide Brighton Cement Reference Group; Penrice Osborne Community Consultative Group; Residents of Inner North West Adelaide Incorporated; O-I Community Consultation Group; Linwood Quarry Joint Working Group; Strathalbyn Community Consultative Group; Mitcham Rail Taskforce; Whyalla Environment Consultation Group; Balefill Management Consultative Committee; and Southern Region Waste Resource Authority Residents Meeting.

Media liaison

South Australia's news and current affairs media, by providing timely and accurate information about environmental issues and pollution incidents, play an important role in the EPA's communication with the

South Australian public. A responsive and accessible media enquiry service enhances the EPA's transparency and accountability. In the 12-month period to 30 June 2013 a total of 258 media enquiries were received by the EPA on a wide range of issues, with wind farm noise, Nyrstar lead emissions and groundwater contamination being the most topical.

KEY AGENCY REFORMS

Better regulation

EPA's regulatory approach

Over the past 12 months, the EPA has focused on building an environmental harms-based approach to complement its current risk-based regulatory approach. The harms-based approach focuses on identifying and allocating resources to facilitate the understanding, analysis and management of the highest priority harms by adopting a disciplined project management approach.

A key element of this initiative has been the recognition of six high-level pressures in the 2012–15 Strategic Plan. These high-level pressures provide a framework for identifying and prioritising harms within the EPA's jurisdiction. Over the past year, the EPA has been developing systematic tools to support the identification, prioritisation and management of harms.

In addition, the EPA has been engaging with specialists working in this field, both in Australia and overseas, notably Professor Malcolm Sparrow, a leading expert in regulation from Harvard University, as well as regulators (eg Florida Department for Environmental Protection, and the New South Wales and Victorian EPAs) and the broader (Australasian Environmental Law Enforcement and Regulators Network or AELERT) community around Australasia.

The Waste Reform Project has been at the forefront in the application of the harms-based approach. The harms-based regulator concept is being more broadly introduced through the business planning process, to manage harms more effectively during 2013–14.

Annual compliance planning

On 28 June 2013, the EPA released its inaugural annual [Compliance Plan for 2013–14](#). The Compliance Plan sets out the EPA's regulatory approach and identifies its integrated regulatory priorities for the following financial year. The plan was formulated as part of the EPA's ongoing improvements in its regulatory effectiveness. However, the Change Program also identified a need for a clearer understanding between the EPA, industry and the community in relation to the EPA's compliance activities.

The EPA's strategic and operational compliance activities set out in this plan will be a key contributor in addressing the particular current environmental challenges facing South Australia. Each activity has clear targets against which the EPA will measure its performance. The plan also outlines the EPA principles that will guide its compliance and enforcement approach, which is proportional, transparent, targeted and timely. Achievements over the past year are also outlined.

Waste Change Project

The Waste Strategy for South Australia seeks to reduce the level of waste disposal by promoting and requiring recovery of resources from waste, with the residual waste appropriately managed to minimise the potential for environmental and health impacts.

The EPA supports this strategy with:

- legislation that requires resource recovery to the extent reasonably achievable prior to disposal and payment of a levy for materials disposed to landfill
- standards that set criteria to be met by operators for recovered resources to be described as a product
- assessment of operating facilities to ensure compliance with legislation.

The proportion of resources recovered from waste is dependent on the criteria specified by the product standards and the approvals given by the EPA, the relative cost of recovering resources from waste, market acceptance and demand for those resources, and market competition between suppliers of recovered resources and alternative materials.

In response to industry concerns, over the last 12 months, the EPA has undertaken a review of its ability to support the waste strategy. This has involved analyses of legislation (Act, Policy, Regulations and product standards/ approvals), EPA work practices, waste industry operating practices, and the adequacy of data relating to resource recovery and waste disposal.

This review identified:

- examples where the potential risk to human health and/or environment posed by waste is not being adequately managed in the waste industry
- examples where legislation does not support a timely and/or proportionate response by the EPA
- that some product standards are overly complex and open to misinterpretation
- inadequate reporting of data, which prevents the rapid identification and subsequent addressing of issues
- that the EPA has not yet completed the implementation of planned activities to reduce the risk associated with current practices.

Over the coming 12 months, the EPA has committed resources to addressing these issues. Internally, this will involve a project management approach, with resources from across the EPA required for the staged approach. Externally, the EPA will continue its engagement with the waste industry to ensure that the impact of change is understood. The EPA will work closely with other departments to utilise their expertise.

Planning Review Committee implementation

During 2012–13, the EPA continued to review its involvement in the South Australian planning system, with a Planning Review Committee established by the Board in 2011 and chaired by Mr Stephen Hains.

Mr Hains was joined by fellow Board members, Ms Megan Dyson and Dr Rob Fowler, along with Dr Donna Ferretti from the Department of Planning, Transport and Infrastructure (DPTI), EPA Chief Executive, Dr Campbell Gemmell, and Mr Peter Dolan, EPA Director of Science and Assessment.

The purpose of the committee was to recommend reforms that:

- ensure the EPA exercises appropriate influence over the planning decisions being made within the system, consistent with its charter
- ensure the EPA is appropriately resourced and operates in an effective and efficient manner to exercise its planning responsibilities within the system.

The committee reported back to the EPA Board in December 2012, at which time the Board endorsed all the recommendations contained in the report. The EPA intends to be more proactive and place greater emphasis on its involvement in the strategic and policy planning area, and to streamline and simplify its responses to development applications.

The [Planning Review Committee's final report](#) was released to the public in March 2013, via the EPA website. Letters were written to key stakeholders advising them of its release.

The first tranche of recommendations being implemented focuses on streamlining and simplifying the EPA's internal processes and those that articulate EPA policy positions on key environmental issues as they relate to the planning system.

Compliance audits

Targeted landfill /resource recovery facility audit

In 2012, the EPA began a targeted audit campaign on the landfill and resource recovery sector. The first audit at an EPA licensed landfill and resource recovery facility was carried out in September 2012. The information collected was shared with the licensee and used to measure the facility's performance against the requirements of its licence, the EP Act and the relevant regulations and policies.

The EPA now has a clearer understanding of the site and its operations, and in consultation with the licensee, is using the audit data to develop a program to address areas of non-compliance and establish clear performance standards for the future. The current licence for the site will be amended to ensure that the performance standards are clearly understood and enforceable.

The EPA will use the data and its observations from the audit to inform its ongoing waste reform policies and initiatives, which include stockpiling and end-of-waste specifications.

Abattoir audit project

Under Schedule 1 of the EP Act, abattoirs operating at a rate greater than 100 tonnes per year of animal meat or meat products for human or animal consumption, or 200 tonnes of poultry or poultry products per year are undertaking an activity of environmental significance and require a licence.

The largest environmental concern with regard to this activity is wastewater management. The EPA initiated an audit of unlicensed abattoirs in the state to assess compliance with the EP Act as well as their impact on the environment.

The audit included as many unlicensed processors as possible within South Australia, based on previous complaints to the EPA and knowledge of existing abattoirs. The audit assessed annual production against the EP Act thresholds for licensing, as well as compliance with obligations under the general environmental duty (section 25 of the EP Act), which requires that a person 'must not undertake an activity that pollutes, or might pollute, the environment unless that person takes all reasonable and practicable measures to prevent or minimise any resulting environmental harm'.

Throughout the audit, the EPA sought to support those operators who endeavoured to have no impact on the environment, by providing advice and direction to assist them in bringing their sites into compliance. Two abattoirs required licensing and have since applied to the EPA. There were no operators acting negligently, and no enforcement action was considered necessary.

The EPA now has a greater understanding of the status of meat processing in South Australia and is pleased with the sector's overall approach to environment protection and compliance.

Significant licensees

Nyrstar transformation

Nyrstar operates in Port Pirie and is one of the world's largest lead-smelting facilities. The smelter is the source of the well-documented lead contamination in the township and high levels of blood lead in the local community. The recommended blood lead level set by the National Health and Medical Research Council (NHMRC) is 10 µg (micrograms) per decilitre (100 µg per litre). The annual limit for lead in air under the National Environment Protection (Ambient Air Quality) Measure (NEPM) is 0.5 µg per m³. Since the limit relates to ambient air quality, it applies at monitoring sites located within the community and not directly alongside the operating facility. However, monitoring alongside the facility is undertaken (at Ellen Street) and is important in providing the most accurate measure of emissions from the facility compared to other sources.

At the end of 2005, 60% of tested children had blood lead levels above the goal of the NHMRC. The Oliver Street and Pirie West lead monitoring sites were also above the annual limit for airborne lead in the NEPM.

In 2006 a five-year partnership between Nyrstar, the state government and the local council commenced. This program, called Tenby10, was designed to reduce lead emissions from Nyrstar. Community involvement in the program was encouraged, while support programs were established to reduce the risk to children with high blood lead levels. The EPA's primary role before, during and after the Tenby10 program, is to ensure that Nyrstar takes all reasonable and practicable measures to reduce lead in air emissions. To support this objective, a number of environment improvement plans have been established with Nyrstar.

By the end of the Tenby10 program, the number of children with lead levels above the NHMRC recommended blood lead level had reduced from 60% (in 2005) to 25% (in 2010). Testing of children during 2011 and 2012 showed that 22% of the children still had blood lead levels above the 10 µg per decilitre.

In 2011, the EPA identified that many lead smelter facilities around the world now use smelting technology that is more advanced than that used at Port Pirie and that these sites have much lower levels of airborne lead emissions. Since this is considered an available technology used by smelting facilities, it is reasonable and practicable to expect Nyrstar to adopt the technology and significantly reduce their emissions.

In 2012, new licence conditions were established that require Nyrstar to investigate options to significantly reduce emissions from the smelter. The EPA approved a further environment improvement plan for Nyrstar detailing the timeline to assess the feasibility of adopting alternative technologies at Port Pirie. The licence requires the submission of a transformation plan by the end of June 2013. An extension was granted for Nyrstar to submit the plan by the end of August 2013.

The EPA also modified the licence to set conditions requiring compliance with a lead-in-air limit of 0.5 µg per m³ at the Pirie West and Oliver Street monitoring locations. The assessment of compliance is made on annual average lead-in-air limits at June 30 and December 31 each year using daily monitoring data.

The figure below shows compliance with the licence requirements. The data shows an increase at the Pirie West monitoring site during May and June 2013. The EPA will receive a report on this increase early in the 2013–14 financial year.

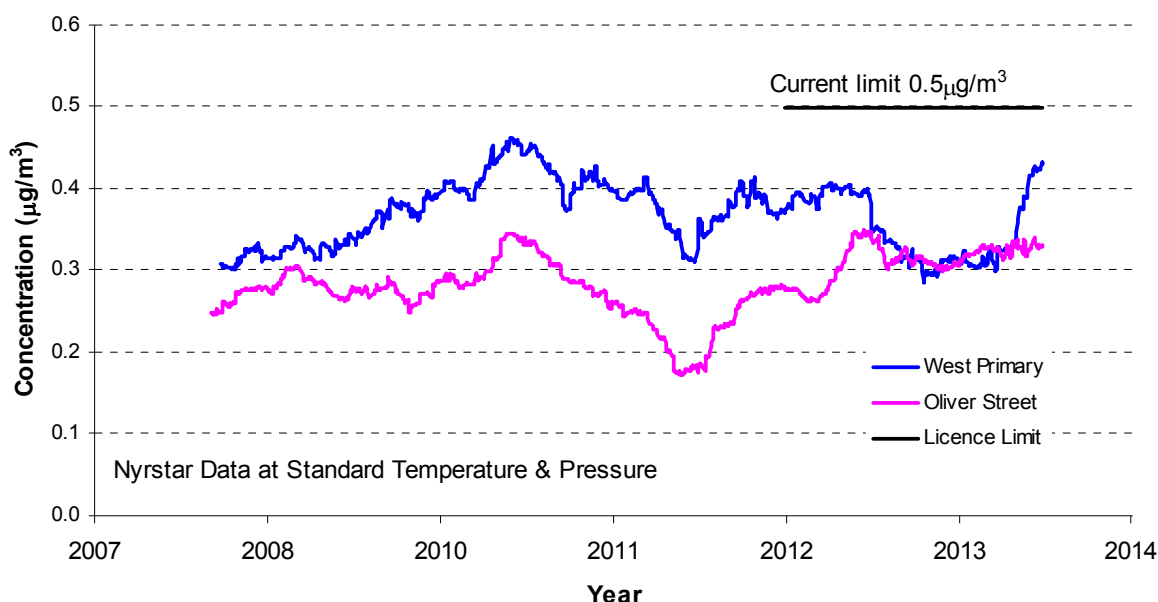


Figure 1 Progressive annual lead concentrations at Port Pirie monitoring sites

In addition to lead contamination, sulfur dioxide emissions pose a respiratory risk to the community and the EPA monitors for sulfur dioxide at Oliver Street in Port Pirie, according to the requirements of the National Environment Protection (Ambient Air Quality) Measure. The standard for sulfur dioxide sets three limits: an hourly limit on 0.2 parts per million (ppm), a daily limit of 0.08 ppm and an annual limit of 0.02 ppm.

The data summarised in Table 1 indicate that there are consistently more than 30 sulfur dioxide emissions per year that exceed the limit of 0.2 ppm for hourly concentration. The goal of the NEPM is to limit the exceedences of the hourly and 24-hourly concentration limit for sulfur dioxide to, at most, once per year.

Table 1 Trends in sulfur dioxide exceedences of the one-hour National Environment Protection (NEPM) Standard

Number of times that the standard for sulfur dioxide was exceeded at monitoring site	Year									
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
One-hour limit (0.2ppm)	21	31	29	33	35	28	29	35	40	33
24-hour limit (0.08ppm)	1	0	0	0	0	0	2	0	0	1

Research undertaken by the EPA in 2011 identified those facilities that upgraded their lead smelting technology also saw a significant reduction in sulfur dioxide emissions. The EPA anticipates that the same result will be achieved if Nyrstar includes an upgrade to its acid plant as part of any proposed site transformation.

Kimberly–Clark Australia (KCA)

Kimberly–Clark Australia (KCA) operates a large paper mill near Millicent in the southeast of South Australia under an indenture agreement that concludes in October 2014. For several years, the EPA and KCA, with assistance from the Department for Manufacturing, Innovation, Trade, Resources and Energy (DMITRE), have discussed and progressed the process and requirements for an EPA licence at the conclusion of the indenture.

During 2012–13, the EPA continued the process of setting environmental values (EVs) for Lake Bonney and also completed an ecological risk assessment of the KCA wastewater discharge. Both of these processes ensure the protection of Lake Bonney into the future, provide assurance for KCA with regard to their ongoing operations, and give guidance to the EPA in the setting of licence conditions, to take effect.

The focus for 2013–14 will be to:

- plan reasonable discharge limits in wastewater for the future
- plan a wastewater monitoring program for KCA
- identify options for future reductions in nutrients in the wastewater
- draft the EPA licence conditions.

Carter Holt Harvey Wood Products Australia Pty Ltd

The wood processing industry in the South East is the largest regionally based manufacturing industry in South Australia, with six major facilities in the City of Mount Gambier. Carter Holt Harvey operates a number of these facilities, with their largest enterprise in Mount Gambier being the Jubilee Highway East sawmill.

Between 2010 and 2012, EPA licence conditions required the site to undertake an environment improvement plan (EIP), specifically to reduce the particulate emissions from the wood-fired boilers on site and to meet the requirements of the [Environment Protection \(Air Quality\) Policy 1994](#).

Monitoring of the stack particulate emissions at the completion of the EIP period indicated a significant reduction in the concentration of particulates from the boilers, with the emissions approximately reduced by half. However, one of the two boilers continued to exceed the maximum concentration of 250 mg/m³ as set in the Air Quality Policy, with emissions of approximately 270 mg/m³.

Throughout 2012, Carter Holt Harvey and the EPA discussed possible further improvements at the site to bring the site into full compliance for particulate emissions.

Carter Holt Harvey applied to the EPA for an exemption to the Air Quality Policy for this site, and this was issued in April 2013. The company is required to continue monitoring the stack emissions. This is in addition to a key requirement of the exemption, which is to investigate options for further improvements in air quality from the boilers at this site.

Adelaide Brighton Cement (ABC)

Under its current licence conditions, Adelaide Brighton Cement (ABC) is required to implement an EIP to manage onsite activities, and meet specific monitoring and reporting requirements.

The current EIP targets continuous improvement of the environmental performance of the company, with a focus on reducing ambient dust levels, noise levels and the visual impact of the site. It was developed in consultation with the Adelaide Brighton Cement Community Liaison Group (CLG) and is valid until December 2015.

Actions undertaken in 2012–13 under the EIP include:

- installation of an additional truck-wash facility to reduce the drag-out dust resulting from the filling of bulk road tankers
- construction of a loading canopy adjacent to the gantry clinker shed to contain dust from this area when clinker is loaded into trucks
- monitoring and modelling of noise and directed noise attenuation work to reduce noise impacts on the local community
- continuous improvements to the filtration systems of the plant to ensure that the emission of particulates, nitrous oxides, sulfur oxides and carbon dioxide are kept to a minimum at all times.

Development work began on a major plant expansion during 2011–12. The construction work has been completed and commissioning of all equipment is well on the way. It is expected that the project will reduce dust emissions further as raw materials will not have to be kept in open stockpiles or moved in the open. As part of this project a new cement ship-loading facility has also been installed, which has reduced cement dust emission considerably from this area of the site.

The EPA attends every ABC CLG meeting and reports on air quality monitoring, community complaints and licence requirements, including EIP objectives.

OneSteel wharf expansion

In 2011, OneSteel announced that it intends to increase iron ore export sales to over 12 million tonnes per year. This was five million tonnes more than the export facilities installed in 2007 as part of Project Magnet would allow.

The increased export volume requires additional ore receipt, handling, storage and ship loading plant. The design of the new plant was largely based on that installed in 2007, which eliminated Whyalla's 'red dust' issues and which is now considered by the EPA to be the minimum standard for any similar project.

In 2012–13, the following elements of the project were completed:

- new export ore storage sheds, including the ore receipt plant
- additional rail infrastructure associated with the new export ore storage sheds
- a temporary ship-loading facility.

To date, a number of export ships have been loaded as part of the commissioning process and the project, including the permanent ship loading facility, is expected to be completed by the end of 2013. The expanded port is will have an export capacity in excess of 12 million tonnes per year.

National and state policy

Pursuing better regulation across government

The EPA continues to lead and participate in a range of programs for the identification and implementation of more effective regulation and regulatory processes across all spheres of the South Australian Government.

The EPA has participated with other environmental regulators across government in collaborative programs relating to better regulation. A key focus area is an ongoing commitment to the training and professional development of compliance staff to ensure they understand and implement the elements of modern, best practice regulation. The EPA is working with Government Skills Australia to ensure the skills and capabilities for frontline officers are clearly mapped and, consequently, ensure that training programs and modules are tailored to the development of officers in these capability areas. This work will continue as a priority for EPA in 2013–14.

At the local level, the EPA continues to work closely with local government, particularly through the Local Government Association, to support councils and their officers in their regulatory activities. This has included collaborating with councils to provide training to officers, the provision of equipment (eg for monitoring noise), and support for local councils to follow up on complex compliance issues such as illegal dumping. This collaborative program will continue into 2013–14.

At the national level, the EPA has been active in its pursuit of better regulatory practice across jurisdictions through a range of programs, particularly as a lead participant in the Australasian Environmental Law Enforcement Regulators network (AELERT). Through this network, the EPA is leading and supporting a number of programs designed to improve regulation, including (as noted earlier) the consideration and development of effective environmental regulation performance measures, development and delivery of training and professional development for regulatory officers, and collaborative efforts to better combat illegal waste activities across borders. The EPA has also been working closely with similar agencies in Victoria and New South Wales on understanding and developing its harms-based regulatory approach, which will complement the current regulatory approach. All three jurisdictions have recognised the importance of focusing effort and resources in a disciplined and systematic way to tackle the largest and most complex environmental harms facing their respective states.

AELERT also supports the Council of Australian Governments (COAG) policy priority to harmonise environmental regulation, to which the EPA provides significant input. Over 2012–13, a key area of focus for COAG and the EPA has been the development and implementation of national standards, particularly environment protection policies. A review of the legislation, policies and procedures at the national level has led the EPA to identify opportunities for pursuing more effective implementation of standards across jurisdictions. This will be a priority for ongoing consideration in 2013–14.

The EPA is committed to continued support and leadership, where appropriate, of programs for improved regulatory approaches and outcomes at all levels of government. It is recognised the significant gains and benefits can be realised through this approach, including the establishment wherever possible of linked and consistent regulatory regimes across departments, spheres of government and states, which in turn can lead to reduced regulatory burden, and ultimately enhanced environmental outcomes.

Local Environmental Nuisance Bill development

The EPA has been negotiating with local government for more than 10 years to identify more effective solutions for dealing with local environmental nuisance (noise, dust, smoke, etc.). There is considerable confusion in the broader community over who has responsibility for addressing these issues. Provisions exist in the EP Act for councils to manage nuisance, however, they are non-mandatory and there is no consistency in their use across councils.

During the reporting period the Parliamentary Statutory Authorities Review Committee delivered the findings of its investigation into the operation of the EPA, subsequently recommending that legislative reform be considered to clearly define the responsibilities of the EPA and other authorities (for example, local

councils) with regard to dealing with local nuisance issues. The Review Committee indicated significant support for such reform.

In December 2012, the Ministers for Sustainability, Environment and Conservation and for Local Government informed local government of the government's intention to legislate through the Local Government Minister's Forum.

Since December 2012 considerable work has been undertaken on developing draft legislation in collaboration with local government. A working group, which includes the Local Government Association (LGA), South Australia Police, KESAB, and the Department of Health, has been established to develop drafting instructions. The LGA has also established an internal reference group to assist with the process of engagement with councils.

Consultation with councils has occurred through the release of a broad discussion paper. A number of face-to-face meetings between EPA and council staff (particularly regional councils) have also taken place. Further consultation with the LGA and other key stakeholders to develop a draft bill will occur throughout 2013–14.

Environment Protection (Water Quality) Policy 2003 review

Proposed revisions to the [*Environment Protection \(Water Quality\) Policy 2003*](#) (Water Quality Policy) were prepared and underwent consultation during 2012–13. The main change proposed to the policy is the replacement of mandatory water quality criteria by national water quality guidelines that trigger a risk-based assessment for determining the relevant impact on the environment, in line with the general environmental duty under the EP Act.

The consultation included regional public meetings in Adelaide, Port Pirie, Port Lincoln, Berri and Mount Gambier. Direct meetings were also held with Indigenous groups and industry associations. The consultation feedback will now be consolidated and considered by the EPA Board in its development of a final revised policy for the consideration of the Minister.

Civil Penalties Policy review

In 2006, South Australia was the first state or territory in Australia to adopt powers to negotiate civil penalties with alleged environmental offenders as an alternative to criminal prosecutions. Civil penalties can be applied to less serious offences, and benefits both the alleged offender and the government by avoiding the expense and additional time involved in court proceedings.

The Civil Penalty Policy review was undertaken to consider and improve the Civil Penalty Calculations Policy and internal office policy. The consultation, which began in February 2013 and included meetings with key stakeholders, concluded in April 2013, with an explanatory report placed on the EPA website. The submissions received influenced further proposed amendments to the policies to be considered by the EPA Board in July 2013.

Five-year rolling review of legislation

Each year, the EPA undertakes a review of a number of pieces of legislation, in line with the state government's five-year rolling legislation review program.

During 2012–13, the EPA reviewed the following legislation:

- **Schedule 1 of the EP Act:** work has continued with updates on terminology to reflect modern practices and a substantial review of the waste provisions of the schedule. It is envisaged that these amendments will come into operation at the beginning of 2014.
- **Environment Protection (Water Quality) Policy 2003:** a draft has been completed. The EPA has undertaken statutory consultation with industry and the community in accordance with requirements in the EP Act. Submissions through the consultation process will provide input into the finalisation of the policy. It is scheduled to be finalised and operational in 2013–14.

- **Environment Protection (Air Quality) Policy 1994:** the EPA has completed the review of the Air Quality Policy and is in the process of developing a detailed assessment of regulatory impacts. The revised policy will undergo a rigorous consultation process with the state government, industry and the community before being finalised
- **Environment Protection (Burning) Policy 1994:** the EPA intends to consolidate its air-related legislation into a single policy document. As such it has reviewed the Burning Policy as part of the review of the Air Quality Policy. The Burning Policy will cease to operate as a standalone document once the revised Air Quality Policy is operational.

Implementation of the Environment Protection (Waste to Resources) Policy 2010

The Environment Protection (Waste to Resources) Policy 2010 (W2R Policy) was introduced on 1 September 2010 and came into effect in stages over three years. The W2R Policy supports South Australia's Strategic Plan 2011 target of reducing waste to landfill by 35% by 2020 and the objectives of [South Australia's Waste Strategy 2011–15](#) by promoting resource recovery and the diversion of waste from landfill.

On 1 September 2012, various identified wastes produced in metropolitan Adelaide were banned from being sent to landfill unless first subjected to a resource recovery process. In addition, a range of materials are progressively being banned from disposal to landfill.

To support these requirements, the EPA has developed the following guidelines to assist waste and resource recovery by industry, and other key generators and transporters of waste:

- guidelines on approvals for resource recovery facilities under clauses 11(6) and 12(6) of the policy
- guidelines on resource recovery processing: the making of clause 11(8) determinations regarding sufficient treatment
- guidelines on handling wastes banned from landfill (draft).

Resource recovery facility approval forms were developed and other related licensing forms amended. Resource recovery facility approvals have been assessed and issued for five facilities as at end April 2013.

On 1 September 2012, fluorescent lighting, television and computer wastes produced in metropolitan Adelaide were prohibited from direct disposal to landfill. To support the implementation of these landfill bans, the EPA, working with [Zero Waste SA](#) (ZWSA), prepared and undertook a stakeholder and public education campaign, including reminder notifications for industry stakeholders and a series of public advertisements across local newspapers.

The EPA, with ZWSA, has been preparing for the final landfill bans, scheduled to come into operation on 1 September 2013, by considering the implications of these bans for stakeholders and designing further public education strategies.

Implementation processes will continue through 2013–14 and involve further communication with stakeholders and awareness campaigns on the upcoming landfill bans.

Contribution to the Standing Council on Environment and Water (SCEW)

The Minister for Sustainability, Environment and Conservation is SA's representative on the [Standing Council on Environment and Water](#) (SCEW). The EPA, in conjunction with the DEWNR supports SCEW through the CE's membership on the Senior Officials Committee and through participation in various thematic oversight groups (TOGs), committees and working groups.

A focus for the EPA under the SCEW agenda has been the progress of a range of initiatives within the National Waste Policy, led by the Waste and Chemicals TOG; input into priority initiatives, including the development of options to manage wood heater emissions led by the Air TOG; and progress of national harmonisation initiatives led by the Seamless Environmental Regulation TOG. Each of these initiatives is discussed in more detail in the report.

The EPA also supports the Minister as a member of the National Environment Protection Council (NEPC) (which is incorporated into SCEW). Over 2012–13, the priorities for the council were the review of the legislation and intergovernmental agreements to support the development and implementation of National Environment Protection Measures (NEPMs) and the review of the Assessment of Site Contamination NEPM. Both of these initiatives were approved by NEPC during 2012–13, with implementation to be a priority area for the EPA during 2013–14.

NEPM variations

A number of variations to NEPMs have been finalised during 2012–13. These include variations to the Used Packaging Materials NEPM, the Movement of Controlled Waste NEPM and, most recently, the Assessment of Site Contamination NEPM. During the reporting period, variations to the Used Packaging Materials NEPM were adopted as an environment protection policy and work commenced on the adoption of the Movement of Controlled Waste NEPM variation.

National sustainability agenda

The EPA continued to be involved in the implementation of the National Waste Policy (NWP) across all levels of the program. A number of priority NWP programs are significant priorities for South Australia. The EPA and ZWSA represent the state on a number of working groups focused on developing and implementing detailed policies and operational approaches for better waste management practices.

Priority areas that have progressed over the last 12 months include the implementation of the *Product Stewardship Act 2011*, which supported the implementation of the collection schemes for television sets, computers and light globes containing mercury; and the national packaging scheme options consultation process. The EPA and ZWSA have had significant input into these programs, which connect strongly with South Australia's Strategic Plan, the State Waste Strategy 2012–15 and the Environment Protection (Waste to Resources) Policy 2010 (W2R Policy).

Under the W2R Policy, computers and televisions were banned from metropolitan landfills in South Australia from 1 September 2012. The first services under the National Television and Computer Recycling Scheme commenced in mid-2012 and will cover metropolitan, regional and remote areas of Australia by the end of 2013. In 2012–13, the EPA, through Zero Waste SA, provided funding to support implementation of the landfill ban and the roll-out of the scheme. This funding was directed to increasing industries' capacity to collect and/or recycle e-waste. Under the scheme 14 locations were established for the drop-off of e-waste free of charge within metropolitan and regional areas in 2012–13. In addition to this service, many councils also provided free drop-off services for e-waste.

The Tyres Product Stewardship Project and the FluoroCycle Scheme were supported by the EPA and are priority initiatives under the National Waste Policy Implementation Plan. These initiatives were at crucial stages in their development in 2012–13.

The EPA continued to support the development of an industry led product stewardship scheme for end-of-life tyres in Australia, with an industry–government working group finalising guidelines outlining the operations of an industry led tyre product stewardship scheme. The scheme aims to increase domestic tyre recycling, expand the market for tyre-derived products and reduce the number of Australian end-of-life tyres sent to landfill, illegally dumped or exported as baled tyres for environmentally unsustainable use.

Mercury containing lamps were also banned from metropolitan landfills in South Australia from 1 September 2012 under the W2R Policy. The EPA contributes to the FluoroCycle Scheme, which aims to increase the recycling of lamps that contain mercury to reduce the amount of mercury entering the environment. The SCEW funding agreement for the FluoroCycle scheme ended on 30 June 2013, with industry expected to take on full responsibility for the scheme.

The EPA, as a representative on the FluoroCycle Administrative Committee, was involved in overseeing and implementation activities to facilitate a smooth transition to a fully funded and industry led scheme. As a foundation signatory to the scheme, the EPA continues to recycle its mercury containing lamps at all of its locations.

Further information on the EPA's inhouse sustainable practices under the Sustainability@Work section of this document.

National packaging options

In 2007, the Environment Protection and Heritage Council (the precursor to the Ministerial Council to SCEW) agreed to undertake an investigation of national measures to reduce the environmental impacts of packaging through increased recycling of packaging and reduction of litter.

In November 2011, the council approved the release of the Packaging Impacts Consultation Regulation Impact Statement (RIS) for public consultation. The RIS process presented a range of options for managing packaging for broad consideration as well as an assessment of their various impacts, costs, benefits and outcomes. The options included a number of product stewardship options, two container deposit schemes and an advanced disposal fee scheme.

In 2012 SCEW agreed to progress to the next stage of consideration of options—the development of a Packaging Impacts Decision RIS, which would analyse in detail the seven options included in the Consultation RIS and three new options arising from public feedback. The new options were two additional product stewardship options and a container deposit scheme option, based on South Australia's container deposit scheme.

The complex and detailed Decision RIS was provided to SCEW for consideration in June 2013, after which a decision will be made to pursue an agreed option for the management of packaging and its impacts across Australia.

NChEM

The National Framework for Chemicals Environmental Management (NChEM) is a working group under the SCEW, which was established through a ministerial agreement to improve the environmental aspects of Australia's chemical management system. The EPA is an active participant in NChEM, along with representatives from other environmental regulators in each state and territory.

In 2012–13, NChEM progressed a major reform designed to improve the management of environmental risks from industrial chemicals in Australia. The reforms were driven by the COAG response to a Productivity Commission review into the regulation of chemicals and plastics in Australia. This work culminated in the release of a Consultation RIS, which offered three options for implementing the reforms. The main reform is the establishment of a body which provides direction in identifying and managing environmental impacts from industrial chemicals.

A range of stakeholders from licensees and industry associations to non-government organisations and other state government departments attended a round-table consultation workshop in Adelaide in June 2013 to discuss these important reforms. Following the consultation review, it is anticipated that the preferred option will be presented as a COAG Decision RIS in early 2014.

Internal system improvements

KPIs and benchmarking

As part of the ongoing refinement of its corporate performance framework, the EPA undertook a full review of its suite of performance measures in early 2013. This comprehensive review sought to ensure that the measures used by the EPA provide information that either:

- reflects the state of the environment
- demonstrates how the activities of the organisation contribute to desired outcomes, or
- drives performance improvement in key areas of EPA operations (for example, regulatory effectiveness or organisational efficiency).

A revised suite of measures and an updated style of reporting will be implemented from 2013–14.

Management reports have continued to be provided to the EPA Executive on a quarterly basis to demonstrate progress against existing targets in three broad management areas: operational, environmental and organisational. A trial dashboard-style report was provided to the EPA Board on a half-yearly basis and this type of reporting will continue in 2013–14.

In an expansion of the work designed to improve its corporate performance framework, the EPA continued to lead a project at the national level, where it offers guidance on the most appropriate performance measures for demonstrating effective environmental regulation. The completion of stage 1 of the AELERT project provided a picture of the current status of Australian and New Zealand regulators' use of performance measures, the theory and application across Australia and internationally, and the gaps evident after a comparison of best practice theory and deployment across Australia and New Zealand.

The EPA, in partnership with EPA Victoria, have committed to a project being led by the Organisation for Economic Co-operation and Development (OECD) to measure environmental compliance and to design analytically sound and policy relevant indicators. The project aims to assist environment enforcement authorities in OECD countries to adequately measure the effectiveness of their compliance assurance efforts and to enable policy makers and the public to see the actual impact of their programs. The EPA intends to use the project outcomes to benchmark against other OECD member countries; develop better outcome-focused compliance measures; and build strong relationships with international peers and leaders in the area of environmental compliance measurement.

The EPA has supported further work to develop published guidance material for all AELERT members relating to useful and effective performance measures.

EPASat Strategy for the EPA

In September 2012, the EPA Executive endorsed a new and additional form of performance review and reporting called 'EPASat'. EPASat consists of a panel of senior leaders who meet regularly to determine the type and level of outcomes/results being produced by the EPA and suggest policies and practices that might produce improvements.

EPASat provides an evidence-based, visual data-driven format that enables the leadership team to ask searching questions and discuss important topics at a more in-depth level than possible through the normal Executive process. The ongoing nature of the system and the imperative to follow up actions agreed at past meetings will provide a greater degree of drive, accountability and focus on the achievement of improved outcomes for the EPA.

The EPASat model is based on the principles of other PerformanceStat strategies that have been adapted to suit organisations and departments around the world. EPASat meetings require senior leaders to account for their branch/team's performance, provide a focus of celebration or learning depending on performance, and offer support to improve performance where necessary.

The EPASat Panel consists of:

- EPA Chief Executive (Chair)
- Deputy Chief Executive
- Executive Director, Operations
- Operations Director, Science, Assessment and Planning
- Operations Director, Mining, Radiation and Regulatory Support
- Key staff/managers relevant to the issue being evaluated.

The first pre-EPASat meeting for site contamination was held on 23 August 2012. A series of EPASat meetings have also been held for waste management, with the first meeting on 26 March 2013.

Public Sector Renewal Project – streamlining tuna industry regulation

The EPA has been working in partnership with PIRSA and the South Australian tuna industry in a Public Sector Renewal Program (PSRP) project to streamline regulation of the tuna industry.

The PSRP is a state government initiative to ensure the delivery of better quality and more innovative community services. PSRP projects have been directed towards improved service delivery, staff capability, development, local empowerment, productivity improvement and budget savings.

The project focused on licensing the tuna industry, particularly the timeliness and associated costs, while maintaining levels of environmental protection. At an industry workshop in Port Lincoln a broader range of issues was identified, priorities clarified and potential solutions explored. The streamlining of the licensing process was a key deliverable within the 90-day project, with longer-term issues such as lease arrangements being identified for resolution after the project's completion.

Statutory Authorities Review Committee Inquiry into the EPA

In April 2011, the Legislative Council of Parliament carried a motion to conduct an inquiry into the EPA, particularly the public notification protocols of contamination.

The Statutory Authorities Review Committee (SARC), which investigates matters relating to the role, performance and continuing relevance of state instrumentalities and independent public bodies, undertook the review.

The Review Committee's recommendations were:

- **Recommendation 1:** The EPA website be expanded to include all information currently contained in the Public Register and new information recorded in the Public Register be uploaded onto the EPA website as soon as reasonably practicable. Resources for the EPA to be reviewed to implement improvements to the Public Register system and the website.
- **Recommendation 2:** The Minister for Water and the River Murray should establish and keep a groundwater bore register and consider options of ensuring the registration of current unregistered bores.
- **Recommendation 3:** The EPA should explore the introduction of a quarterly community consultation meeting with community stakeholders.
- **Recommendation 4:** The Minister should consider the possibility of legislative reform to clearly define the roles and responsibilities between the EPA and other authorities (for example, local councils etc.) when dealing with minor/local environmental nuisances.
- **Recommendation 5:** The EP Act should be amended, so that the Object listed at section 10(1)(ix)(B) is included as a formal function of the EPA.
- **Recommendation 6:** In one year's time, the EPA is to attend before the Review Committee and report on the matters raised.

In responding to the recommendations of the Review Committee, the state government noted and supported the further investigation and implementation of the recommendations. The government also acknowledged that some of these actions are already being progressed by the EPA.

Licensing Administration Modernisation Project (LAMP)

The Licensing Administration Modernisation Project (LAMP) commenced in September 2010 and the EPA has made significant progress with this project during the 2012–13 financial year. The \$2.5 m project entails modernising the EPA's business application systems relating to licensing, waste levy auditing, waste tracking processes and the recording of old waste management commission records.

As part of LAMP, a new system will be implemented for the submission of application forms and payments online. The implementation of this system is scheduled in the first half of 2013–14 and will provide

significant benefits to licensees by simplifying the process of submitting forms, renewals, annual returns and payments.

An online waste tracking system from NSW EPA has been acquired and implemented on South Australia's infrastructure and customised to meet the EPA's interstate and intrastate waste tracking needs. The use of this system will provide the EPA with opportunities for harmonisation with NSW EPA and provide benefits to the waste industry. The implementation of this system is planned for mid-to-late 2013–14.

Modernising the systems and processes as part of LAMP is expected to result in efficiency gains for EPA staff and increased online services for licensees, such as electronic forms and payment options.

New intranet (The Hub)

The EPA's refreshed intranet system, 'The Hub', was launched in early December 2012 and is being jointly undertaken with DEWNR. The Hub provides quick access to online tools and applications as well as corporate announcements and events, and is coupled with a powerful searching tool to assist in the transition to an electronic working environment.

Consultation and work started in late 2012 on building a solid and strategic platform for managing the EPA's records and information. Collaboration and project sites were tested and built to meet the needs of future business requirements.

EPA staff and the Hub will evolve together to create a consistent and collaborative working environment where:

- information is shared with internal and external stakeholders to improve business processes
- individuals and teams collaborate to work effectively and efficiently
- records and information are created and captured as important assets of the EPA
- the EPA strives to achieve State Records SA compliance and Australian and international information best practices.

MEETING OUR ENVIRONMENTAL GOALS

South Australia has a unique and delicate environment, one that deserves to be protected for future generations. While the EPA has primary responsibility for regulating the environment, a collective effort is needed from all spheres of government, industry and the community to ensure our environment is well preserved.

Working with other organisations, the EPA achieves its environmental goals through scientific-based monitoring (such as water and air quality monitoring) and enforcing a streamlined regulatory approach. This section highlights some of the key initiatives undertaken during 2012–13 which assist the EPA achieve its goals given below.

As mentioned earlier in this report, the EPA's environmental goals are to ensure:

- **Good quality land:** protect land from the adverse impacts of pollution and waste by addressing historical site contamination, advising and regulating industry and promoting sustainable waste management (through the waste hierarchy).
- **Good quality water:** protect the quality of surface, ground, coastal and marine waters from pollution by monitoring water quality, advising and regulating industry and supporting water quality improvement projects.
- **Good quality air:** protect air quality from atmospheric pollutants by monitoring air quality, including odour, advising and regulating industry and supporting community based air quality improvement initiatives.
- **Protection from radiation:** protect the environment and the community from the health risks associated with ionising and non-ionising radiation by advising and regulating sites, mines, equipment and users of radiation.
- **Protection from noise:** Protect the community from exposure to unacceptable noise levels by advising and regulating industry and supporting local government and police with community based noise management.

A separate [annual report](#) on the *Radiation Protection and Control Act 1982* (RPC Act) provide information on radiation protection activities.

GOOD QUALITY LAND

Management of site contamination (historical pollution)

Site contamination continued to be a priority focus area for the EPA over 2012–13. As well as overseeing a number of specific contaminated areas, the EPA continued to strengthen systems, communications and tools, and input into national research organisations.

Accomplishments for the financial year included:

- increased transparency and availability of site contamination information through the web and print media
- accreditation of a fifth person as a site contamination auditor under the South Australian scheme; with an additional applicant accredited through the mutual recognition process
- contribution to the revision and publication of the Site Contamination NEPM, which establishes a contemporary and nationally consistent approach to the assessment of site contamination
- establishment of the first (contaminated) groundwater prohibition area in the suburbs of Allenby Gardens and Flinders Park
- regulation of significant site contamination issues at Hendon, Solomontown, Elizabeth, Aldgate, Mount Gambier and Clovelly Park.

Table 2 Notifications received by the EPA during 2012–13

Received documentation	2011–12	2012–13
Notifications of commencement of site contamination audit	53	46
Site contamination audit reports	35	24
Notifications of termination of site contamination audit	9	18
Agreements for the transfer of liability for site contamination	6	9
Notifications of harm to groundwater	100	89

Working with CRC CARE

[CRC CARE](#) is Australia's leading science-based partnership for assessing, preventing and remediating contamination of soil, water and air.

CRC CARE's second term of operation has seen an increased focus on assisting in the development of uniform national standards for assessing and remediating contamination. The outputs from the research programs will fill knowledge gaps and allow adoption of remediation that balances health and environmental protection with economic and social considerations.

The EPA is a proud financial partner of CRC CARE. Some of the work to which the EPA is actively contributing includes:

- the drafting of the framework for the accreditation of site contamination professionals
- the Societal Perceptions of Remediation Technologies project
- the drafting of the National Remediation Framework
- the Policy Advisory Committee and the Research and Technology Committee
- co-supervising a PhD thesis on Title Blight
- Beyond 2020 Committee which focuses on identifying a sustainable funding structure for CRC CARE.

National Environment Protection (Assessment of Site Contamination) Measure 1999

The *National Environment Protection (Assessment of Site Contamination) Measure 1999* (the ASC NEPM) was gazetted on 22 December 1999 and has been recognised as the primary national guidance document for the assessment of site contamination in Australia. The ASC NEPM was made under the Commonwealth *National Environment Protection Council (NEPC) Act 1994* and is given effect by specific legislation and guidance in each state and territory.

The purpose of the ASC NEPM is to establish a nationally consistent approach to assessing site contamination among regulators, site assessors, environmental auditors, landowners, developers and industry.

In December 2004, a review of the ASC NEPM was initiated and on 11 April 2013 an amendment to the ASC NEPM was officially approved by the NEPC. The key changes to the ASC NEPM resulting from the review relate to the areas of human health risk assessment, ecological risk assessment, petroleum hydrocarbons and vapour assessment, and asbestos.

The amended document will provide improved guidance for the assessment of site contamination in Australia, potentially leading to improved financial, human health and environmental outcomes through a consistent and up-to-date national approach, which delivers adequate and balanced protection of human health and the environment.

Regulators throughout Australia have agreed in principle to a transition period of up to 12 months for full implementation of the new ASC NEPM guidelines. The transition period allows for regulators to implement any legislative or administrative steps required to put the amendment into effect.

In South Australia, the amended ASC NEPM has implications for:

- the policy and guidelines currently in use by the EPA and other state and local government agencies
- site contamination auditors, consultants and other environmental professionals carrying out assessment, remediation and auditing
- state and local government, developers, industry, planners and the community involved in assessing, developing and managing land where site contamination has been identified as a potential or known issue.

A program for the implementation of the amended ASC NEPM in South Australia has been developed by the EPA, based on the national plan. This program aims to ensure that stakeholders are aware of the changes and transitional plan and that relevant guidance material is reviewed and updated to ensure consistency with the amended ASC NEPM.

Major sites

Elizabeth (GeneralMotors Holden)

The EPA was provided with a section 83A notification of site contamination of underground water on 10 July 2009 for the vehicle assembly plant site, Holden Vehicle Operations, located at Philip Highway, Elizabeth. The notification was in response to the identification of light non-aqueous phase liquid at a portion of the property.

Subsequent assessment has determined that the groundwater contamination extends extensively off site. The contaminants identified are chlorinated hydrocarbons, including trichloroethylene (TCE) and perchloroethylene (PCE).

General Motors Holden (GMH) has engaged a site contamination auditor to prepare a contamination audit report for the site. The audit report will assess the groundwater contamination present on and off the GMH property.

The EPA has advised property owners in the area to avoid using underground water for any purpose. GMH has assessed the risk of vapours from these chemicals entering homes. The assessment has determined that there is no vapour risk to residents from the contaminated groundwater.

The EPA will continue to work with GMH as the assessment and remediation activities progress.

Port Stanvac (Mobil Refinery)

The EPA is continuing to oversee the assessment and remediation of the Mobil Port Stanvac Refinery site using the site contamination provisions under the EP Act.

On 17 June 2011, the EPA agreed to the voluntary site contamination assessment proposal (VSCAP) prepared by Mobil. The VSCAP is a statutory proposal prescribed by the Act and is made available on the EPA Public Register.

The VSCAP expires on 1 June 2013 and Mobil has presented the EPA with a second VSCAP for the additional assessment works required at the site.

Mobil submitted environmental management plans for the demolition of infrastructure at the site. Physical demolition works commenced in August 2012 and are well underway. Following demolition, environmental remediation work can commence.

Quarterly meetings are held between the EPA and Mobil for the purpose of providing updates on the works at the site.

Hendon (groundwater contamination)

In May 2012, the EPA advised approximately 2,900 landowners in the area that they should not use groundwater until further notice. The EPA became aware of the potential contamination as a result of historical information provided to the EPA which identified off-site groundwater contamination for a site located on Philips Crescent, Hendon.

The EPA informed the community that it would undertake an assessment in the Hendon/Seaton/Royal Park area to gather new information about the contamination. A site contamination consultant was engaged to carry out the installation and subsequent sampling of groundwater and soil vapour wells in the investigation area, targeting sensitive land uses.

The EPA received a report which indicated that groundwater contamination had been identified throughout the assessment area. The contaminants identified included the chlorinated hydrocarbons, perchloroethene (PCE), trichloroethene (TCE) and dichloroethene (DCE), and metals. The EPA continues to advise landowners in the investigation area that groundwater should not be used for any use.

Chemical substances were also detected in soil vapour wells in the investigation area, predominantly PCE and TCE. At this time, it is unclear whether the presence of these chemical substances poses a risk to receptors in the area and further assessment works are being undertaken by the EPA to better understand the contaminant plume and any risks associated with the identified contamination.

AllenbyGardens (groundwater contamination)

In June 2013 the EPA established the first Groundwater Prohibition Area, in Allenby Gardens and Flinders Park, under the provisions of Section 103S of the EP Act.

The groundwater became polluted or contaminated from the dumping of industrial rubbish and residues in an old pit (pughole) on a property in AllenbyGardens. The pit resulted from the excavation of clay material for brick-making purposes. The oils and solvents dumped in the pughole leached into the groundwater and, over time, moved northwesterly with the flow of the groundwater towards the ocean.

In the area of Allenby Gardens and Flinders Park a number of groundwater wells or bores access the groundwater from the top watertable aquifer and a deeper second aquifer. The groundwater, when uncontaminated, is considered potentially suitable as a domestic water supply. Groundwater in this area has been used for garden and lawn watering, filling of swimming pools and greywater application such as

toilet flushing. The leaching of harmful chemicals into the groundwater can impact on an aquifer system and can pose a risk to human health or human safety if the groundwater is used.

Once groundwater has been assessed to be contaminated it is important to manage it, such that human health or human safety is not jeopardised. In cases where it is extremely difficult and invasive to treat or remove or contain the chemicals in the groundwater, eliminating human contact with the groundwater becomes the best option for managing the risk. It has been estimated that the chemical substances will exceed guideline values for this area until the year 2050.

A groundwater prohibition area provides a strategy based, long-term and legislative way by which the use of groundwater is prohibited for any purpose and therefore eliminates the human exposure to contaminated groundwater. It also ensures that this information is passed on to new property owners for years to come.

Illegal dumping

Illegal dumping has been a significant problem for both the community and the government for a considerable time. The EPA's Illegal Dumping Unit targets the illegal dumping of hazardous waste, controlled waste and commercial quantities of construction and demolition waste.

During 2012–13 the Illegal Dumping Unit has:

- reviewed 100 complaints and enquiries in relation to illegal dumping, 49 of which have been finalised.
- conducted a total of 21 investigations into illegal dumping activities, including seven incidents and 10 matters carried over from 2011–12, seven of which have been finalised:
 - one matter referred to local government
 - one warning letter
 - one EPO
 - two matters discontinued due to insufficient evidence to identify offenders
 - two matters filed as no offences were disclosed.
- conducted a campaign in the southern and northern waste precinct and issued 14 expiations (fixed penalty fee) to drivers of trucks transporting uncovered waste.

As of May 2013 there were:

- 12 matters under active investigation
- two matters under review by the Crown Solicitor's Office to determine the sufficiency of evidence.

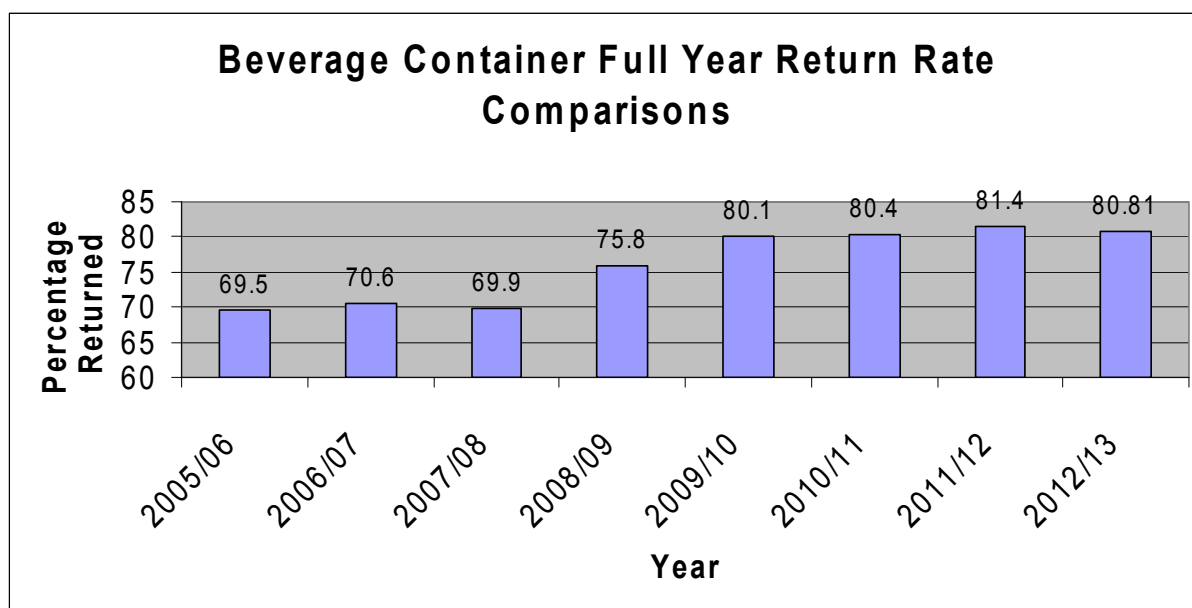
Container deposit legislation

South Australia's container deposit scheme continues to generate extremely high rates of return of beverage containers (Table 3 and Figure 2). The September 2008 refund increase to 10 cents continues to be a catalyst for increased return rates. Table 4 shows the return rates for the various container types for 2012–13 and prior to the 10-cent refund increase.

In regard to a potential national container deposit scheme, the National Ministerial Standing Council for Environment and Water (SCEW) has undertaken a decision regulatory impact statement (DRIS) to assess potential options for increasing the recovery of packaging materials and decreasing litter from packaging materials. The DRIS is scheduled to be completed in late 2013 and will then be considered by Environment Ministers, who will make a decision via SCEW on whether a national scheme should progress. South Australia has been actively involved in each stage of the development of the DRIS and remains supportive of a national container deposit scheme.

Table 3 Percentage return rates for beverage containers

Year	% Return
2007–08	69.9
2008–09	75.8
2009–10	80.1
2010–11	80.4
2011–12	81.4
2012–13	80.8

**Figure 2** CDL annual return rates**Table 4** Return rates 2012–13 for the various container types and prior to the 10-cent refund increase

Container type	Return rates 2012–13	Prior to refund increase
Glass	85.7	78.5
Aluminium	86.9	77.3
Polyethylene terephthalate (PET)	72.2	63.6
High-density polyethylene (HDPE)	58.2	49.2
Liquid paperboard cartons (LPD)	62.9	35.4

Plastic bag legislation

Retail compliance and consumer acceptance of the plastic bag ban remains high, although there continues to be instances of non-compliance at events with a strong contingent of interstate-based transient traders. The EPA, which administers the *Plastic Shopping Bags (Waste Avoidance) Act 2008*, did not issue any expiation notices during the past financial year but is reconsidering its compliance strategies for dealing with this type of situation, with a view to taking more formal action in the future.

Several other jurisdictions have enacted very similar legislation to the South Australian model. The Northern Territory incorporated its plastic bag legislation into the *Environment Protection (Beverage Containers and Plastic Bags) Act 2011*, with the ban commencing on 1 September 2012. The Australian Capital Territory's ban commenced on 1 November 2011.

The most recent jurisdiction to introduce a ban on lightweight shopping bags is Tasmania, whose ban will commence on 1 November 2013.

Table 5 Plastic bag compliance statistics

Plastic bag compliance statistics	2012–13	2011–12
Inspections (total)	115	122
Number of failed inspections	23	16
Written 'cautions/warnings' issued	23	14
Expiation notices issued	0	0
Environment protection orders issued	0	0

GOOD QUALITY WATER

Adelaide Coastal Waters Quality Improvement Plan

The Adelaide Coastal Water Quality Improvement Plan (ACWQIP) was released in June 2013. The focus of the ACWQIP is on reducing the nutrient and sediment loads entering Adelaide's coastal waters from industrial and wastewater treatment plant discharges and via stormwater. The eight strategies of the ACWQIP link to other key South Australian Government activities relating to stormwater, such as work under the Adelaide and Mount Lofty Ranges Regional Natural Resources (AMLRNRM) Management Plan, Water for Good, the Stormwater Management Strategy and the Blueprint for Urban Stormwater Management.

Considerable progress in reducing pollutants to Adelaide's coastal waters from industrial and wastewater treatment plant discharges was made through process and plant improvements. The ACWQIP provides clear, agreed long-term targets for nitrogen discharges to Adelaide's coast and, while negotiating continuous improvement is always challenging, there is clear community and stakeholder support for this process to continue until sustainable loads are achieved.

The ACWQIP also provides clear guidance for a range of stakeholders on the importance of managing suspended solids and coloured dissolved organic matter loads from stormwater. This can be achieved through increased stormwater reuse, assisted by improved uptake of water sensitive design features, particularly for infill development and the refurbishment of existing streetscape infrastructure. The EPA is currently leading the implementation of the ACWQIP and will use its influential role to encourage integrated and cost-effective outcomes in partnership with a range of key stakeholders.

Mount Lofty Ranges Quality Improvement Plan

The draft Mount Lofty Ranges Watershed Water Quality Improvement Plan (WQIP) has undergone further development, with considerable technical review and a redraft to ensure that it can be delivered in a web-friendly format.

A series of key stakeholder consultations has commenced to reach agreement on the range of actions to be progressed when the plan is implemented.

The WQIP will assist with the protection of water quality in the Mount Lofty Ranges Watershed in an efficient manner, by ensuring that key activities in sensitive locations receive timely direction for achieving long-term water quality, which is sustainable for local ecosystems and Adelaide's water supply. The implementation of the WQIP will result in guidance to industry and community stakeholders from water quality managers such as the Adelaide and Mount Lofty Ranges Natural Resources Management Board, DEWNR and local councils that is consistent with the aims of the Environment Protection (Water Quality) Policy 2003.

LakeBonney Environmental Values Project

The EPA developed community agreed environmental values (EVs) for the future water quality management of LakeBonney in the South East during 2012–13. This project built on work the EPA has been undertaking since 1993 to bring the lake back from a highly degraded state. This work, including negotiated outcomes with Kimberly–ClarkAustralia and SA Water, has resulted in a gradual improvement in the lake's water quality. The EPA is now negotiating with KCA to authorise its discharge under the EP Act when its indenture ceases. The EPA will use agreed EVs and associated water quality objectives to inform discharge targets that will guide long-term investment by KCA at the site. The agreed EVs and water quality objectives will also underpin monitoring, which will give the community confidence in the state of the lake.

In 2012, the EPA worked with the local communities in the South East and Millicent to gain feedback on the desired future for LakeBonney and its catchments. Groups included in this consultation included the hunters and fishers, the South-East Aboriginal Reference Group, South Australian Recreational Fishers, local residents, industry and local government.

A report detailing the outcome of these discussions, *LakeBonney, SE – Report of the consultation and the community's aspirational environmental values*, was circulated to the community for comment. These aspirational EVs will now be reviewed against the existing water quality of the lake, and the effort needed to improve the water quality to support each aspirational EV will be assessed against the 'reasonable and practicable' regulatory requirements of the EP Act.

The appropriate management responses to ensure that the lake's water quality continues to improve will be described. These will include information about the extent to which the aspirational EVs are likely to be met in the 10–30 year timeframes, based on the EPA's current understanding of how the lake will respond to changes in pollutant loads. A final report containing all of this information will then be circulated for feedback from the public in late 2013.

Although LakeBonney remains degraded, the water quality of the lake could now support a wider variety of uses. The consultation process by the EPA has encouraged the community to explore possible future uses, including limited boating and other recreational activities.

Wastewater treatment plants

Christies Beach Wastewater Treatment Plant

In 2012–13 the EPA revised SA Water's Christies Beach Wastewater Treatment Plant (WWTP) to include a nitrogen load limit, which is an enforceable mechanism for driving nitrogen discharge reductions and achieving the targets of the Adelaide Coastal Water Quality Improvement Plan.

In addition the EPA has required an improved and more scientifically rigorous methodology for receiving environment and plant performance monitoring. This will ensure appropriate assessment of potential impacts on the receiving environment, based on sound science and a clear understanding of plant performance.

This focused regulatory effort sets a new precedent for delivering nitrogen reduction in the metropolitan coast and ensuring quality environmental monitoring across major WWTPs in the future.

Benchmarking project

To assist the EPA's regulatory prioritisation, a benchmarking project has been undertaken to provide a visual representation of SA Water plant performance, based on treatment volume and nutrient removal efficiency. This allows the identification of plants operating outside an expected performance curve and defined standard.

The outcomes of the benchmarking project contribute to a qualitative risk assessment framework developed as a prioritisation tool for SA Water facilities. This approach identifies those facilities which may pose greater environmental risk than others, based on a number of factors including:

- location
- condition and reliability of plant and equipment
- the robustness of environmental management systems and processes in place
- history.

This information has enabled the EPA to inform SA Water's plan for operating and investing in sewerage services in the future. This approach aims to ensure that investment proposals address the environmental priorities identified by the EPA and that harm reduction outcomes are achieved. These priorities have included minimising chlorine discharges to inland receiving waters and increasing recycled water reuse.

Plant upgrading in the District Council of the Copper Coast

The EPA has facilitated a wide-scale significant upgrade to wastewater management provision in the District Council of the CopperCoast. This has resulted in the commencement of a major plant upgrade at Wallaroo and a new wastewater treatment plant servicing coastal towns previously connected to potentially

failing onsite septic tank systems and an overloaded WWTP. These historic conditions have contributed to nutrients entering nearshore marine waters and impacting upon sensitive marine habitats.

These major capital infrastructure upgrades have delivered sustainable waste management outcomes for the region, protection of the previously affected nearby marine environment and support for ongoing development in the region.

River Murray, Coorong and Lower Lakes

Vessel and facility management

During 2012–13, the EPA progressed a number of initiatives associated with the implementation of the [*Code of Practice for Vessel and Facility Management \(Marine and Inland Waters\)*](#).

Key areas include:

- continued expansion and implementation of wastewater management requirements for all vessels operating on South Australia's marine and inland waters
- discussions and further relationship-building with the Department of Planning, Transport and Infrastructure with the aim of incorporating the new EPA greywater regulations for commercial vessels into future DPTI bi-annual vessel surveys
- ongoing development with industry to improve the reliability of wastewater treatment solutions as an alternative to retention and pump-out
- continuation and expansion of the industry inspection trial to allow EPA licensed slipways and accredited marine surveyors to inspect and assess vessels operating on inland waters for compliance with the black and greywater requirements specified in the code of practice
- ongoing work with the houseboat industry and houseboat operators to successfully develop and improve the reliability of 'world-first on-board greywater treatment technology'
- furthering the work achieved so far by implementing an enforcement campaign to help deliver objectives as set out in the code.

Lower Murray Reclaimed Irrigation Area acidification investigation and assessment

Further investigations and in-field remediation trials were undertaken in the Lower Murray Reclaimed Irrigation Area (LMRIA) salt drain acidification joint program in 2012–13. The program is a partnership between the EPA, Murray–Darling Basin Authority, DEWNR and SA Water and delivered a number of individual projects designed to identify scenarios and possible risks to the health of the River Murray by:

- monitoring river channel discharges as well as on-farm drainage networks
- modelling impacts to the river channel from drainage discharges under a number of realistic flow scenarios
- investigating possible long-term ecological effects from discharges
- trialling a number of unique initiatives to treat and potentially remediate the LMRIA.

Further to this, EPA staff were instrumental in delivering community support and awareness through tailored communication, representation on a number of community panels and personal visits.

Coorong, Lower Lakes, Murray Mouth (CLLMM) water quality monitoring and assessment

The monitoring program funded through the Commonwealth Government's 'Murray Futures' program was designed and developed over the drought period to determine the effects of acid sulfate soil material on the water quality of the region. Officers of the EPA routinely undertake monitoring and evaluation of surface and groundwater in the Coorong Lower Lakes and Murray Mouth region of the state.

During 2012–13, with the site re-inundated, the monitoring continued to show evidence of post-drought effects on water quality and the ecology of the water body, specifically:

- persistent elevated salinity >3000 EC (above long-term average conditions <1500 EC) within Lake Albert, despite almost three years of flows and elevated water levels
- persistent acidity in marginal surface water sites (Boggy and Hunters Creeks)
- ongoing and persistent low pH and groundwater acidity since refill
- ecological richness depression at a number of sites around the lake margins due to microphyte (plant) loss and change in lake bed character.

EPA involvement in South Australian response to proposed Murray–Darling Basin Plan

The EPA continues to take part in the multi-organisation process to comment on, develop and commence implementation of the Murray–Darling Basin Authority's Basin Plan. Specific aspects include the water quality and salinity management plan, the environmental watering plan, water resource plan requirements, and monitoring and evaluating the effectiveness of the plan.

Aquatic ecosystem condition reports

EPA surface water-quality monitoring and evaluation uses multiple lines of evidence, including biological and ecological measures as well as traditional water chemistry, to assess aquatic ecosystem condition. [Aquatic ecosystem condition reports](#) (AECRs) have been designed to be broadly informative about the condition of SA aquatic ecosystems and to support associated environmental management decision making. The reports present the 'observed' aquatic ecosystem condition on a six-level scale: Excellent, Very Good, Good, Fair, Poor and Very Poor. To provide context, the 'expected' condition of the ecosystem is also presented, based on desktop risk assessment work.

The AECRs follow a standard 'condition–pressure–response' framework. In addition to describing ecosystem condition, they also identify the key pressures likely to cause impacts and the management responses in place to address those pressures. The management responses highlight the development and implementation of various initiatives by state and local governments, NRM Boards and industry.

The second set of creeks and rivers AECRs were released in September 2012 and covered 72 inland waterway sites in the Adelaide and MountLoftyRanges. The majority of these inland waterways were rated as 'Fair' to 'Very Good' on the ecosystem condition scale, with the key pressures on these ecosystems identified as excess nutrients and sediments washed off urban and agricultural catchments. It has taken more than 170 years of European settlement for the waterways to reach their current condition, making improving them a significantly long-term challenge.

Table 6 Observed ecosystem condition on AECRs for 72 creek sites in the Adelaide and Mt Lofty Ranges (AMLR) NRM region (2011 data)

Observed condition	Excellent	Very Good	Good	Fair	Poor	Very Poor
AMLR	0	1	10	27	24	10

The third set of creeks and rivers AECRs was released in June 2013. These covered 65 inland waterway sites in the South Australian Arid Lands (SAAL) and Northern and Yorke NRM regions. The majority of these inland waterways were rated as 'Good' to 'Very Good' on the ecosystem condition scale, with the key pressures on these ecosystems again identified as excess nutrients and sediments washed off agricultural catchments.

Table 7 Observed ecosystem condition on AECRs for 65 creek sites in the SA Arid Lands and Northern and Yorke NRM regions (2012 data)

Observed condition	Excellent	Very Good	Good	Fair	Poor	Very Poor
NY (11 sites)	0	1	3	5	2	0
SAAL (54 sites)	0	5	29	18	2	0

In June 2013 the EPA also released the first set of marine AECRs. These were based on the monitoring data from marine 'biounits' (during 2010 and 2011) in Lower Spencer Gulf and Gulf St Vincent. These rated between 'Excellent' and 'Poor' on the ecosystem condition scale. Excess nitrogen from industry and stormwater discharged to the marine environment were identified as the key pressures that require management. [Detailed methods and assessment reports](#) are available on the website.

Table 8 Observed ecosystem condition on AECRs for nine biounits in Gulf St Vincent and Lower Spencer Gulf regions (2010 and 2011 data)

Marine region and biounit	2010	2011
Gulf St Vincent		
Adelaide metropolitan	Fair	Good
Yankalilla	Poor	Poor
Nepean	Good	Good
Orontes	Very Good	Very Good
Clinton	Very Good	Very Good
Lower Spencer Gulf		
Jussieu	Good	Not sampled in 2011
Franklin	Good	
Tiparra	Excellent	
Wardang	Poor	

Real-time beach water quality advice

Historical monitoring by the EPA across Adelaide's beaches has indicated that they are safe for swimming for the majority of the time. For short periods of time after considerable rainfall events the water quality is not suitable for swimming, as discoloured stormwater can be flushed onto the beaches and impact on the water quality.

In 2012–13, the EPA rolled out a trial beach water quality reporting system in partnership with the Adelaide and Mount Lofty Ranges Natural Resources Management Board. The trial was launched by the Minister in December 2012 and is based upon real-time flow data collected by the AMLNRM Board at seven locations across the Adelaide metropolitan area. The system provides alerts on both the EPA website and through an email alert service to which people can subscribe, enabling interested stakeholders to be notified when stormwater is being discharged to the metropolitan beaches.

Six alerts were issued between December 2012 and April 2013 for separate flow events, with most relating to flows from major stormwater outlets at Patawalonga/Barcoo and the Torrens River.

GOOD QUALITY AIR

Framework for air quality

In 2012–13, the EPA initiated the development of a Framework for Air Quality for South Australia to provide guidance for the management of air quality over the next decade or so. Covering both Greater Adelaide and the regional industrial and agricultural areas of the state, the project has its origins in a government-endorsed recommendation of the 2008 State of Environment Report.

A pilot air quality strategy project commenced in 2010 with a focus on Port Adelaide–LeFevre Peninsula, a collaboration between the EPA, several key state agencies and the City of Port Adelaide-Enfield. The area was chosen for its unique mix of industry and commercial activities, transport infrastructure and residential land uses, providing an excellent test bed for strategic approaches to air quality. The active participation of groups and individuals from the local community, industry and commercial interests, and members of State and Commonwealth Parliaments was a crucial element of the project.

In March 2012, the state government decided to broaden the focus of the project into a Framework for Air Quality, covering Greater Adelaide and other regional centres of the state and incorporating what had been learned from the pilot program. The new framework will incorporate strategies for reducing emissions from a wide variety of sources, such as transport and domestic appliances, complementing the current active regulation of industry emissions by the EPA.

In a region such as metropolitan Adelaide, the government's view is that, while it needs to actively implement broad strategic actions for air quality, there is also a need for collaboration with local communities and their councils to address more localised concerns more effectively. Outside Greater Adelaide, each regional industrial centre also has its own unique character, industrial base, and consequent special air quality concerns.

The draft Air Quality Framework sits in the context of South Australia's Strategic Plan and complements other important planning documents such as the *30-Year Plan for Greater Adelaide*.

The project is also occurring in parallel with a comprehensive review of the Environment Protection (Ambient Air Quality) Policy, providing important regulatory underpinning and policy guidance for coming decades and within the context of major national initiatives on air quality. In particular the EPA is actively participating in the statutory review of the Air Quality NEPM and the development of a National Plan for Clean Air, under the umbrella of the COAG Standing Council on Environment and Water (SCEW).

Adelaide air quality data

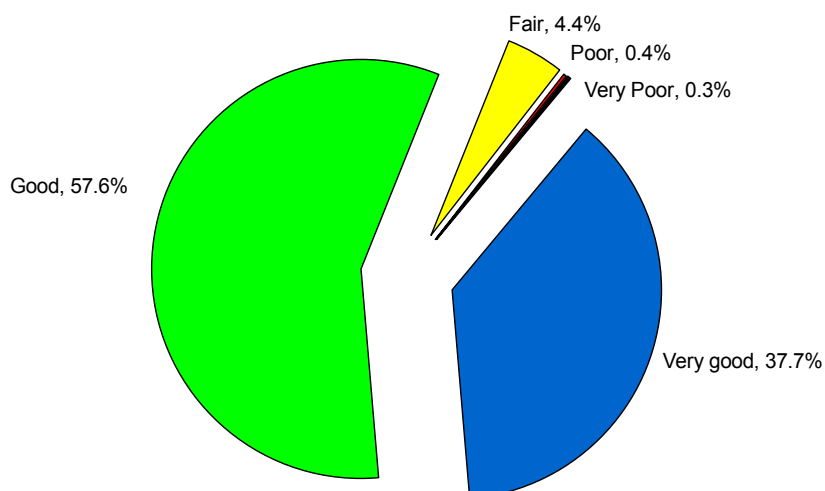


Figure3 Adelaide's air quality index for 2012–13

The pie chart of Adelaide's air quality index shown in Figure 3 describes the general air quality in the Adelaide metropolitan area. This is a summary of air pollutant levels of particles, ozone, nitrogen dioxide, carbon monoxide and sulfur dioxide monitored in the Adelaide metropolitan region.

Air quality in Adelaide can be considered good or very good 95.3% of the time.

Generally, during dry conditions and when winds are high, dust blown from regional areas can combine with other forms of particle pollution, such as those from industry, motor vehicles, bushfires and sources in the metropolitan area, to cause dust levels above the National Environment Protection (Ambient Air Quality) Measure (Air NEPM) standards. However, improved rainfall and humidity were major factors in reducing these levels during 2012–13.

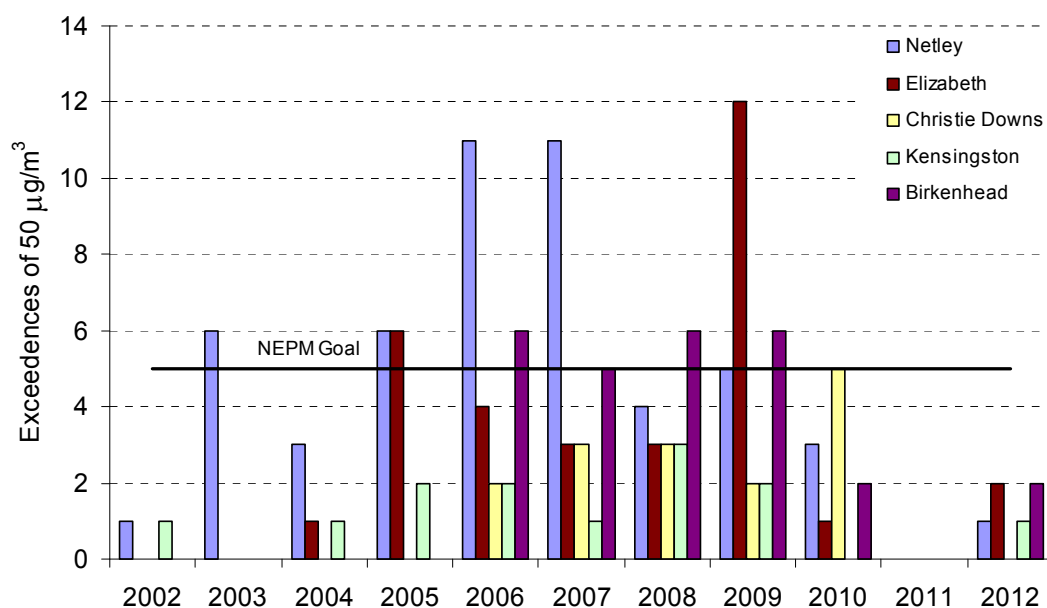
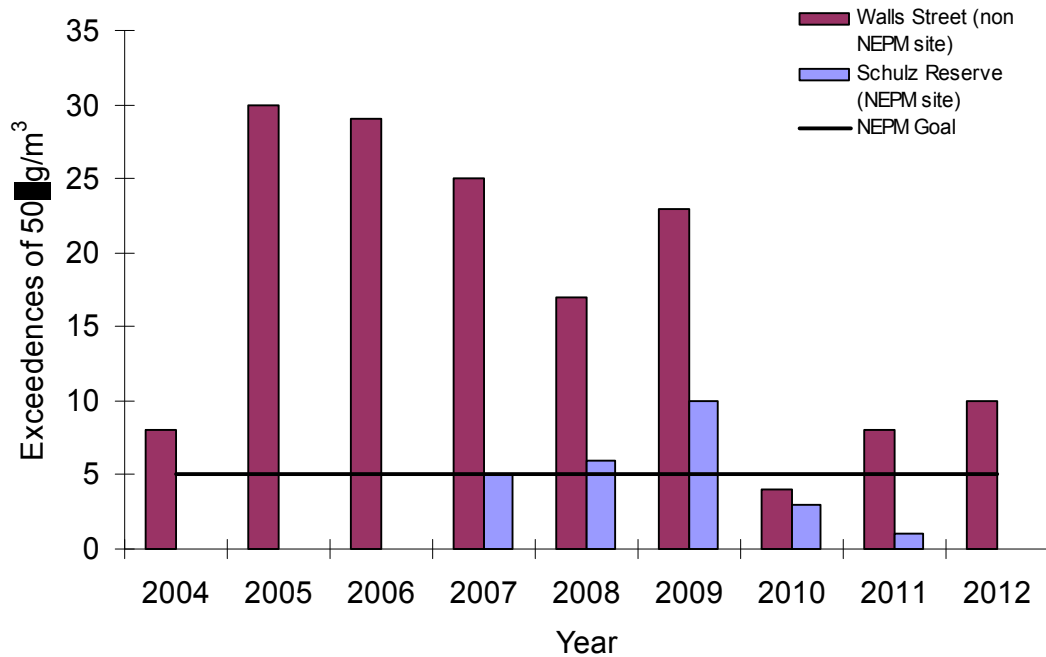


Figure 4 Annual exceedences of the Air NEPM PM₁₀ standard at Adelaide monitoring sites.
No exceedences of the NEPM Standard or Goal were measured in 2011.

The metropolitan monitoring network provides a comprehensive picture of particle concentrations across Adelaide. Exceedences of the NEPM Goal have reduced in recent years, partly as a result of wetter conditions after drought years.

Whyalla air quality data



Notes: Compliance with the Air NEPM is assessed at Schulz Reserve only
 Monitoring at Walls Street commenced 02/07/2004
 Monitoring at Schulz Reserve commenced 27/04/2007

Figure 5 Annual exceedences of the Air NEPM PM₁₀ standard at Whyalla monitoring sites

The Whyalla monitoring network provides a picture of particle concentrations at residential and near industry sites across Whyalla. Exceedences of the NEPM Standard or Goal have reduced in recent years due to improved industry emissions and wetter weather.

Port Pirie air quality data

Nyrstar's plans to transform its smelting technologies and significantly reduce its emissions along with information about Port Pirie's air quality (see earlier section Nyrstar).

Motor vehicle air emissions inventory for Adelaide

Motor vehicle emissions are the major contributors of hazardous pollutants in urban airsheds. For example, according to the National Pollutant Inventory (NPI) figures, motor vehicles contribute up to 20% of PM₁₀, 67% of nitrogen oxides NO_x, 40% sulphur dioxide SO₂ and 80% carbon monoxide CO in the Adelaide airshed (that is, the Adelaide metropolitan region).

However, NPI figures do not necessarily reflect potential population exposures close to the major roads themselves. The EPA is working to understand patterns of exposures in communities where major transport corridors may influence exposure to particles and other pollutants in the Adelaide airshed. This includes developing fine-scale inventories and atmospheric models for population exposure to underpin planning designed to reduce community exposures over the coming decade or so.

As part of the government's strategic approach to reducing traffic pollution and its impacts, the EPA has continued its academic collaboration with the University of South Australia in a project that aims to improve estimations of motor vehicle emissions in the inventory database and produce measures of population exposure to traffic emissions. The EPA is also continuing its collaboration with the University of Adelaide and the Department of Health in a study to understand the co-benefits of alternative transportation on air quality and public health. The EPA is also involved in quantifying the impact on air quality of the South

Australian Government's future development programs, and is also actively contributing to the development of a National Plan for Clean Air, under the auspices of the SCEW.

New monitoring stations project (Adelaide CBD, North Haven, LeFevre Peninsula)

Two new monitoring stations are being established in areas where there are both higher population numbers and sources of air pollution, such as motor vehicles, industry and residential emissions: on the Le Fevre Peninsula and within Adelaide's Central Business District. These stations will assist in providing a more complete picture of the population's exposure to air pollution emissions.

The Le Fevre Peninsula site commenced producing valid data for particles, nitrogen oxides, ozone and sulfur dioxide at the beginning of April 2013. Equipment for the CBD site has been purchased to monitor particles, nitrogen oxides and carbon monoxide expected mainly from motor vehicles. Negotiations for the location of this site are not yet complete but a central location is being sought.

The data from these sites will provide additional support for implementing the government's 30-Year Plan for Greater Adelaide and the Adelaide Council's plan for a pedestrian-friendly city.

PROTECTION FROM NOISE

Wind farms and EPA involvement

Wind farms have become the subject of considerable debate in some communities where they are located and increasingly in communities where wind farm projects have been proposed.

South Australia currently has 15 operational wind farms, the majority of which are in the Mid-North and the South East of the state, primarily sited in these areas due to a viable wind source and proximity to electricity transmission infrastructure.

In 2011–12, approximately 24% of South Australia's energy production was generated from wind farms. The state has a renewable energy target of 33% by 2020, with a large proportion of this target likely to be generated by wind power. The generating capacity of current and proposed wind farm facilities in South Australia is also well in excess of half of the total capacity in Australia.

Wind farms are regulated through the planning system in South Australia, with ultimate responsibility lying with planning authorities. In many cases the local council assessment processes cover a whole range of issues and impacts, and the role of the EPA is limited to providing advice to planning authorities on noise, in accordance with its [Wind Farms Environmental Noise Guidelines](#).

Every wind farm approved in South Australia has had its noise impact assessed at pre- and post-construction phases by independent acoustic consultants, with only one confirmed non-compliance incident occurring in the approximately 10 years of wind farm operations in South Australia. The problem was caused by the presence of 'tone' at one of the receivers at the Hallett 2 Wind Farm, due to issues with the particular model of turbine. The wind farm owner has since eliminated the problem.

In 2011–12, the EPA was able to purchase continuous monitoring equipment, which has greatly enhanced its capability to understand noise environments. During 2012–13, the EPA used the new equipment for three important studies, including a major study around the Waterloo Wind Farm, in the central region north of Adelaide.

In September 2012, the EPA initiated a project whose aim was to understand infrasound levels in various urban and rural environments, particularly in city office locations near traffic corridors and domestic environments, including houses in the vicinity of two wind farms. Infrasound can be defined as sound or noise where the energy lies mainly in the frequency range below 20Hz. In this study, analyses of infrasound covering the range from around 25Hz down to 0.25Hz indicated that infrasound levels at houses that are a reasonable distance from wind farms were no more severe than those from other sources and were considerably lower than infrasound levels within the city. The EPA has since re-analysed the data within the audible 'low frequency' band between 20Hz and 200Hz, arriving at similar results.

Waterloo Wind Farm

In April 2013, the EPA initiated a study to investigate the concerns of the Waterloo community regarding perceived noise impacts arising from the Waterloo Wind Farm.

The aim of the study is to determine whether there is any physical basis for noise characteristics described by various residents in the vicinity of the wind farm and the conditions under which any such events occur. This would further the EPA's understanding of the influences that may be acting in the noise environments experienced by residents.

In designing the project, the EPA made an early decision to work independently of all parties in the debate around wind farms, in the interests of remaining as objective as possible. However, the EPA is relying on, and is grateful for, the active participation of both community members and the wind farm operators, both of whom have provided a range of complementary information for the project.

Rather than attempting to undertake a comprehensive generalised survey of noise around the wind farm, the EPA made a clear decision to focus directly on the question of whether there is any physical basis for the effects described by residents in the area and, if so, the factors that may be associated with them. The

EPA offered further assurances that this was not a health study. To that end, noise and associated meteorological instruments have been installed at six houses where residents have made very specific complaints about noise and its impacts.

The physical monitoring is combined with a broader community diary component, for which the EPA had around 60 volunteer participants. Residents have been supplied with weekly diaries and requested to record any noise events and the times at which they occur, along with supporting information about the weather and any other local conditions they considered relevant. Information from the weekly returns would be compared with instrumental data to develop a picture of the noise environment in the vicinity of the wind farm and any conditions that may influence it.

The information-gathering stage is designed to continue for two months and is projected for completion by mid-June, after which the task of analysing large volumes of data will commence. It is expected that a report will be published on the EPA website in late 2013. The EPA provided regular summaries of noise and diary return data on its website during the project and made comprehensive datasets available to the community, researchers and other interested people on request.

At the conclusion of the study, the EPA will be asking health authorities to consider the significance of the results for future guidance on wind farms. The EPA is aware that the National Health and Medical Research Council is reviewing current knowledge at this time and notes that in May 2013 the Victorian Department of Health released a statement on wind farm noise.

Noise mapping at Bowden

In September 2012, the EPA initiated a noise-monitoring program at Bowden Urban Village in Adelaide's inner northwestern suburbs. The aim of this monitoring was to establish a baseline understanding of the existing noise environment in a typical transit-oriented development (TOD), in order to enable the prediction of the likely future noise impacts and the provision of advice to the site developer (Renewal SA) on effective mitigation of any noise issues for the future residents of the TOD.

The first phase of the project involved gathering six months of baseline noise data, commencing in September 2012 and concluding in March 2013. A key finding of this initial stage of noise monitoring was the identification of road traffic noise as a significant issue during both day and night, in particular for buildings along Park Terrace.

The next phase of the project is the production of noise maps detailing the current exposure to noise across the site from each of the significant noise sources in the area. The maps will also assist in the prediction of the future noise impact, following completion of the TOD in several years' time, taking into account increases in noise exposure due to increasing traffic and activity in the area, as well as the changing built form, arising from development at the site.

At present, the EPA is working on the development of the noise model for the site and reporting on the findings from phase 1 of the noise monitoring.

Following completion of development at the site, a second stage of noise monitoring is planned, primarily to confirm the effectiveness of the noise management advice provided and to further improve the EPA's understanding of noise issues associated with similar 'brownfield' developments. A timeframe for this monitoring has not yet been established, as this will depend largely on the completion of the Bowden Urban Village development itself.

Rail noise project

The [Rail Noise Guidelines](#) were published on the EPA website in early 2013, after extensive consultation with industry and government stakeholders. They provide a range of information that underpins EPA advice on proposed developments of new or significantly upgraded rail infrastructure, or new residential or other sensitive uses proposed near existing rail corridors.

OTHER COMPLIANCE, ENFORCEMENT AND STATUTORY INFORMATION

Pollution reporting and enquiries

The EPA continues to maintain a pollution reporting and enquiries line (telephone 8204 2004, free call non-metro 1800 623 445) to receive calls about environmental concerns. Table 9 summarises the number and types of pollution reports received during 2012–13, while Table 10 details the number and types of general enquiries.

Depending on the nature of the complaint, the EPA's response may be to:

1. provide verbal or written information to the caller
2. register a formal report for follow-up by an authorised officer
3. refer the information provided by the caller to another state or local government agency for action.

The EPA utilises a three-stage process for the management of non-licensed complaints. In 2012–13 only approximately 5% of these complaints were not resolved by this process. These complaints were subsequently allocated for investigation by an authorised officer.

Table 9 Number of reports received by the EPA

Type of report	2010–11	2011–12	2012–13
Air quality	711	867	1205
Air and noise	64	184	120
Noise	1241	986	1255
Marine pollution	19	26	32
Site contamination	28	39	35
Water	138	174	148
Waste	153	165	252
Other	155	285	251
Total	2509	2726	3298

Table 10 Number of enquiries received by the EPA

Type of enquiry	2011–12	2012–13
Air quality	326	396
Noise	354	535
Water quality	236	233
Waste	323	620
Complaint & enquiry follow-up for repeat calls	637	432
Site contamination	251	288
Licensing	955	991

Type of enquiry	2011–12	2012–13
Staff request	1032	1279
Other	891	1834
Total	5005	6606

In addition to these calls, a further 5196 enquiries were resolved by the call centre service via the use of frequently asked questions.

Planning and development assessment

Planning strategies and policies

The EPA regularly reviews proposed amendments to development plans by assessing statements of intent (SOIs), development plan amendments (DPAs) and council strategic directions reports (Section 30 of the *Development Act 1993*). The EPA's advice to councils and the Minister for Planning seeks to ensure that:

- suitable environmental investigations are undertaken prior to confirming whether any proposed rezoning is appropriate
- planning policies are incorporated into DPAs (and ultimately development plans) to ensure that future development does not have adverse environmental impacts
- appropriate environment protection strategies are incorporated into council strategic directions reports to guide future amendments to development plans.

During 2012–13, the EPA has increased its efforts in working with councils and the Department of Planning, Transport and Infrastructure to influence the development of planning policy that takes account of environmental issues. This has resulted in greater consideration of environmental issues during the planning policy process. During the year, the EPA assessed 19 SOIs, nine ministerial DPAs, 23 local DPAs and nine local council strategic direction reports.

The EPA provided advice on the following significant statements of intent/development plan amendments:

- TonsleyPark Ministerial DPA
- Town of Gawler – GawlerRiver Flood Prone Areas
- City of PortLincoln – Part of Deferred Urban DPA
- Mid Murray Council – Myall Place DPA
- City of Whyalla – Port Nonowie SOI
- Light Regional Council – Roseworthy Growth Area Stage One SOI.

Structure plans

The EPA also contributes to the development of the structure plans and regional planning strategies that form part of the South Australian Planning Strategy, established under the *Development Act 1993*. During the year, the EPA provided advice on the following structure plans and regional planning strategies:

- Playford Growth Area
- Roseworthy
- Yorke and Mid North.

Development assessment

The EPA provided advice or direction on 253 development applications in response to referrals made under the *Development Act 1993* during 2012–13. Some of the more significant applications included:

- a 75-megawatt peak power station, comprising three diesel-fired gas turbines intended to meet peak demand for electricity in the Hindmarsh Valley
- an extension to T&R Pastoral's (now Thomas Food International) sheep lairage at its Murray Bridge abattoir, increasing holding capacity by 9000 sheep
- a Managed Aquifer Recharge Scheme at Oaklands Park, comprising the injection in winter of up to 500 ML per year of wetland treated stormwater into the T2 aquifer, with summer recovery of 172 ML per year for use on Marion reserves
- an activated sludge wastewater treatment plant at Callington designed for modular expansion to meet development growth in Mount Barker
- a pedestrian and cyclist footbridge over the River Torrens
- the Keyneton Wind Farm, 70 kilometres northeast of Adelaide and comprising 42 turbines
- a pilot-scale trial of stage 1 of a tellurium dioxide processing plant at the existing Nyrstar smelter at Port Pirie
- an iron ore export facility at Lucky Bay.

Of the 253 development applications assessed during 2012–13, the EPA advised or directed the refusal of just seven applications.

Assessment of major development and projects

The Minister for Planning refers major developments and projects with potential environmental impacts to the EPA for assessment and advice, regardless of whether an activity contained in Schedule 1 of the EP Act is involved or not. The EPA coordinates responses to major development applications on behalf of the Environment and Conservation Portfolio (EPA, DEWNR and ZWSA). Documents relating to the following major developments or projects were referred to the EPA during 2012–13:

4. Port Spencer (Sheep Hill) Deep Water Port Facility on Eyre Peninsula: in September 2012 the EPA prepared a response to the proponent's draft response to submissions from government agencies and the public. In November 2012, the EPA submitted a response to the draft assessment report by the DPTI.
5. Integrated Waste Services (IWS) Northern Balefill at Dublin: in November 2012 the EPA prepared a response to a proposed amendment to the previously approved major development.
6. BucklandPark township: in accordance with the major development approval which was granted in 2010, the EPA reviewed the adequacy of the proponent's stormwater management plan. In January 2013, the EPA also provided advice on matters relating to management of human wastewater.
7. Nyrstar Smelter in Port Pirie: in April 2013 the EPA prepared a response to the DPTI on the draft state government guidelines for preparation of impact assessment documents for redevelopment of the Nyrstar smelter in Port Pirie.
8. Jeffries Composting – In June 2013 the EPA prepared a response to a proposed amendment to this previously approved major development.
9. Plympton Park Mixed Use development – In June 2013 the EPA prepared a response to an amended version of the development assessment report for this proposed major development.

Aquaculture

Licence and lease applications

The *Aquaculture Act 2001*, which became operational in July 2002, is administered by Primary Industries and Regions South Australia. In accordance with provisions of section 59 of the *Aquaculture Act 2001*, all licence applications and amendments must be referred to and approved by the EPA before the licence can

be granted. During 2012–13, 31 licence applications and one lease conversion were referred to the EPA, all of which were assessed within the statutory timeframe of six weeks.

Aquaculture policies and guidelines

The EPA addresses and responds to the statutory requirements of the Development Act 1993, the establishment of general policies and aquaculture zone policies prescribed under the Aquaculture Act 2001, and general aquaculture issues. During 2012–13, the EPA provided comment on the following aquaculture policies and guidelines as drafted by PIRSA:

- PIRSA Amalgamation of Aquaculture Leased Area Guidelines
- Statement of Intent Franklin Harbour zone policy.

Environmental surveys

The EPA conducts regular environmental surveys of aquaculture industry operations, with the aim of increasing industry awareness of the environmental obligations and associated policies these operations have under the EP Act. In addition, the surveys also provide information on potential environmental issues, which can then assist the EPA with their assessment of licence applications and the provision of advice on PIRSA aquaculture policies. During 2012–13, the EPA completed 14 environmental surveys of aquaculture facilities located across South Australia.

Projects

The EPA is also involved in a range of government and industry aquaculture projects. During 2012–13, the EPA was involved in the following key projects:

- As part of the Change@SouthAustralia program, the EPA worked with PIRSA Fisheries and Aquaculture and the Australian Southern Bluefin Tuna Industry Association (ASBTIA) on a 90 day project to streamline tuna industry regulation. An outcome from the project was the development of a Memorandum of Administrative Agreement which encompassed a number of key aspects including:
 - streamlining the licence assessment process for licence applications relating to tuna applications
 - developing protocols for the application of chemical use within the tuna industry
 - establishing principles to underpin the review of the environmental monitoring programs for the tuna industry
 - identifying short- and long-term objectives to further secure the project's outcome of reducing red tape for the tuna industry.
- In conjunction with the South Australian Oyster Growers Association, the EPA was successful in securing a \$40,000 grant through the Clever Green Eco-innovation Program managed by DMITRE. This funding will be used to conduct a feasibility study to identify potential solutions for the recycling of the waste oyster baskets generated by the industry.

Regulation of resources (mining and petroleum)

Mining applications

The EPA ensures mining applications take into account the objects of the EP Act. It works with Department for Manufacturing, Innovation, Trade, Resources and Energy (DMITRE), the principal mining regulator in South Australia.

The EPA reviews mining lease, retention lease and miscellaneous purposes licence applications submitted to DMITRE under the *Mining Act 1971*. Throughout 2012–13, the EPA continued working with DMITRE, the mining industry and other government departments to collectively address environmental matters relating to new mining proposals. Table 11 highlights the EPA's involvement.

Table 11 Mining application reviews (non-uranium and uranium) in 2012–2013

Company	Project	Action/involvement by EPA
Iron Clad	Wilcherry	Management and storage of iron ore at and through Lucky Bay
Royal Resources	Razorback Ridge	Feasibility and/or approvals process assistance
Iron Road	Warrambo	Feasibility and/or approvals process assistance
Oz Minerals	Carrapateena	Feasibility and/or approvals process assistance
Rex Minerals	Hillside	Feasibility and/or approvals process assistance
Quasar/Alliance Resources	Four Mile	Approvals process assistance
Helix Resources/ Mungana Goldmines	Tunkillia	Feasibility and/or approvals process assistance
Lincoln Minerals	Gum Flat	Feasibility and/or approvals process assistance
Havilah Resources	Portia	Feasibility and/or approvals process assistance
Havilah Resources	Maldorky	Feasibility and/or approvals process assistance
Goldus	Teeltupa	Works approval and new licence process
Centrex Metals	Wilgerup	Feasibility and/or approvals process assistance

The EPA also regulates certain activities of environmental significance associated with mines already operating, where for example mineral processing occurs. These are regulated through the issuing of environmental authorisations in the form of licences. There are currently 15 operating mines with EPA licences. In the mining sector the major environmental areas on which the EPA focuses have generally been concerned with air quality and water management/quality. The EPA has further been involved (either through licensing and/or advice) with mining-associated infrastructure developments located away from mine sites such as port facilities and desalination plants.

During 2012–13, the EPA and DMITRE Minerals developed and entered into a formal Administrative Arrangement (AA). The key objective of this Minerals AA is to achieve consistent, collaborative and efficient environmental regulation of South Australia's mineral resources, especially where the regulatory obligations and responsibilities of the parties (under the Acts specified above) overlap. This arrangement is intended to create a long-term commitment to a mutual working relationship between the parties. Furthermore, it aims to ensure that DMITRE is the one-stop shop for the regulation of these resources in South Australia

Another initiative developed by the EPA and DMITRE during 2012–13 involved the formation of a Mine Closure Working Group. The working group was developed to clearly define the processes to be followed in the closure of mines and the relinquishment of leases and licences in accordance with South Australian legislation. Some of the objectives of the group include developing a process for assessing long-term, post-closure risk and developing a suitable methodology for mitigating and managing any associated risk. Furthermore, the group aims to identify any shortfalls in current legislation and other potential obstacles to the implementation of the processes.

Amendments to BHP Billiton Olympic Dam FY 2011–13 Environmental Protection and Management Program

As part of BHP Billiton's compliance with its indenture, major development approval conditions plans and programs, changes were made to the 2011–13 Environmental Protection and Management Program (EPMP) in anticipation of the expansion project being carried out by the company. In conjunction with other

government agencies, the EPA undertook a detailed assessment of the revised EPMP, resulting in some improvements and amendments to the program. However, due to BHP Billiton's decision in August 2012 not to proceed with the expansion, a further amended EPMP has been submitted to South Australian Government agencies (including DMITRE, EPA and DEWNR) and the federal Department of Sustainability, Environment, Water, Population and Communities (SEWPAC). The amended EPMP reflects the modified scale and nature of the proposed future operations at Olympic Dam, as they currently stand.

The EPA has undertaken a comprehensive review of these proposed changes and in doing so provided comment to DMITRE, the agency coordinating the whole-of-government response for South Australia.

Petroleum industry

The EPA licenses all production-related activities that fall under the prescribed activity of petroleum production, storage or processing under Schedule 1 of the EP Act. Key licensees include Santos and Beach Energy.

Santos has major interests in the petroleum provinces of the Cooper and Eromanga Basins in Central Australia, on behalf of the SA Cooper Basin Joint Venture. Operations undertaken in the South Australian sector of the Cooper Basin range from exploration to extraction and processing. The regulatory focus has been on plant upgrades, site remediation and black smoke management (Moomba) and monitoring and remediation of groundwater contamination (Port Bonython).

Petroleum production, storage or processing activities fall under the *Petroleum and Geothermal Energy Act 2000* and consequently the EPA advises DMITRE on enforcement standards and guidelines to ensure that environmental requirements are included in proposals (and licences) to DMITRE.

As outlined in the Administrative Agreement between the Energy Resources Division of DMITRE and the EPA, cooperation between the two agencies ensures consistency and knowledge sharing. The EPA has facilitated cooperation by:

- providing comment on petroleum activities that are assessed by DMITRE as being of low and medium environmental impact
- reviewing DMITRE's criteria for classifying the level of environmental impact of regulated activities (where the level of environmental impact of a regulated activity will determine the level of consultation)
- advising on the use of materials and practices for fracture stimulation programs
- providing comment on the content of the environmental impact reports (EIRs) and statements of environmental objectives (SEOs) required for submission to DMITRE. This has included the following:
 - review of preliminary exploration and survey activities in South Australia (ground-based geophysical non-seismic)
 - review of the Pipeline Preliminary Survey and other low-impact survey activities
 - review of the 2007 SEO for geophysical operations in the Otway Basin
 - Cooper Basin fracture stimulation EIR and SEO assessment (Beach Energy).

In 2012–13, the EPA participated in an unconventional gas industry round-table whose theme was regulator transparency. The round-table included key players in the gas industry and aimed to build on the existing 'road map' for projects in South Australia. Stakeholders were informed of the EPA's role in unconventional gas projects, in particular the relationship with DMITRE – the Administrative Agreement and Memorandum of Understanding between the two agencies.

Compliance and enforcement

Compliance inspections

The EPA issues licences to regulate activities with the potential to harm the environment. Approximately 2100 licences are currently regulated under the Environment Protection Act 1993, with approximately 150 registered premises, 5500 individual licences, and eight mining and milling licences under the Radiation Protection and Control Act 1982.

The EPA undertakes inspection of licensees' premises to assess compliance with licence conditions. During 2012–13, the EPA inspected 242 high-priority sites, with a range of resultant actions, including formal written warnings and environment protection orders. For more serious cases of non-compliance, the EPA commenced investigation with a view to civil or criminal prosecutions under the EP Act.

Environment protection orders

EPOs can be issued by authorised officers under section 93(1) of the EP Act:

- (a) for the purpose of securing compliance with:
 - (i) the general environmental duty; or
 - (ii) mandatory provisions of an environment protection policy; or
 - (iii) a condition of an environmental authorisation; or
 - (iv) a condition of a beverage container approval; or
 - (v) any other requirement imposed by or under this Act; or
- (b) for the purpose of giving effect to an environment protection policy.

Police officers are authorised under the EP Act and use EPOs to deal with complaints about noise (for example, loud music) from domestic premises.

Some local government officers are authorised under the EP Act, but this authority is limited to the council area in which they are employed. The majority of EPOs issued by councils relate to breaches of the Environment Protection (Water Quality) Policy 2003 with regard to stormwater issues from building sites.

Table 12 Environment protection orders

EPOs recorded	2010–11	2011–12	2012–13
EPA	15	21	19
Police	53	20	42
Councils	8	0	0
Total	76	41	61

Prosecutions/civil penalties

More serious incidents of non-compliance may result in civil or criminal prosecutions under the EP Act.

The EPA has a dedicated Investigations Branch which probes breaches of the EP Act and the RPC Act in accordance with established compliance and enforcement criteria (refer to EPA's regulatory approach). Prosecutions pursued by the EPA are conducted by the Crown Solicitor's Office and the Office of the Director of Public Prosecutions.

The EPA conducted a total of 22 investigations in 2012–13, including five incidents this financial year and 17 matters carried over from 2011–12. Of the 22, 12 have been finalised as follows:

- Three matters has been finalised in the Environment, Resource and Development Court (ER&D Court) (Table 13).
- Two matters dealt with by way of a negotiated civil penalty (Table 14).
- The remaining seven matters were dealt with by other compliance actions:
 - one warning letter
 - two EPOs
 - two matters referred to the licence coordinator for follow up
 - two matters discontinued due to insufficient evidence.

As of 30 June 2013 there are:

- Three prosecutions currently underway in the ER&D Court and are yet to be finalised.
- Five matters under active investigation.
- One matter being negotiated under the civil penalties policy.
- One matter seeking Crown Solicitor's Office advice.

Table 13 Finalised prosecutions 2012–13

Name	Charges	Penalty
District Council of the Copper Coast	Intentionally or recklessly contravened a mandatory provision of an environment protection policy, section 34(1) of the EP Act 1993 and clause 10(1) of the Environment Protection (Waste to Resources) Policy 2010.	Convicted and fined \$31,500. Ordered to pay prosecution costs of \$800 and victim of crime levy of \$260.
Detlef Friedrich	Eleven counts of supplying a beverage in a container to a retailer for sale by the retailer without bearing the approved refund marking, section 69B(2)(a) of the EP Act 1993.	Convicted and fined \$5,400. Ordered to pay prosecutions costs of \$800 and victim of crime levy of \$160.
Stelios Kapoulitsas	Three counts of breach of licence conditions, section 45(5) of the EP Act 1993 and one count of undertaking a prescribed activity without an environmental authorisation, section 36(1) of the EP Act 1993	Convicted and fined \$7,500. Ordered to pay prosecution costs of \$800 and victim of crime levy of \$160.

As an alternative to criminal prosecution for less serious offences under the EP Act, the EPA may negotiate a civil penalty directly with an individual or corporation which the EPA believes has committed the offence, or may apply to the ER&D Court for an order that the person(s) pay an amount as a civil penalty to the EPA.

EPA-negotiated civil penalties are developed in compliance with its [Policy for calculation of civil penalties under the Environment Protection Act 1993](#).

Table 14 Finalised civil penalties 2012–13

Name	Charges	Penalty
Future Entertainment Pty Ltd	Exceedences of agreed noise limits set by Adelaide City Council with organisers of the Future Music Festival held in the parklands and creating environmental nuisance.	Negotiated civil penalty (Section 104A EP Act 1993) in an amount of \$1,957.50.
AbiGroup Contractors Pty Ltd	Discharge of approximately 4.7 megalitres of turbid stormwater from northern sediment basin at Christie Road, Lonsdale (Adelaide Desalination Plant) into the waters of Gulf St Vincent due to unattended pump.	Negotiated civil penalty (Section 104A EP Act 1993) in an amount of \$23,852.50.

Emergency response

The EPA responds to emergency pollution incidents when notified through the emergency 24-hour number. Emergency responses are of three types:

- whole-of-government procedure as outlined in the State Emergency Management Plan. This applies to spills or leaks of hazardous substances onto land or into non-marine waters, and is coordinated by emergency services (police, fire and technical advice coordinators)
- national response plan, which deals with oil or chemical spills at sea, and is coordinated by the Marine Group of DPTI
- other environmental incidents that do not trigger either of the above emergency response systems. This includes incidents reported by EPA licence-holders and some incidents reported by members of the public through the pollution reporting line, which requires an immediate assessment by the EPA.

Major incidents

During 2012–13, the EPA responded to 149 incidents through its emergency pollution incident response system. The majorities of the calls came from members of the public and EPA licence holders and were dealt with by the provision of advice relating to containment and clean-up. Examples included:

- fire in stockpiles at Adelaide Resource Recovery facility at Wingfield;
- spill of nitro-hydrochloric acid on board a freight truck in transit to Challenger Gold Mine, near Pimba,
- diesel spill from generator western side of weir of River Torrens.

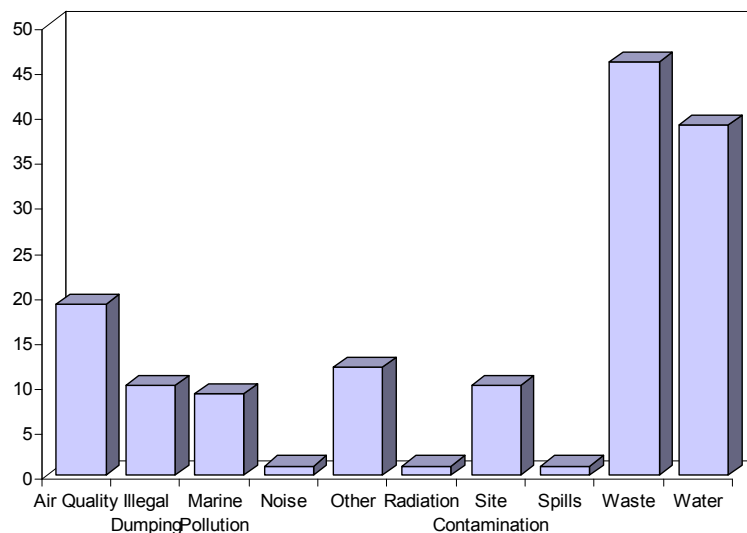


Figure 6 Emergency responses by category

Freedom of information and the Public Register

During 2012–13, 45 freedom of information (FOI) applications and 335 Public Register requests were received (Table 15). The EPA has a statutory obligation under the *Land and Business (Sale and Conveyancing) Act 1994* to provide information relating to environment protection (Table 16).

Table 15 Freedom of Information applications and Public Register requests

Applications	2010–11	2011–12	2012–13
Freedom of information	40	37	45
Public Register	233	252	335

Table 16 Section 7 enquiries/responses

Section 7 enquiries/responses	2010–11	2011–12	2012–13
Automatic enquiries to the Lands Titles Office database involving the perusal of the Section 7 information maintained by the EPA	47 599	41 209	42 222
Manual enquiries requiring an EPA search made upon requests by the Lands Titles Office	4 825	3 993	4 253

Direction by the Minister

According to section 111 (2) of the EP Act, the Minister to whom the EP Act is committed has given no direction to the Authority during the period of this report.

Whistleblowers Act

Nil return.

Energy efficiency action plan report

Priority area 1: energy management

EPA currently focuses on the three priority areas of energy, fleet management and waste.

The rationalisation of EPA accommodation, the main source of energy consumption, was finalised in October 2009 with the completion of the radiation laboratory fit-out in leased premises within the city. The centralisation of staff into 250 Victoria Square, a six-star building with a five-star fit-out, resulted in a marked reduction in energy consumed for office accommodation which has been maintained in the past year.

Table 17 Performance against annual energy use targets

	Total for EPA			EPA office location				Air monitoring sites	
	Energy use (GJ)	Expenditure (\$)	GHG emissions (tonnes)	Energy use (GJ)	GHG emissions (tonnes)	Business measure (m ²)	Energy use per (m ²)	Energy use (GJ)	GHG emissions (tonnes)
Base year									
2000–01	2084	\$79 259	671	1844	592	5277	0.35	240	79
MJ per m ²							348		
2001–02	1849	\$69 402	595	1647	527	5277	0.31	203	67
2004–05	1950	\$78 303	628	1675	537	5397	0.31	275	91
2005–06	1828	\$73 672	588	1582	506	5690	0.28	246	81
2007–08	1848	\$79 959	431	1608	375	5690	0.28	240	56
2008–09	1856	\$89 224	433	1548	361	5173	0.30	308	72
2009–10	1247	\$60 580	291	1097	214	5173	0.21	150	77
2010–11	1175	\$58 524	274	877	204	5173	0.17	298	69
2011–12	1143	\$82 584	266	854	199	5173	0.16	289	67
2012–13	1143	\$93 916	266	823	192	5173	0.16	320	74
MJ per m ²							160		
Target (2014)	1563		503	1383	444		0.32		

Energy consumption was incorrectly reported for the 2011–12 financial year due to a clerical error. Figures have been adjusted in the above report.

Priority area 2: waste management

One of EPA's environmental goals is for 'the sustainable use of resources—reducing costs to business and environmental impacts by promoting the efficient use of resources and waste minimisation'.

In support of this concept within the office environment in 250 Victoria Square, all waste management and recycling is managed in partnership with the Lessors Building Management. Containers for all waste are provided within utilities rooms and kitchens, and are collected regularly by cleaning staff, recording quantities and contents recycled where possible. Streams of waste collected include:

- co-mingled recyclable waste
- organic food waste
- white paper and confidential paper destruction
- general dry waste.

As a means of encouraging staff to consider recycling and appropriate disposal of waste, only paper recycling bins are provided at work stations.

Toner cartridges from photocopying machines and printers, batteries and light bulbs are also collected and recycled.

Priority area 3: travel and fleet management

EPA reviews vehicle utilisation and vehicle mix annually, and at each three-year lease renewal. Consideration is given to environmental aspects of the replacement vehicles available, in addition to ensuring the vehicle meets the business requirements of staff. Locally produced diesel fueled Holden Cruze sedans have now been introduced to the fleet.

Table 18 EPA vehicle fleet

Vehicle types	Number of vehicles as at 30 June 2013							
	2006	2007	2008	2009	2010	2011	2012	2013
Diesel only	3	3	4	6	9	9	11	14
Electric/unleaded (hybrid)	0	0	0	1	2	2	2	1
Unleaded only	6	10	10	12	9	8	10	11
LPG only	7	3	2	2	3	3	1	1
Combined dual fuel(unleaded and LPG)	19	19	15	9	2	2	2	1
Total long-term hire vehicles	35	35	31	30	25	24	26	28

Table 19 Energy use and greenhouse gas emissions

	2006	2007	2008	2009	2010	2011	2012
Energy (GJ)	2082	1939	1883	1883	1902	1950	1643
CO ₂ emissions (tonnes)	154	144	126	123	126	126	111

Note: During 2007–08, the emissions conversion factor was changed, and is now based on direct emissions from the vehicle only, in line with the National Greenhouse Accounts (NGA) factors produced by the Department of Climate Change. Prior years' emission conversions did not differentiate between direct and indirect emission, as these were not available at the time.

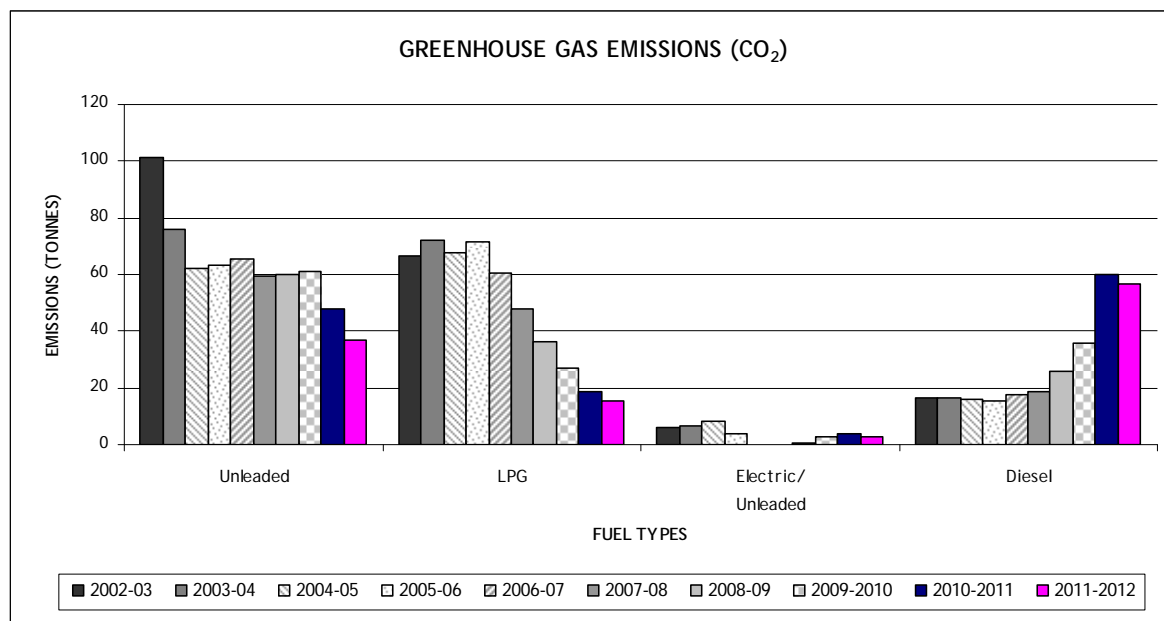


Figure 7 Greenhouse gas emissions

Greening of Government Operations (GoGo) Framework

In accordance with the requirements of the cross-government Energy Efficiency Action Plan, the EPA's annual energy usage is detailed earlier. The EPA's internal program Sustainability@Work also focuses on monitoring and reducing the usage of materials such as batteries, printing materials and in turn, the amount of waste produced by the organisation.

Sustainability@Work

The EPA continues to demonstrate a leadership role in best practice environmentally sustainable behaviour in the workplace to other businesses and communities in the state.

The EPA's Sustainability@Work (S@W) team meets on a bi-monthly basis to discuss sustainable practices in the workplace, including promoting initiatives, ensuring actions are implemented and working towards instilling a culture to reduce the EPA's environmental footprint.

In 2012–13 the EPA implemented the third and final year of its three-year Environment Action Plan focusing on energy, water, waste, transportation and green purchasing. The S@W Team continued to implement the actions in its plan with the assistance of EPA staff.

The following are the 2012–13 highlights.

Review of Chief Executive Statement on Sustainable Behaviour in the Workplace and Development of Top 10 Priority Areas

The EPA Chief Executive, Dr Gemmell, has continued his support of S@W in the EPA by his endorsement of a reviewed Chief Executive Statement on Sustainable Behaviour in the Workplace and the development of Top 10 Priority Areas for S@W.

The S@W Team held a competition inviting all EPA staff to contribute ideas in the development of a list of Top 10 Sustainable Priorities by identifying areas in which the EPA could further reduce its carbon footprint. The feedback received was used to develop a vision, strategy, goals and the top 10 priority areas for the S@W Team to use as the basis for its next action plan.

Travel survey

The DPTI conducted its second travel survey of EPA staff in 2012, the first survey having been conducted in 2009. Compared with the 2009 survey, there has been a significant decrease in the number of trips to work by car, with corresponding increases in trips to work by public transport, cycling or walking (Figure 8).

According to the 2011 Australian Bureau of Statistics (ABS) census results on work travel, the EPA is also leading the way in sustainable travel to work by car, with the census identifying a 54% average for persons travelling to work in the Adelaide CBD compared with EPA's 30%. The EPA also has a higher usage of public transport and bicycle travel by staff compared with other travellers (Figure 9).

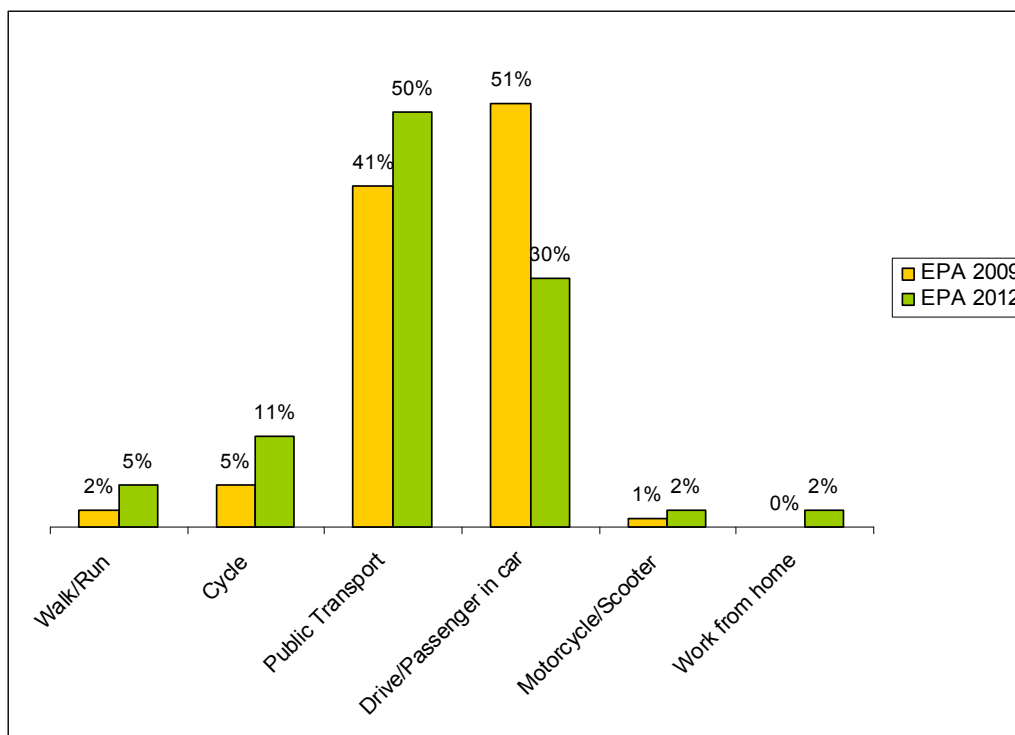


Figure 8 DPTI survey outlining EPA staff travel habits

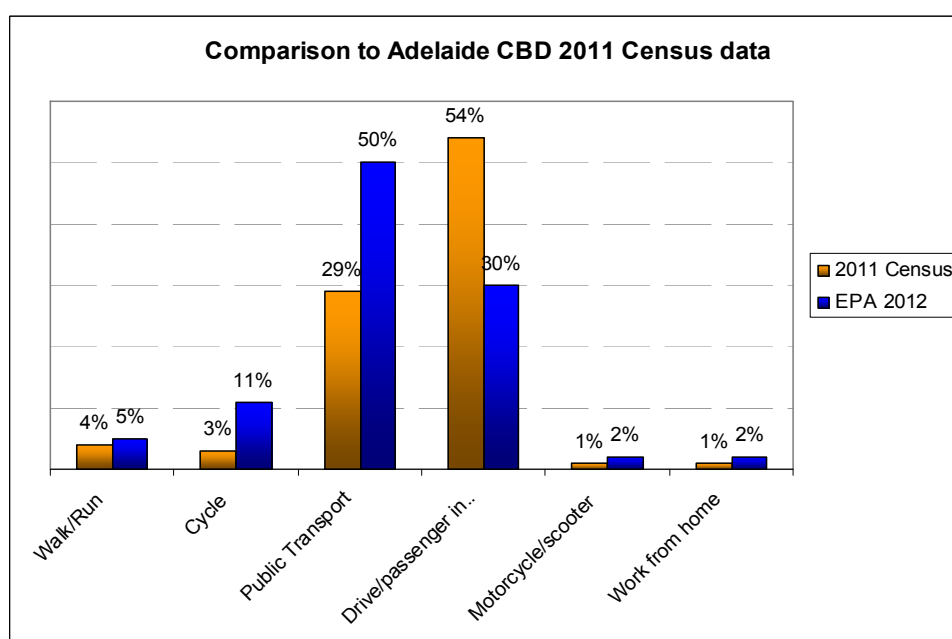


Figure 9 2011 ABS Census comparing EPA travel habits

Other key achievements for 2012–13 include:

- CDL: 10-cent refund bottle separation, with 4149 containers recycled
- donation to Greening Australia of \$647.30
- battery rechargeable initiative launched
- BUG (Bicycle Users Group) membership for cyclists, supporting 22 staff
- participation in National Ride To Work day, including a joint morning tea with SA Water
- participation in the Walk to Work day, including a breakfast
- participation in Westpac's Stair Climb Challenge, supporting eight staff
- participation in World Environment Day celebrations (Think, Eat, Save), with a sustainable market held in the Level 9 kitchen. Zero Waste SA staff were invited and attended the celebrations with a guest speaker to talk about sustainable consumption, with money raised going to Oz Harvest
- investigation of the establishment of a private vehicle carpool register for commuting to work commenced.

APPENDIX 1 ORGANISATIONAL INFORMATION

Refreshed Performance and Development Review

At its best, performance management can build engagement, create accountability and improve performance. During 2012 the Change Program of refreshing the Performance and Development Review (P&DR) template and process was implemented. The review supported organisational development initiatives key to the Change Program and reinforced the EPA's commitment as a learning and developing agency, focused on continuous improvement.

The P&DR tool and process was initially reviewed using focus group context mapping, individual staff interviews, desktop research and executive team input. The focus areas identified as requiring improvement through a high-performance P&DR system included:

- giving attention to priorities
- assessing behaviour and achievements
- clarifying expectations
- building individual competence
- developing organisational capability.

To facilitate this change the P&DR preparation process was simplified, the key results area and core competencies were incorporated, a simple rating scale was added, and workshops were provided to develop manager capability.

A number of activities supported the September–October 2012 roll-out. Manager workshops focused on the new P&DR template and process. Feedback from the attendees was incorporated into the review. Staff 'Pulse Surveys' were scheduled across the roll-out. The surveys asked staff to rate their perceptions of the process and how prepared they were to conduct or participate in P&DRs. Information from the surveys allowed modifications to workshops and HUB information/user instructions.

The refreshed P&DR template and process were successfully implemented by December 2012. Initial feedback indicates that the revised form helped to support a tightly focused discussion and improved specific feedback on skills. Final reporting on the P&DR and suggestions for its rejuvenation are being collated to inform the next primary P&DR for September–October 2013. While some areas worked better than others, there will still be some improvement to the template and process.

Equal employment opportunity

The EPA has doubled its Aboriginal employment over the past year, primarily through the use of the National Indigenous Cadetship Program. The EPA continues to partner with the DEWNR to access Indigenous and Aboriginal support networks and staff cultural awareness training.

Implementation of role and context statements

Strong and relevant management is at the heart of every great organisation. Linked to leadership and management development is the integration of appropriate tools, which define our work roles and assist with performance development and review.

The EPA has been working on a simpler format for job and person specifications over the last two years. The biggest challenge has been to make the document concise and succinct and reduce the number of essential selection criteria to a meaningful level. Doing this provides an improved and efficient process for applicants and streamlines the recruitment process for selection panels, while still retaining the ability to identify and prioritise relevant skills. This year the EPA begun the process of converting the job and person specifications into role and context statements with links to relevant competencies and supported by training and support for document authors.

The new documents are designed to improve the efficiency and cost-effectiveness of the process for selection panels and also improve the candidate experience by streamlining the application process. The original documents now also include a Work Health Safety Role Profile, which allows easy identification of potential hazards as well as the required training. An evaluation process is currently being developed to allow for any further improvements to be made.

The context statement, in addition to giving background information on the EPA and the relevant team, contains the expected behaviours of employees and managers, including customer service and working safely.

Workforce statistics

Table 20 Total number of employees

	2011–12	2012–13
Persons	232	232
FTEs	218.22	216.86

Table 21 Employee gender balance

	2011–12		2012–13	
Gender	% persons	% FTEs	% persons	% FTEs
Male	53.88	56.39	55.17	57.93
Female	46.12	43.61	44.83	42.07

Table 22 Number of persons separated from or recruited to EPA

	2011–12	2012–13
Separated from the agency*	39	24
Recruited to the agency	43	27

* This includes TVSPs.

Table 23 Number of persons on leave without pay

	As at 30 June 2012	As at 30 June 2013
On leave without pay	9	7

Table 24 Number of employees by salary bracket

Salary bracket	2012–13		
	Male	Female	Total
\$0–\$53 199	5	8	13
\$53 200–\$67 699	17	29	46
\$67 800–\$86 599	72	53	125
\$86 600–\$109 299	29	14	43
\$109 300+	5	0	5
TOTAL	128	104	232

Table 25 Status of employees in current position

FTEs					
	Ongoing	Short-term contract	Long-term contract	Other (casual)	Total
Male	103.6	9.8	12.2	0	125.63
Female	73.2	10.8	7.2	0	91.23
TOTAL	176.9	20.6	19.4	0	216.86

Persons					
	Ongoing	Short-term contract	Long-term contract	Other (casual)	Total
Male	105	10	13	0	128
Female	85	11	8	0	104
TOTAL	190	21	21	0	232

Table 26 Number of executives by gender, classification and status

Classification	Ongoing		Tenured contract		Untenured contract		Other (casual)		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
SAES1	0	0	0	0	4	0	0	0	4	0
CEO	0	0	0	0	1	0	0	0	1	0
TOTAL	0	0	0	0	5	0	0	0	5	0

Table 27 Average days of leave taken per FTE employee

Leave type	2009–10	2010–11	2011–12	2012–13
Sick leave	8.81	8.70	8.23	7.45
Family carer's leave	0.94	1.47	1.41	1.36
Miscellaneous special leave	0.50	0.55	0.62	0.99

Table 28 Number of Aboriginal and/or Torres Strait Islander employees

Salary bracket	Aboriginal employees	Total employees	% Aboriginal employees	Target*
\$0–\$53 199	1	13	7.69	2%
\$53 200–\$67 699	0	46	0	2%
\$67 700–\$86 599	1	125	0.8	2%
\$86 600–\$109 299	0	43	0	2%
\$109 300+	0	5	0	2%
TOTAL	2	232	0.86	2%

* Target from South Australia's Strategic Plan

Table 29 Number of employees by age bracket and gender

Age bracket	Male	Female	Total	% of total	2012 Workforce Benchmark* %
15–19	0	0	0	0	6.2%
20–24	4	3	7	3.02	9.7%
25–29	8	15	23	9.91	10.9%
30–34	12	18	30	12.93	9.8%
35–39	17	16	33	14.22	10.1%
40–44	19	16	35	15.09	11.8%
45–49	27	11	38	16.38	11.2%
50–54	19	13	32	13.79	11.3%
55–59	13	7	20	8.62	9.0%
60–64	6	4	10	4.31	6.1%
65+	3	1	4	1.72	3.7%
TOTAL	128	104	232	100	100.0

* Source: Australian Bureau of Statistics (ABS) Australian Demographics Statistics, 6291.0.55.001 Labour Force Status (ST LM8) by sex, age, state, marital status–employed–total from February 1978 Supertable, South Australia at May 2009.

Table 30 Cultural and linguistic diversity of employees

	Male	Female	Total	% of agency	% of SA community*
Number of employees born overseas	31	19	50	21.55	22.1%
Number of employees who speak language(s) other than English at home	16	16	32	13.79	14.4%

* Benchmarks from ABS Publication Basic Community Profile (SA) Cat No. 2001.0, 2006 census.

Table 31 Number of employees with ongoing disabilities requiring workplace adaptation

2011–12				2012–13			
Male	Female	Total	% of agency	Male	Female	Total	% of agency
5	3	8	3.4	4	3	7	3

Table 32 Types of employee disabilities

Disability	Male	Female	Total	% of agency
Disability requiring workplace adaption	4	3	7	3
Physical	4	3	7	3
Intellectual	0	0	0	0
Sensory	1	1	2	0.9
Psychological/psychiatric	0	0	0	0

Table 33 Number of employees using voluntary flexible working arrangements by gender

Arrangement	Male	Female	Total
Purchased leave	3	4	7
Flexitime	116	91	207
Compressed weeks	2	5	7
Part-time job share	14	49	63
Working from home	2	10	12

Table 34 Documented review of individual performance development plan

Occurrence of review	Total work force 2011–12	Total work force 2012–13
Review within the past 12 months	77.16	77.16
Review older than 12 months	15.09	18.10
No review	7.76	4.74

Table 35 Leadership and management training expenditure

Category of expenditure	2011–12	2012–13
Total training and development expenditure (\$)	589 074.21	480 173.80
Total leadership and management development expenditure (\$)	90 522.30	128 572.00
% of total expenditure	2.93	2.40
% total leadership and management expenditure	0.45	0.65

Table 36 Accredited training packages by classification

Classification	Number of accredited training packages
AS03	1
AS05	1
AS06	1
P02	5
P03	1
P04	1
P05	1

Table 37 Positions with customer service reflected in job and person specifications

Positions	%
% of positions with customer service reflected in the job and person specification	100
% of positions without customer service reflected in the job and person specification	0

Work Health Safety and Wellbeing

The EPA continues to be committed to managing Work Health Safety (WHS), through continuous improvement across the organisation. The EPA endeavours to improve the culture and climate of the organisation, making WHS a primary consideration of staff when undertaking work.

The Executive group is involved and committed to improving and driving the EPA's WHS culture and climate by monitoring, reviewing and participating in the programs. Executive is also committed to further reform and improvement to the Work Health Safety and Injury Management system (WHS&IMS), and ensuring that it is as simple as possible, sustainable, robust and fit for purpose.

The WHS committee is well supported by management and staff and continues to take a systematic and proactive approach in the discussion of issues and the achievement of outcomes. The committee continues to develop, monitor and evaluate the EPA's injury prevention programs.

The EPA is addressing WHS risks, in particular those risks associated with driving, plant and equipment and asbestos management in the field. The EPA has been revising and assessing plant and equipment and improving safe systems of work by implementing a program of safe operating procedures (SOPs) across the organisation.

The safe driving program the EPA has implemented over the last two years, which involves staff participating in business driver awareness training provided by SAPOL, defensive driver training and 4WD training, has seen an improvement in driver behaviour. These programs will continue to be developed and improved in 2013–14.

The EPA piloted an electronic Take 5 Hazard and Risk assessment tool for field staff. The scope of this pilot was to improve the implementation of the working off-site procedures and to identify and control the foreseeable hazards. The EPA conducted a critical review of the pilot and once identified and improvements are made, the EPA will implement the tool across the EPA's field-based business.

The commitment and significant work undertaken in this area have seen the EPA improve its WorkCover Self Insurers rating from a non-conforming system in 2011–12 to a developing system in 2012–13. The EPA will continue to develop and improve its WHS&IMS and work closely with WorkCover in 2013–14 to develop and improve this further.

Injury management

The EPA has continued its focus on early intervention and the reporting of work-related injuries and incidents, with improved reporting processes and the implementation of an online Hazard, Incident Reporting Management System (HIRMS), which will be implemented on 1 July 2013. This will provide EPA staff with a mechanism to report incidents and hazards in a simpler and more efficient manner.

The EPA has also continued to support the safe return to work of staff suffering from a non-work related injury or illness by identifying suitable duties that can be undertaken by the staff member.

The EPA experienced two claims during the 2012–13 period, one being a lost-time injury and the other a non-lost-time injury. The EPA was able to resolve the two claims, leaving a total of three current open claims at the end of this financial year.

In 2013–14, the EPA will continue its commitment to ensuring that injured staff have a safe and early return to work and full recovery. Our continued focus and improvement on claims management is supported by our external partners.

Table 38 Work Health Safety and Injury Management statistics

	2010–11	2011–12	2012–13
1 WHS legislative requirements			
Number of notifiable occurrences pursuant to OHS&W Regulations 2010 Division 6.6 and section 38 of the <i>Work Health and Safety Act 2012</i>	1	4	0
Number of notifiable injuries pursuant to OHSW Regulations Division 6.6 and section 38 of the <i>Work Health and Safety Act 2012</i>	0	0	0
Number of notices served pursuant to OHSW Act sections 35, 39 and 40 (default, improvement and prohibition notices)	0	0	0
2 Injury management legislative requirements			
Total number of employees who participated in the rehabilitation program	1	6	0
Total number of employees rehabilitated and reassigned to alternative duties	0	0	0
Total number of employees rehabilitated back to their original work	1	1	0
Number of open claims as at 30 June	4	4	3
Percentage of workers compensation expenditure over gross annual remuneration	0.24%	0.067%	0.093%

Table 39 Meeting the organisation's safety performance targets

	Base: June 2010	Performance: 12 months to end of June 2013*			Final target (2015)
	Numbers or %	Actual	Notional quarterly target**	Variation	Numbers or %
1 Workplace fatalities	0	0	0	0	0
2 New Workplace Injury Claims	2	2	2	0	2
3 New Workplace Injury Claims Frequency rate	5.5	5.6	4.9	+0.7	4.1
4 Lost Time Injury Frequency Rate***	2.7	2.8	2.4	+0.4	2.1
5 New Psychological Injury Claims	2.7	0	2.4	-2.4	2.0

	Base: June 2010	Performance: 12 months to end of June 2013*			Final target (2015)
	Numbers or %	Actual	Notional quarterly target**	Variation	Numbers or %
6 Rehabilitation and Return to Work:					
a Early Assessment within 2 days	–	No claims involved	No claims involved	No claims involved	80%
b Early Intervention within 5 days	–	No claims involved	No claims involved	No claims involved	90%
c Lost Time Claims have 10 business days or less	50%	100%	60.00%	40% above target	60%
7 Claim determination:					
a Claims not yet determined have Provisional Liability within 7 days.	100%	100%	100%	0% target met	100%
b 75% or more of new claims determined within 10 business days	50%	100%	75%	25% above target	75%
8 Income Maintenance Payment for Recent Injuries:					
2011–12 injuries (at 24 months development)	–	\$27 000	\$4 000	–\$23 000	–
2012–2013 injuries (at 12 months development)	–	\$4 000	\$14 000	–\$10 000	–

* Except for Target 8, which is YTD. For Targets 5, 6c, 7a and 7b, performance is measured up to the previous quarter.

** Based on cumulative reduction from base at a constant quarterly figure.

*** Lost Time Injury Frequency Rate Injury frequency rate for new lost-time injury/disease for each one million hours worked. This frequency rate is calculated for benchmarking and is used by the

Table 40 Workers compensation expenditure

Expenditure 2012–13	2011–12 (\$m)	2012–13 (\$m)	Variation (\$m) + (–)	% Change + (–)
Income maintenance	0.027	0.004	–0.023	–85%
Lump sum settlements redemptions s42	–	–	–	–
Lump sum settlements permanent disability s43	–	–	–	–
Medical/hospital costs combined	0.017	0.012	–0.005	–70%
Other	0.00124	0.00237	+ 0.0113	+91%
Total claims expenditure	0.0450	0.0167	–0.0283	–37%

APPENDIX 2 FINANCIAL STATEMENTS AND ACCOMPANYING NOTES

Account payment performance

The state government benchmark of achieving 90% of the number of invoices paid within 30 days was achieved in 2012–13 (see Table 41).

Table 41 Account payment performance

Particulars	Number of accounts paid	Percentage of accounts paid (by number)	Value in A\$ of accounts paid	Percentage of accounts paid (by value)
Paid by the due date*	3491	92.75	10 100 801	94.10
Paid within 30 days or less from due date	177	4.70	500 832	4.67
Paid more than 30 days from due date	96	2.55	132 567	1.23

* The due date is defined as per section 11.7 of Treasurer's Instruction 11 'Payment of Accounts'. Generally, unless there is a discount or a written agreement between the public authority and the creditor, payment should be within 30 days of the date the invoice is first received by the public authority or service provider.

Contractual arrangements

During the 2012–13 financial year, the EPA did not enter into any contractual arrangement where the total value of an individual contract exceeded \$4 million.

Instances of fraud

There have been no instances of fraud detected in the EPA during this financial year.

Use of consultants

Table 42 provides information on the use of consultants.

Table 42 Use of consultants – controlled entity

Value of consultancies let	Number of consultancies 2010–11	Number of consultancies 2011–12	Number of consultancies 2012–13	2010–11 expenditure	2011–12 expenditure	2012–13 expenditure
Below \$10 000	2	1	1	16 800	2 200	2 000
\$10 001–\$50 000	–	1	–	–	13 500	–
Above \$50 000	–	–	–	–	–	–
Total	2	2	1	16 800	15 700	2 000
Below \$10 000						
Number of consultants in this category: 1			Value of consultants in this category: \$2000			
Morton Phillips			Consulting Fees for Office of Chief Executive Review Support			
Between \$10 001–\$50 000						
Number of consultants in this category: Nil			Value of consultants in this category: Nil			
Above \$50 000						
Number of consultants in this category: Nil			Value of consultants in this category: Nil			

Table 43 Overseas travel

Number of employees	Destination/s	Reason for travel	Total cost to agency
1	Tanzania	IAEA regulatory review mission to Tanzania including MkujuRiver mine project	\$0
1	Taiwan	Taiwan EPA Asian and Pacific region working group meeting on soil and groundwater remediation.	\$0

INDEPENDENT AUDITOR'S REPORT



Government of South Australia

Auditor-General's Department

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To the Chief Executive Environmental Protection Authority

As required by section 31(1)(b) of the *Public Finance and Audit Act 1987*, I have audited the accompanying financial report of the Environment Protection Authority for the financial year ended 30 June 2013. The financial report comprises:

- a Statement of Comprehensive Income for the year ended 30 June 2013
- a Statement of Financial Position as at 30 June 2013
- a Statement of Changes in Equity for the year ended 30 June 2013
- a Statement of Cash Flows for the year ended 30 June 2013
- notes, comprising a summary of significant accounting policies and other explanatory information
- a Certificate from the Deputy Presiding Member, Chief Executive and the Chief Financial Officer.

The Board's Responsibility for the Financial Report

The Members of the Board are responsible for the preparation of the financial report that gives a true and fair view in accordance with the Treasurer's Instructions promulgated under the provisions of the *Public Finance and Audit Act 1987* and Australian Accounting Standards, and for such internal control as the members of the Board determines is necessary to enable the preparation of the financial report that is free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

My responsibility is to express an opinion on the financial report based on the audit. The audit was conducted in accordance with the requirements of the *Public Finance and Audit Act 1987* and Australian Auditing Standards. The auditing standards require that the auditor comply with relevant ethical requirements and that the auditor plan and perform the audit to obtain reasonable assurance about whether the financial report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial report. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial report, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of the financial report that gives a true and fair view in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made by the Members of the Board, as well as the overall presentation of the financial report.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Opinion

In my opinion, the financial report gives a true and fair view of the financial position of the Environment Protection Authority as at 30 June 2013, its financial performance and its cash flows for the year then ended in accordance with the Treasurer's Instructions promulgated under the provisions of the *Public Finance and Audit Act 1987* and Australian Accounting Standards.



S O'Neill
AUDITOR-GENERAL
17 September 2013

Environment Protection Authority

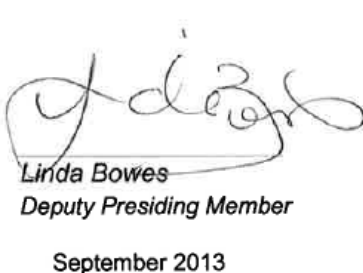
Certification of the financial statements

We certify that the:

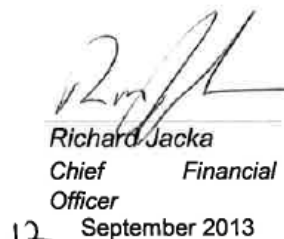
- financial statements of the Environment Protection Authority:
 - are in accordance with the accounts and records of the authority; and
 - comply with relevant Treasurer's instructions; and
 - comply with relevant accounting standards; and
 - present a true and fair view of the financial position of the authority at the end of the financial year and the result of its operations and cash flows for the financial year.
- internal controls employed by the Environment Protection Authority over its financial reporting and its preparation of the financial statements have been effective throughout the financial year.



Campbell Gemmell
Chief Executive
12 September 2013



Linda Bowes
Deputy Presiding Member
September 2013



Richard Jacka
Chief Financial Officer
12 September 2013

Environment Protection Authority
Statement of Comprehensive Income
For the year ended 30 June 2013

	Note	2013 \$'000	2012 \$'000
Expenses			
Employee benefits expenses	5	21,896	21,795
Supplies and services	6	6,991	7,225
Depreciation and amortisation	7	853	989
Grants and subsidies	8	18,843	19,075
Net (gain)/loss from the disposal of non-current assets	9	8	2
Other expenses	10	1,104	652
Total expenses		49,695	49,738
Income			
Revenues from fees and charges	12	54,326	53,120
Grants and contributions	13	1,640	1,583
Interest revenues	14	199	259
Other income	15	29	34
Total income		56,194	54,996
Net cost of providing service		(6,499)	(5,258)
Revenues from / payments to SA Government			
Revenues from SA Government	16	900	724
Payments to SA Government	16	(998)	-
Total revenues from SA Government		(98)	724
Net result		6,401	5,982
Total comprehensive result		6,401	5,982

The net result and total comprehensive result are attributable to the SA Government as owner

The above statement should be read in conjunction with the accompanying notes

**Environment Protection Authority
Statement of Financial Position
As at 30 June 2013**

	Note	2013 \$'000	2012 \$'000
Current assets			
Cash and cash equivalents	17	14,992	19,031
Receivables	18	6,681	5,796
Total current assets		21,673	24,827
Non-current assets			
Receivables	18	7	6
Property, plant and equipment	19	6,506	5,813
Intangible assets	20	743	727
Total non-current assets		7,256	6,546
Total assets		28,929	31,373
Current liabilities			
Payables	21	1,063	1,515
Employee benefits	22	1,820	1,637
Provisions	23	41	52
Other current liabilities	24	199	56
Total current liabilities		3,123	3,260
Non-current liabilities			
Payables	21	377	400
Employee benefits	22	3,873	4,076
Provisions	23	174	155
Other non-current liabilities	24	644	711
Total non-current liabilities		5,068	5,342
Total liabilities		8,191	8,602
Net assets		20,738	22,771
Equity			
Contributed capital		-	8,434
Asset revaluation surplus		437	437
Retained earnings		20,301	13,900
Total equity		20,738	22,771
The total equity is attributable to the SA Government as owner			
Unrecognised contractual commitments	25		
Contingent assets and liabilities	26		

The above statement should be read in conjunction with the accompanying notes

Environment Protection Authority
Statement of Changes in Equity
For the year ended 30 June 2013

	Contributed Capital	Asset Revaluation Surplus	Retained Earnings	Total Equity
	\$'000	\$'000	\$'000	\$'000
Balance at 1 July 2011	3,195	437	7,918	11,550
Net result for 2011-12	-	-	5,982	5,982
Total comprehensive result for 2011-12	-	-	5,982	5,982
Transactions with SA Government as owner				
Equity contribution received	5,239	-	-	5,239
Balance at 30 June 2012	8,434	437	13,900	22,771
Net result for 2012-13	-	-	6,401	6,401
Total comprehensive result for 2012-13	-	-	6,401	6,401
Transactions with SA Government as owner				
Equity contribution repaid	(8,434)	-	-	(8,434)
Balance at 30 June 2013	-	437	20,301	20,738

All changes in equity are attributable to the SA Government as owner

The above statement should be read in conjunction with the accompanying notes

Environment Protection Authority
Statement of Cash Flows
For the year ended 30 June 2013

	Note	2013 \$'000	2012 \$'000
Cash flows from operating activities			
Cash outflows:			
Employee benefit payments		(21,913)	(20,933)
Payments for supplies and services		(6,481)	(6,558)
Payment of grants and subsidies		(18,843)	(19,075)
Other payments		(120)	(131)
Cash used in operations		(47,357)	(46,697)
Cash inflows:			
Fees and charges		51,547	49,227
Receipts from grant and contributions		1,640	1,583
Interest received		204	259
Other receipts		29	34
Cash generated from operations		53,420	51,103
Cash flows from SA Government			
Receipts from SA Government		900	724
Payments to SA Government		(998)	-
Cash generated from SA Government		(98)	724
Net cash provided by/(used in) operating activities	28	5,965	5,130
Cash flows from investing activities			
Cash outflows			
Purchase of property, plant and equipment		(1,562)	(710)
Proceeds from the sale of property, plant and equipment		(8)	(2)
Cash used in investing activities		(1,570)	(712)
Net cash provided by/(used in) investing activities		(1,570)	(712)
Cash flows from financing activities			
Cash Outflows			
Return of capital contributions from government		(8,434)	-
Cash used in financing activities		(8,434)	-
Cash inflows			
Capital contributions from government		-	5,239
Cash generated from financing activities		-	5,239
Net cash provided by/(used in) financing activities		(8,434)	5,239
Net increase / (decrease) in cash and cash equivalents		(4,039)	9,657
Cash and cash equivalents at the beginning of the period		19,031	9,374
Cash and cash equivalents at the end of the period	17	14,992	19,031

The above statement should be read in conjunction with the accompanying notes

Environment Protection Authority

Note Index

For the year ended 30 June 2013

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Environment Protection Authority
Notes to and forming part of the Financial Statements
For the year ended 30 June 2013

1 Objectives of the Environment Protection Authority

(a) Reporting Entity

The Environment Protection Authority reporting entity (the Authority) comprises the following:

- the Environment Protection Authority – a statutory authority with an appointed board established by the *Environment Protection Act 1993*
- an administrative unit also named the Environment Protection Authority established under the *Public Sector Act 2009*
- the Environment Protection Fund established under the *Environment Protection Act 1993*.

Under the *Environment Protection Act 1993*, the Chief Executive of the administrative unit is also taken to be the Chief Executive of the statutory authority. The Chief Executive is subject to the control and direction of the Minister in relation to the activities of the administrative unit, and is subject to the control and direction of the Board in relation to giving effect to its policies and decisions under the *Environment Protection Act 1993*.

The statutory authority is South Australia's primary environmental regulator for the protection, restoration and enhancement of our environment. The statutory authority makes use of the services of the administrative unit's employees and facilities in performing its statutory obligations.

The administrative unit also has responsibility for radiation protection functions under the *Radiation Protection and Control Act 1982*. The Authority's financial statements include assets, liabilities, revenues and expenses attributable to Radiation Protection. The income and expenses (excluding overheads) attributable to radiation protection are disclosed in Note 32. However assets and liabilities have not been separately disclosed as they cannot be reliably attributed to radiation protection functions.

The Environment Protection Fund (the Fund) meets the accounting criteria of a controlled entity of the Authority and consequently the assets and liabilities of the Fund are recognised by the Authority in the Statement of Financial Position, the Fund's revenues and expenses have been recognised in the Authority's Statement of Comprehensive Income and the Fund's changes in equity have been recognised in the Authority's Statement of Changes in Equity. The transactions of the Fund are disclosed in Note 31.

(b) Strategic Context

The Authority promotes the principles of ecologically sustainable development and works with government, industry and the people of South Australia, with key roles to:

- review, develop and draft environmental protection policies and national environment protection measures
- authorise activities of environmental significance through an authorisation system aimed at the control and minimisation of pollution and waste
- conduct compliance investigations and institute environmental monitoring and evaluation programmes
- provide advice and assistance regarding best environmental management practice.

The Authority has a key advocacy and engagement role across government and with the people of South Australia, business and communities throughout South Australia, to achieve a healthy and valued environment.

(c) Financial Arrangements

The Department of Environment, Water and Natural Resources (DEWNR) provides some professional, technical and administrative support to the Authority. The identifiable direct costs of providing these services are met by the Authority. In addition, certain services are provided by DEWNR at no charge to the Authority and have not been recognised in the financial statements as it is impractical to determine a value for these items. The costs of these services include salaries and overheads relating to the provision of various administrative services.

A Memorandum of Understanding was signed on 13 March 2013 between DEWNR and the Authority relating to the provision of these services.

The Authority's sources of funds consist of income derived primarily from fees, levies and licences. These fees, levies and licences include:

- waste levies from landfill depots
- environmental authorisation fees
- radiation licence fees
- fines and penalties
- section 7 enquiries.

The financial activities of the Authority are primarily conducted through deposit accounts with the Department of Treasury and Finance (DTF) pursuant to Section 8 and Section 21 of the *PFAA*. The deposit accounts are used for funds provided by Parliamentary appropriation together with revenues from services provided and from fees and charges.

2 Summary of significant accounting policies

(a) Statement of compliance

The Authority has prepared these financial statements in compliance with section 23 of the PFAA.

The financial statements are general purpose financial statements. The accounts have been prepared in accordance with relevant Australian Accounting Standards and comply with Treasurer's Instructions and accounting policy statements promulgated under the provisions of the PFAA.

The Authority has applied Australian Accounting Standards that are applicable to not-for-profit entities, as the Authority is a not-for-profit entity.

Australian Accounting Standards and interpretations that have recently been issued or amended but are not yet effective have not been adopted by the Authority for the reporting period ending 30 June 2013.

(b) Basis of preparation

The preparation of the financial statements requires:

- the use of certain accounting estimates and management to exercise its judgment in the process of applying the Authority's accounting policies. The areas involving a higher degree of judgment or where assumptions and estimates are significant to the financial statements, are outlined in the applicable notes;
- accounting policies are selected and applied in a manner which ensures that the resulting financial information satisfies the concepts of relevance and reliability, thereby ensuring that the substance of the underlying transactions or other events are reported; and
- compliance with accounting policy statements issued pursuant to section 41 of the *Public Finance and Audit Act 1987*. In the interest of public accountability and transparency the accounting policy statements require the following note disclosures, that have been included in these financial statements:
 - (a) revenues, expenses, financial assets and liabilities where the counterparty/transaction is with an entity within the SA Government as at reporting date, classified according to their nature. A threshold of \$100,000 for separate identification of these items applies;
 - (b) expenses incurred as a result of engaging consultants;
 - (c) employee targeted voluntary separation package information;
 - (d) employees whose normal remuneration is equal to or greater than the base executive remuneration level (within \$10,000 bandwidths) and the aggregate of the remuneration paid or payable or otherwise made available, directly or indirectly by the entity to those employees; and
 - (e) board/committee member and remuneration information, where a board/committee member is entitled to receive income from membership other than a direct out-of-pocket reimbursement.

The Authority's Statement of Comprehensive Income, Statement of Financial Position and Statement of Changes in Equity have been prepared on an accrual basis and are in accordance with historical cost convention, except for certain assets that were valued in accordance with the valuation policy applicable.

The Statement of Cash Flows has been prepared on a cash basis.

The financial statements have been prepared based on a twelve month period and presented in Australian currency.

The accounting policies set out below have been applied in preparing the financial statements for the year ended 30 June 2013 and the comparative information presented.

(c) Comparative information

The presentation and classification of items in the financial statements are consistent with prior periods except where specific accounting standards and/or accounting policy statements have required a change.

Where presentation or classification of items in the financial statements has been amended, comparative figures have been adjusted to conform to changes in presentation or classification in these financial statements unless impracticable.

Where the Authority has applied an accounting policy retrospectively; retrospectively restated items in the financial statements; reclassified items in the financial statements, it has provided three Statements of Financial Positions and related notes.

The restated comparative amounts do not replace the original financial statements for the preceding period.

(d) Rounding

All amounts in the financial statements have been rounded to the nearest thousand dollars (\$'000).

(e) Taxation

The Authority is not subject to income tax. The Authority is liable for payroll tax, fringe benefits tax, goods and services tax (GST), emergency services levy, land tax equivalents and local government rate equivalents.

Shared Services SA (SSSA) prepares a Business Activity Statement on behalf of the Authority under the grouping provisions of the GST legislation. Under these provisions, DEWNR is liable for the payments and entitled to the receipts associated with GST. Therefore, the Authority's net GST receivable/payable is recorded in DEWNR's Statement of Financial Position. GST cash flows applicable to the Authority are recorded in DEWNR's Statement of Cash Flows.

(f) Events after the reporting period

Adjustments are made to amounts recognised in the financial statements, where an event occurs after 30 June and before the date the financial statements are authorised for issue, where those events provide information about conditions that existed at 30 June.

Note disclosure is made about events between 30 June and the date the financial statements are authorised for issue where the events relate to a condition which arose after 30 June and which may have a material impact on the results of subsequent years.

(g) Income and expenses

Income and expenses are recognised to the extent that it is probable that the flow of economic benefits to or from the Authority will occur and can be reliably measured.

Income has been aggregated according to its nature and has not been offset unless required or permitted by a specific accounting standard, or where offsetting reflects the substance of the transaction or other event.

The notes accompanying the financial statements disclose income where the counterparty/transaction is with an entity within the SA Government as at the reporting date, classified according to their nature.

Income

The following are specific recognition criteria:

Fees and Charges

Environmental Authorisation Fees received under the *Environment Protection Act 1993* are recognised as revenue when invoiced. All other license fees, including those received under the *Radiation Protection and Control Act 1982*, are recognised as revenue upon receipt.

Waste Levies are recognised by the Authority on an accrual basis.

Contributions received

Contributions are recognised as an asset and income when the Authority obtains control of the contributions or obtains the right to receive the contributions and the income recognition criteria are met (i.e. the amount can be reliably measured and the flow of resources is probable).

Generally, the Authority has obtained control or the right to receive for:

- Contributions with unconditional stipulations - this will be when the agreement becomes enforceable i.e. the earlier of when the receiving entity has formally been advised that the contribution (e.g. grant application) has been approved; agreement/contract is executed; and/or the contribution is received.
- Contributions with conditional stipulations - this will be when the enforceable stipulations specified in the agreement occur or are satisfied; that is income would be recognised for contributions received or receivable under the agreement.

All contributions received by the Authority have been contributions with unconditional stipulations attached and have been recognised as an asset and income upon receipt.

Revenues from SA Government

Appropriations for program funding are recognised as revenues when the Authority obtains control over the funding. Control over appropriations is normally obtained upon receipt.

Where money has been appropriated in the form of an equity contribution, the Treasurer has acquired a financial interest in the net assets of the Authority and the appropriation is recorded as contributed equity. A return of contributed equity was made in 2012-13 of \$8,434,000 by the Authority (the Authority received a \$5,239,000 equity contribution in 2011-12).

Net gain/loss on non-current assets

Income from the disposal of non-current assets is recognised when the control of the asset has passed to the buyer and has been determined by comparing proceeds with carrying amount. When revalued assets are sold, the revaluation increments are transferred to retained earnings.

Gains on disposal of non-current assets are recognised at the date control of the asset is passed to the buyer and are determined after deducting the cost of the asset from the proceeds at that time.

Other income

Other income consists of sundry expense reimbursements.

Expenses

The following are specific recognition criteria:

Employee benefits

Employee benefits include all costs related to employment including wages and salaries, non-monetary benefits and leave entitlements. These are recognised when incurred.

Superannuation

The amount charged to the Statement of Comprehensive Income represents the contributions made by the Authority to the superannuation plan in respect of current services of current Authority staff. The Department of Treasury and Finance centrally recognises the superannuation liability in the whole of government financial statements.

Depreciation and amortisation

All non-current assets, having a limited useful life, are systematically depreciated/amortised over their useful lives in a manner that reflects the consumption of their service potential. Amortisation is used in relation to intangible assets such as software, while depreciation is applied to tangible assets such as property, plant and equipment.

Assets' residual values, useful lives and amortisation methods are reviewed and adjusted if appropriate, on an annual basis.

Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset are accounted for prospectively by changing the time period or method, as appropriate, which is a change in accounting estimate.

The value of leasehold improvements is amortised over the estimated useful life of each improvement, or the unexpired period of the relevant lease, whichever is shorter.

Land assets are not depreciated.

Depreciation/amortisation is calculated on a straight line basis over the estimated useful life of the following classes of assets as follows:

<u>Class of Asset</u>	<u>Useful Life</u>
Computing equipment	3-10 years
Intangibles	3-14 years
Infrastructure	15-50 years
Plant and equipment	0-15 years
Moveable vehicles	10-25 years
Furniture and fittings	5-15 years
Buildings and improvements	30-50 years
Other	7-10 years

Grants and subsidies

For contributions payable, the contribution will be recognised as a liability and expense when the Authority has a present obligation to pay the contribution and the expense recognition criteria are met.

All contributions paid by the Authority have been contributions with unconditional stipulations attached.

Payments to SA Government

Payments to the SA Government include the return of surplus cash pursuant to the cash alignment policy and paid directly to the Consolidated Account.

(h) Current and non-current classification

Assets and liabilities are characterised as either current or non-current in nature. Assets and liabilities that are sold, consumed or realised as part of the normal operating cycle even when they are not expected to be realised within twelve months after the reporting date have been classified as current assets or current liabilities. All other assets and liabilities are classified as non-current.

Where asset and liability line items combine amounts expected to be realised within twelve months and more than twelve months, the Authority has separately disclosed the amounts expected to be recovered or settled after more than twelve months.

(i) Assets

Assets have been classified according to their nature and have not been offset unless required or permitted by a specific accounting standard, or where offsetting reflects the substance of the transaction or other event.

Where an asset line item combines accounts expected to be settled within twelve months and more than twelve months, the Authority has separately disclosed the amounts expected to be recovered after more than twelve months.

The notes accompanying the financial statements disclose financial assets where the counterparty/transaction is with an entity within the SA Government as at the reporting date, classified according to their nature.

Cash and cash equivalents

Cash and cash equivalents in the Statement of Financial Position includes cash at bank and on hand.

For the purposes of the Statement of Cash Flows, cash and cash equivalents consist of cash and cash equivalents as defined above.

Cash is measured at nominal value.

Receivables

Receivables include amounts receivable from fees and charges, interest, prepayments and other accruals.

Receivables arise in the normal course of selling goods and services to other government agencies and to the public. Trade receivables are generally due within 30 days after the issue of an invoice.

Collectability of receivables is reviewed on an ongoing basis. An allowance for doubtful debts is raised when there is objective evidence that the Authority will not be able to collect the debt. Bad debts are written off when identified.

*Non-Current Assets*Acquisition and Recognition

Non-current assets are initially recorded at cost or at the value of any liabilities assumed, plus any incidental cost involved with the acquisition. Non-current assets are subsequently measured at fair value less accumulated depreciation.

Where assets are acquired at no value, or minimal value, they are recorded at their fair value in the Statement of Financial Position. However, if the assets are acquired at no or nominal value as part of a restructuring of administrative arrangements then the assets are recognised at book value i.e. the amount recorded by the transferor public authority immediately prior to the restructure.

All non-current tangible assets with a value over \$10,000 are capitalised.

Revaluation of Non Current Assets

All non-current tangible assets are valued at written down current cost (a proxy for fair value), and revaluation of non-current assets or group of assets is only performed when its fair value at the time of acquisition is greater than \$1 million and estimated useful life is greater than three years.

Every five years, the Authority revalues its land, buildings and infrastructure. However, if at any time management considers that the carrying amount of an asset materially differs from its fair value, then the asset will be revalued regardless of when the last valuation took place. Non-current tangible assets that are acquired between revaluations are held at cost until the next valuation, when they are revalued to fair value.

Any revaluation increment is credited to the asset revaluation surplus except to the extent that it reverses a revaluation decrease of the same asset class previously recognised as an expense, in which case the increase is recognised as income.

Any revaluation decrease is recognised as an expense, except to the extent that it offsets a previous revaluation increase for the same asset class, in which case the decrease is debited directly to the asset revaluation surplus to the extent of the credit balance existing in revaluation surplus for that asset class.

Any accumulated depreciation as at the revaluation date is eliminated against the gross carrying amounts of the assets and the net amounts are restated to the revalued amounts of the asset.

Upon disposal or derecognition, any revaluation surplus relating to that asset is transferred to retained earnings.

The Authority undertook an independent professional valuation in 2009 for all land, buildings and infrastructure. The valuer used by the Authority was as follows:

- Land, Buildings & Infrastructure
1 July 2009, Valcorp Australia Pty Ltd
Mr N Zwaans, BBus(Property) GAPI
Mr F Taormina, BAppSc(Val), AAPI

Fair value was determined by identifying a market buying price, estimated as written down modern equivalent replacement cost. The fair value of land and buildings was based on recent market transactions for similar land and buildings in the area taking into account zoning and restricted use.

Assets deemed to be at fair value

APF III *Asset Accounting Framework* states that revaluation of a non-current asset is required only when its fair value at the time of acquisition is greater than \$1 million and its estimated useful life is greater than 3 years.

Asset classes that did not satisfy this criteria and are therefore deemed to be at fair value are:

- moveable vehicles
- computing equipment
- application software
- furniture and fittings
- plant and equipment

Impairment

All non-current tangible and intangible assets are tested for indications of impairment at each reporting date. Where there is an indication of impairment, the recoverable amount is estimated. An amount by which the asset's carrying amount exceeds the recoverable amount is recorded as an impairment loss.

For revalued assets, an impairment loss is offset against the respective asset revaluation surplus.

Intangible Assets

An intangible asset is an identifiable non-monetary asset without physical substance. Intangible assets are measured at cost. Following initial recognition, intangible assets are carried at cost less any accumulated amortisation and any accumulated impairment losses.

The useful lives of intangible assets are assessed to be either finite or indefinite. The Authority only has intangible assets with finite lives. The amortisation period and the amortisation method for intangible assets is reviewed on an annual basis.

The acquisition or internal development of software is capitalised only when the expenditure meets the definition criteria (identifiability, control and the existence of future economic benefits) and recognition criteria (probability of future economic benefits and cost can be reliably measured) and when the amount of expenditure is greater than or equal to \$10,000.

All research and development costs that do not meet the capitalisation criteria outlined in AASB 138 are expensed.

(j) Liabilities

Liabilities have been classified according to their nature and have not been offset unless required or permitted by a specific accounting standard, or where offsetting reflects the substance of the transaction or other event.

Where a liability line item combines accounts expected to be settled within twelve months and more than twelve months, the authority has separately disclosed the amounts expected to be settled after more than twelve months.

The notes accompanying the financial statements disclose financial liabilities where the counterparty/transaction is with an entity within the SA Government as at the reporting date, classified according to their nature.

Payables

Payables include creditors, accrued expenses and employment on-costs and Paid Parental Leave Scheme payable.

Creditors represent the amounts owing for goods and services received prior to the end of the reporting period that are unpaid at the end of the reporting period. Creditors include all unpaid invoices received relating to the normal operations of the Authority.

Accrued expenses represent goods and services provided by other parties during the period that are unpaid at the end of the reporting period and where an invoice has not been received.

The paid parental leave scheme payable represents amounts which the Authority has received from the Commonwealth Government to forward onto eligible employees via the Authority's standard payroll processes. That is, the Authority is acting as a conduit through which the payment to eligible employees is made on behalf of the Family Assistance Office.

All payables are measured at their nominal amount and are normally settled within 30 days from the date of the invoice or the date the invoice is first received.

Employee benefits on-costs include payroll tax, WorkCover levies and superannuation contributions in respect to outstanding liabilities for salaries and wages, long service leave, annual leave and skills and experience retention leave.

The Authority makes contributions to several State Government and externally managed superannuation schemes. These contributions are treated as an expense when they occur. There is no liability for payments to beneficiaries as they have been assumed by the respective superannuation schemes. The only liability outstanding at reporting date relates to any contributions due but not yet paid to the South Australian Superannuation Board.

Leases

The determination of whether an arrangement is or contains a lease is based on the substance of the arrangement. The Authority has entered into one or more operating leases.

Operating Leases

Operating lease payments are recognised as an expense in the Statement of Comprehensive Income on a straight-line basis over the lease term. The straight-line basis is representative of the pattern of benefits derived from the leased assets.

Lease Incentive

All incentives for the agreement of new or renewed operating leases are recognised as an integral part of the net consideration agreed for the use of the leased asset. Incentives received to enter into operating leases are recognised as a liability.

The aggregate benefit of lease incentives received by the Authority in respect of operating leases has been recorded as a reduction of rental expense over the lease term, on a straight line basis.

Lease incentives in the form of leasehold improvements are capitalised as an asset and depreciated over the remaining term of the lease or estimated useful life of the improvement, whichever is shorter.

Employee benefits

These benefits accrue for employees as a result of services provided up to the reporting date that remain unpaid. Long-term employee benefits are measured at present value and short-term employee benefits are measured at nominal amounts.

Salaries, wages, annual leave, skills and experience retention leave and sick leave

The liability for salary and wages are measured as the amount unpaid at the reporting date at remuneration rates current at reporting date.

The annual leave liability and the skills and experience retention leave liability is expected to be payable within twelve months and is measured at the undiscounted amount expected to be paid. In the unusual event where salary and wages, annual leave and skills and experience retention leave liability are payable later than 12 months, the liability will be measured at present value.

No provision has been made for sick leave as all sick leave is non-vesting and the average sick leave taken in future years by employees is estimated to be less than the annual entitlement of sick leave.

Long service leave

The liability for long service leave is measured as the present value of expected future payments to be made in respect of services provided by employees up to the end of the reporting period using the projected unit credit method.

The estimated liability for long service leave is based on actuarial assumptions over expected future salary and wage levels, experience of employee departures and periods of service. These assumptions are based on employee data over SA government entities. Expected future payments are discounted using market yields at the end of the reporting period on government bonds with durations that match, as closely as possible, the estimated future cash outflows.

Provisions

Provisions are recognised when the Authority has a present obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

When the Authority expects some or all of a provision to be reimbursed, the reimbursement is recognised as a separate asset but only when the reimbursement is virtually certain. The expense relating to any provision is presented in the Statement of Comprehensive Income net of any reimbursement.

Provisions are measured at the present value of management's best estimate of the expenditure required to settle the present obligation at reporting date. If the effect of the time value of money is material, provisions are discounted for the time value of money and the risks specific to the liability.

The workers compensation provision is an actuarial estimate of the outstanding liability as at 30 June 2013 provided by a consulting actuary engaged through the Public Sector Workforce Relations Division of the Department of the Premier and Cabinet. The provision is for the estimated cost of ongoing payments to employees as required under current legislation.

The Authority is responsible for the payment of workers compensation claims.

(k) Unrecognised contractual commitments and contingent assets and liabilities

Commitments include operating lease and remuneration commitments arising from contractual or statutory sources and are disclosed at their nominal value.

Contingent assets and contingent liabilities are not recognised in the Statement of Financial Position, but are disclosed by way of a note and, if quantifiable, are measured at nominal value.

Unrecognised contractual commitments and contingencies are disclosed net of the amount of GST recoverable from, or payable to the Australian Taxation Office. If GST is not payable to, or recoverable from the Australian Taxation Office, the commitments and contingencies are disclosed on a gross basis.

3 New and revised accounting standards and policies

The Authority did not voluntarily change any of its accounting policies during 2012-13.

Australian Accounting Standards and Interpretations that have recently been issued or amended but are not yet effective, have not been adopted by the Authority for the period ending 30 June 2013. The Authority has assessed the impact of the new and amended standards and interpretations and considers there will be no impact on the accounting policies or the financial statements of the Authority.

4 Activities of the Authority

The Authority is funded by appropriation and fees and charges for the provision of environment protection, policy and regulatory services. In line with the objectives of establishing the Authority to focus on environment protection activities, the Authority conducts its services through a single program, Environment and Radiation Protection. The purpose of this program is to achieve a clean, healthy and valued environment that supports social and economic policy for all South Australians. As the Authority conducts its services through a single program, a Statement of Disaggregated Disclosures has not been prepared.

Environment Protection Authority
Notes to and forming part of the Financial Statements
For the year ended 30 June 2013

5 Employee benefits expenses

	2013 \$'000	2012 \$'000
Salaries and wages	15,725	15,111
TVSPs (refer below)	889	348
Long service leave	264	1,249
Annual leave	1,526	1,447
Skills and experience retention leave	76	-
Employment on-costs - superannuation	1,828	1,907
Employment on-costs - other	961	983
Board and Committee fees	162	160
Workers Compensation	34	103
Other employee related expenses	431	487
Total: Employee benefits expenses	21,896	21,795

Targeted voluntary separation packages:

	2013 \$'000	2012 \$'000
Amount paid during the reporting period to separated employees:		
TVSPs	889	348
Annual Leave and long service leave paid to those employees	251	124
Total	1,140	472
Recovery from the Department of Treasury and Finance	900	352
Net cost to Environment Protection Authority	240	120

The number of employees who received a TVSP during the reporting period

6 2

Remuneration of employees

The number of employees whose remuneration received or receivable falls within the following bands:

	2013 No. of employees	2012 No. of employees
\$134,000 – 137,999*	-	1
\$138,000 - 147,999	1	-
\$168,000 – 177,999	-	1
\$178,000 – 187,999	1	-
\$198,000 – 207,999	2	1
\$208,000 – 217,999	-	1
\$218,000 – 227,999	-	1
\$308,000 – 317,999	1	-
Total number of employees	5	5

*This band has been included for the purposes of reporting comparative figures based on the executive base level remuneration rate for 2011-2012.

The table includes all employees who received remuneration equal to or greater than the base executive remuneration level during the year. Remuneration of employees reflects all costs of employment including salaries and wages, payments in lieu of leave, superannuation contributions, salary sacrifice benefits and fringe benefits and any fringe benefits tax paid or payable in respect of those benefits. The total remuneration received by these employees for the year was \$1.044 million (\$0.939m).

6 Supplies and services

	2013 \$'000	2012 \$'000
Accommodation and property management expenses	2,252	2,199
Consultants	2	16
Contractors	251	470
Fee for service	561	456
General administration	853	847
Information technology & communication expenses	604	648
Minor works, maintenance & equipment	462	444
Monitoring fees	439	298
Scientific and technical services	630	686
Transportation	141	144
Travel and accommodation	243	344
Vehicle and aircraft	358	384
Other	195	289
Total: Supplies and services	6,991	7,225

Supplies and services provided by entities within the SA Government

Accommodation and property management expenses	2,207	2,124
Scientific and technical services	7	28
General administration	520	497
Vehicle and Aircraft	135	338
Total: Supplies and services - SA Government entities	2,869	2,987

Environment Protection Authority
Notes to and forming part of the Financial Statements
For the year ended 30 June 2013

Consultants

The number and dollar amount of consultancies paid/payable (included in supplies and services expense) that fell within the following bands:

	2013		2012	
	Number	\$'000	Number	\$'000
Below \$10,000	1	2	1	2
\$10,000 to \$50,000	-	-	1	14
Total paid/payable to the consultants engaged		2		16

7 Depreciation and amortisation

	2013	2012
	\$'000	\$'000
Depreciation		
Buildings and Improvements	1	1
Computing Equipment	20	9
Furniture and Fittings	437	437
Moveable Vehicles	8	9
Infrastructure	14	13
Plant and Equipment	171	166
Total: Depreciation	651	635
Amortisation		
Intangible Assets	202	354
Total: Amortisation	202	354
Total Depreciation and Amortisation	853	989

8 Grants and subsidies

	2013	2012
	\$'000	\$'000
Grants and subsidies paid/payable to entities within the SA Government		
Department of Environment, Water and Natural Resources	175	320
Zero Waste SA *	18,479	18,563
Total: Grants and subsidies - SA Government entities	18,654	18,883
Grants and subsidies paid/payable to entities external to the SA Government		
Community Organisations and Associations	181	165
Individuals - Solar Hot Water Rebate	-	1
Commonwealth Government	8	26
Total: Grants and subsidies - Non SA Government entities	189	192
Total: Grants and subsidies	18,843	19,075

* As per section 113 of the Environment Protection Act 1993 the Authority earns and collects 100 percent of waste levies, however is then required to transfer 50 percent of solid waste levies collected to Zero Waste SA as per section 17 of the Zero Waste SA Act 2004. This transfer represents the payment of waste levies monies to Zero Waste SA in accordance with the Zero Waste SA Act 2004.

9 Net (gain)/loss from the disposal of non-current assets

	2013	2012
	\$'000	\$'000
Moveable vehicles		
Proceeds from disposal	(15)	-
Less: Net book value of assets disposed	22	-
Net gain/(loss) from disposal	7	-
Plant and equipment		
Proceeds from disposal	-	-
Less: Net book value of assets disposed	1	3
Net (gain)/loss from disposal	1	3
Other assets		
Proceeds from disposal	-	(1)
Less: Net book value of assets disposed	-	-
Net (gain)/loss from disposal	-	(1)
Total: Assets		
Total proceeds from disposal	(15)	(1)
Less: Total value of assets disposed	23	3
Total: Net (gain)/loss from disposal of assets	8	2

Environment Protection Authority
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10 Other expenses		2013 \$'000	2012 \$'000
Bad and doubtful debts		1,006	537
Other (including audit fees - see note 11)		98	115
Total: Other expenses		1,104	652
Other expenses paid/payable to entities within the SA Government			
Other (including audit fees - see note 11)		98	112
Total: Other expenses - SA Government entities		98	112
11 Auditor's remuneration		2013 \$'000	2012 \$'000
Audit fees paid/payable to the Auditor-General's Department		98	112
Total: Audit fees		98	112
Other services:			
No other services were provided by the Auditor-General's Department			
12 Revenues from fees and charges		2013 \$'000	2012 \$'000
Fines and Penalties		298	477
Environmental Authorisation Fees		11,477	10,341
Radiation Licence Fees		3,208	1,848
Other Licence Fees		556	613
Waste Levies		38,725	39,773
Other fees and charges		62	68
Total: Fees and charges		54,326	53,120
Fees and charges received/receivable from entities within the SA Government			
Fines and Penalties		3	4
Environmental Authorisation Fees		2,068	1,753
Radiation Licence Fees		357	226
Other Licence Fees		3	3
Total: Fees and charges - SA Government entities		2,431	1,986
13 Grants and contributions		2013 \$'000	2012 \$'000
Grants and contributions received/receivable from entities within the SA Government			
SA Government Grants	(i)	1,108	1,210
Total grants and contributions - SA Government entities		1,108	1,210
Grants and contributions received/receivable from entities external to the SA Government			
Commonwealth Government	(ii)	500	373
Private Industry and Community Grants	(iii)	32	-
Total grants and contributions - non SA Government entities		532	373
Total: Grants and contributions		1,640	1,583
(i) State Government Grants and Contributions		2013 \$'000	2012 \$'000
Adelaide & Mount Lofty Ranges Natural Resources Management Board		25	25
SA Murray Darling Basin Natural Resources Management Board		4	-
SA Water Corporation		-	56
Department of Further Education, Employment, Science and Technology		100	150
The Department of Environment, Water and Natural Resources (DEWNR)		975	927
Primary Industries and Resources SA		2	50
Other		2	2
		1,108	1,210

Environment Protection Authority
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(ii) Commonwealth Government	2013 \$'000	2012 \$'000
Commonwealth Scientific and Industrial Research Organisation	-	1
Murray Darling Basin Authority	358	245
Department of Education, Employment and Workplace Relations	14	-
Department of Resources, Energy and Tourism	23	22
Department of Sustainability, Environment, Water, Population and Communities	105	105
	<u>500</u>	<u>373</u>

(iii) Private Industry and Community Grants	2013 \$'000	2012 \$'000
Dairy SA	31	-
University of Adelaide	1	-
	<u>32</u>	<u>-</u>

Contributions with conditions of expenditure

Contributions which have conditions of expenditure still to be met as at reporting date were \$7.102million (\$6.824m).

The Authority is engaged in a variety of funding programs involving State and Commonwealth sources who provide monies to the Authority on the premise that these funds are expended in a manner consistent with the terms of the agreement. At reporting date these contributions relate to:

	2013 \$'000	2012 \$'000
Environment Protection Fund	6,963	6,698
National Pollutant Inventory	91	-
Chemcollect	18	41
Externally Funded Projects	30	85
	<u>7,102</u>	<u>6,824</u>

The Environment Protection Fund is established under section 24 of the *Environment Protection Act 1993*. The Fund must be kept as directed by the Treasurer. Prescribed percentages of waste levies and licence fees are paid into the Fund under section 8 of the *Environment Protection Regulations 2009*. The Fund may be applied by the Minister or by the Authority with the approval of the Minister.

14 Interest revenues	2013 \$'000	2012 \$'000
Interest from entities within the SA Government	199	259
Total: Interest revenues	<u>199</u>	<u>259</u>

15 Other income	2013 \$'000	2012 \$'000
Other income received/receivable		
Salaries and wages recoveries	5	15
Other sundry revenue	24	19
Total: Other Income	<u>29</u>	<u>34</u>

16 Revenues from / payments to SA Government	2013 \$'000	2012 \$'000
Revenues from SA Government		
Appropriations from Consolidated Account pursuant to the Appropriation Act	-	724
Contingency funds	900	-
Total: Revenues from SA Government	<u>900</u>	<u>724</u>
Payments to SA Government		
Return of surplus cash pursuant to cash alignment policy	(998)	-
Total payments from SA Government	<u>(998)</u>	<u>-</u>

Contingency revenue of \$0.9m from SA Government representing recovery for TVSPs paid during the year (\$0.351m for operational funding and \$0.373m for capital projects).

Environment Protection Authority
Notes to and forming part of the Financial Statements
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17 Cash and cash equivalents

	2013 \$'000	2012 \$'000
Deposits with the Treasurer	8,024	12,328
Environment Protection Fund Deposit Account	6,963	6,698
Cash on hand/Imprest accounts	5	5
Total: Cash and Cash Equivalents	14,992	19,031

Interest rate risk

Cash on hand is non-interest bearing. The Environment Protection Fund Deposit Account earns a floating interest rate, based on daily bank deposit rates. The carrying amount of cash and cash equivalents represents fair value.

18 Receivables

	2013 \$'000	2012 \$'000
Current:		
Receivables	8,107	6,258
Less: Allowance for doubtful debts	(1,560)	(576)
	6,547	5,682
Prepayments	116	92
Accrued revenues	16	21
Workers compensation recoveries	2	1
	6,681	5,796
Total: current receivables	6,681	5,796
Receivables from SA Government entities		
Receivables	67	103
Accrued revenues	16	21
Total: current receivables from SA Government entities	83	124
Non-Current:		
Receivables from entities external to the SA Government		
Workers compensation recoveries	7	6
Total: non-current Receivables	7	6

Movement in allowance for doubtful debts

The allowance for doubtful debts (allowance for impairment loss) is recognised when there is objective evidence (i.e. calculated on past experience and current and expected changes in client credit rating) that a receivable is impaired. An allowance for impairment loss has been recognised in 'Other Expenses' in the Statement of Comprehensive Income for specific debtors and debtors assessed on a collective basis for which such evidence exists.

Movements in the allowance for doubtful debts (impairment loss)

	2013 \$'000	2012 \$'000
Carrying amount at the beginning of the period	576	55
Increase in the allowance	990	526
Amounts written off	(6)	(5)
Carrying amount at the end of the period	1,560	576

Interest rate and credit risk

Receivables are raised for all goods and services provided for which payment has not been received. Receivables are normally settled within 30 days. Receivables and accrued revenues are non-interest bearing. Other than as recognised in the allowance for doubtful debts, it is not anticipated that counterparties will fail to discharge their obligations. The carrying amount of receivables approximates net fair value due to being receivable on demand. There is no concentration of credit risk.

Environment Protection Authority
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19 Property, plant and equipment

	2013 \$'000	2012 \$'000
Land		
Independent valuation	200	200
Total: Land	200	200
Buildings and improvements		
Independent valuation	35	35
Less: Accumulated depreciation	(19)	(18)
Total: Buildings and improvements	16	17
Infrastructure		
Independent valuation	443	359
Less: Accumulated depreciation	(106)	(92)
Total: Infrastructure	337	267
Capital works in progress		
Capital works in progress	1,565	532
Total: Capital works in progress	1,565	532
Moveable vehicles		
At cost (deemed fair value)	182	209
Less: Accumulated depreciation	(95)	(92)
Total: Moveable vehicles	87	117
Computing equipment		
At cost (deemed fair value)	247	200
Less: Accumulated depreciation	(129)	(109)
Total: Computing equipment	118	91
Furniture and fittings		
At cost (deemed fair value)	5,409	5,409
Less: Accumulated depreciation	(1,919)	(1,481)
Total: Furniture and fittings	3,490	3,928
Plant and equipment		
At cost (deemed fair value)	3,790	3,761
Less: Accumulated depreciation	(3,097)	(3,100)
Total: Plant and equipment	693	661
Other		
At cost (deemed fair value)	19	34
Less: Accumulated depreciation	(19)	(34)
Total: Other	-	-
Total: Property, plant and equipment	6,506	5,813

Asset Movement Reconciliation

A reconciliation of the carrying amount of each class of property, plant and equipment and intangible assets is displayed in the following table.

Asset Movement Reconciliation 2012-2013

	Land \$'000	Buildings and Improvements \$'000	Infrastructure \$'000	Capital Works in Progress \$'000	Moveable Vehicles \$'000
Carrying amount at beginning of the period	200	17	267	532	117
Additions	-	-	84	1,169	-
Additions - Transfers to/(from) CWIP	-	-	-	(136)	-
Depreciation / Amortisation expense	-	(1)	(14)	-	(8)
Disposals	-	-	-	-	(22)
Carrying amount at end of the period	200	16	337	1,565	87

	Computing Equipment \$'000	Furniture and Fittings \$'000	Plant & Equipment \$'000	Intangible Assets \$'000	2013 Total \$'000
Carrying amount at beginning of the period	91	3,928	661	727	6,540
Additions	47	-	204	82	1,586
Additions - Transfers to/(from) CWIP	-	-	-	136	-
Depreciation / Amortisation expense	(20)	(437)	(171)	(202)	(853)
Disposals	-	-	(1)	-	(23)
Other	-	(1)	-	-	(1)
Carrying amount at end of the period	118	3,490	693	743	7,249

Environment Protection Authority
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Asset Movement Reconciliation 2011-2012

	Land \$'000	Buildings and Improvements \$'000	Infrastructure \$'000	Capital Works in Progress \$'000	Moveable Vehicles \$'000
Carrying amount at beginning of the period	200	18	280	319	112
Additions	-	-	-	411	14
Additions - Transfers to/(from) CWIP	-	-	-	(198)	-
Depreciation expense	-	(1)	(13)	-	(9)
Carrying amount at end of the period	200	17	267	532	117

	Computing Equipment \$'000	Furniture and Fittings \$'000	Plant & Equipment \$'000	Intangible Assets \$'000	2012 Total \$'000
Carrying amount at beginning of the period	25	4,364	669	832	6,819
Additions	75	1	120	51	672
Additions - Transfers to/(from) CWIP	-	-	41	198	41
Depreciation / Amortisation expense	(9)	(437)	(166)	(354)	(989)
Disposals	-	-	(3)	-	(3)
Carrying amount at end of the period	91	3,928	661	727	6,540

20 Intangible assets

	2013 \$'000	2012 \$'000
Electronic Environment Licensing Forms (E-ELF)		
At cost (deemed fair value)	167	167
Less: Accumulated amortisation	(167)	(157)
Total: Electronic Environment Licensing Forms (E-ELF)	-	10
Integrated Information System (IIS)		
At cost (deemed fair value)	474	474
Less: Accumulated amortisation	(474)	(474)
Total: Integrated Information System (IIS)	-	-
General Environment Information System (GENI)		
At cost (deemed fair value)	1,789	1,653
Less: Accumulated amortisation	(1,271)	(1,140)
Total: General Environment Information System (GENI)	518	513
Complaints and Reports of Environmental Significance System (CARES)		
At cost (deemed fair value)	240	240
Less: Accumulated amortisation	(240)	(238)
Total: Complaints and Reports of Environmental Significance System (CARES)	-	2
Other		
At cost (deemed fair value)	554	472
Less: Accumulated amortisation	(329)	(270)
Total: Other	225	202
Total: Intangible Assets	743	727

Impairment

There were no indications of impairment on intangible assets at 30 June 2013.

Environment Protection Authority
Notes to and forming part of the Financial Statements
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21 Payables	2013	2012
	\$'000	\$'000
Current:		
Creditors	539	1,006
Accrued Expenses	170	181
Employment on-costs	344	324
Paid Parental Leave Scheme payable	10	4
Total: Current Payables	1,063	1,515
 Payables to SA Government entities		
Creditors	34	116
Accrued Expenses	118	112
Employment on-costs	344	324
Total: Current Payables to SA Government entities	496	552
 Non-Current:		
Employment on-costs	377	400
Total: Non-Current Payables	377	400

All non-current payables are to SA Government entities.

As a result of an actuarial assessment performed by the Department of Treasury and Finance, the percentage of the proportion of long service leave taken as leave has remained at the 2012 rate of 40%. This rate is used in the employment oncost calculation.

Interest rate and credit risk

Creditors and accruals are raised for all amounts due but unpaid. Sundry creditors are normally settled within 30 days. Employment on-costs are settled when the respective employee benefit that they relate to is discharged. All payables are non-interest bearing. The carrying amount of payables represents fair value due to the amounts being payable on demand.

22 Employee benefits	2013	2012
	\$'000	\$'000
Current:		
Annual Leave	1,358	1,290
Long Service Leave	386	347
Skills and experience retention leave	76	-
Total: Current Employee benefits	1,820	1,637
 Non-Current:		
Long Service Leave	3,873	4,076
Total: Non-Current Employee benefits	3,873	4,076
 Total: Employee Benefits	5,693	5,713

AASB 119 contains the calculation methodology for long service leave liability. This year, an actuarial assessment performed by the Department of Treasury and Finance was used to calculate the liability rather than using a short hand measurement technique for the calculation of the liability.

AASB 119 requires the use of the yield on long term Commonwealth Government bonds as the discount rate in the measurement of the long service leave liability. The yield on long term Commonwealth Government bonds has increased from 2012 (3.00%) to 2013 (3.75%).

This increase in the bond yield, which is used as the rate to discount future long service leave cash flows, results in a decrease in the reported long service leave liability.

The net financial effect of the changes in methodology and actuarial assumptions in the current financial year is immaterial. The impact on future periods is impracticable to estimate as the long service liability is calculated using a number of assumptions - a key assumption is the long-term discount rate.

The actuarial assessment performed by the Department of Treasury and Finance left the salary inflation rate at 4%. As a result, there is no net financial effect resulting from changes in the salary inflation rate.

Environment Protection Authority
Notes to and forming part of the Financial Statements
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23 Provisions	2013	2012
	\$'000	\$'000
Current:		
Provision for Workers Compensation	41	52
Total: Current Provisions	41	52
Non-Current:		
Provision for Workers Compensation	174	155
Total: Non-Current Provisions	174	155
Total Provisions	215	207
 Carrying amount at the beginning of the period	 207	 146
Additional provisions recognised	8	61
Carrying amount at the end of the period	215	207

A liability has been reported to reflect unsettled workers compensation claims. The workers compensation provision is based on an actuarial assessment performed by the Public Sector Workforce Relations Division of the Department of the Premier and Cabinet.

24 Other liabilities	2013	2012
	\$'000	\$'000
Current:		
Lease incentive	67	67
Other	132	(11)
Total: Current other liabilities	199	56
Non-Current:		
Lease incentive	644	711
Total: Non-current other liabilities	644	711
Total other liabilities	843	767

25 Unrecognised contractual commitments	2013	2012
	\$'000	\$'000
Expenditure commitments - Remuneration		
Commitments for the payment of salaries and other remuneration under fixed-term employment contracts in existence at the reporting date but not recognised as liabilities are payable as follows:		
Within one year	1,105	499
Later than one year but not later than five years	2,371	1,076
Total: Remuneration commitments	3,476	1,575

Amounts disclosed include commitments arising from executive and other service contracts. The Authority does not offer fixed-term remuneration contracts greater than five years.

Expenditure commitments- other:

Commitments in relation to other expenditure contracted for at the reporting date but not recognised as liabilities are payable as follows:

Within one year	475	-
Total: Other commitments	475	-

The Authority's other commitments relate to the purchase of goods and services for the Licensing Administration Modernisation Project.

Operating lease commitments:

Commitments in relation to operating leases contracted for at the reporting date but not recognised as liabilities are payable as follows:

Within one year	2,238	2,196
Later than one year but not later than five years	9,244	9,112
Later than five years	14,974	17,458
Total: Operating lease commitments	26,456	28,766
Representing:		
Non-cancellable operating leases	26,456	28,766
Total: Operating lease commitments	26,456	28,766

The operating leases held by the Authority are mainly property leases with penalty clauses equal to the amount of the residual payments remaining for the lease terms. The leases are payable one month in advance and the Authority has the right of renewal. There are no existing or contingent rental provisions.

26 Contingent assets and liabilities

The Authority is not aware of the existence of any contingent assets or contingent liabilities as at 30 June 2013.

Environment Protection Authority
Notes to and forming part of the Financial Statements
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27 Remuneration of Board and Committee Members

Board and committee members that received or were entitled to remuneration during the 2013 financial year were:

Board of the Environment Protection Authority (EPA)

Ms Cheryl Bart (resigned 3 August 2012)
 Mr Stephen Hains
 Ms Jane Yuille (resigned 20 April 2013)
 Ms Megan Dyson (resigned 20 April 2013)
 Ms Linda Bowes
 Mr Robert Fowler
 Mr Terry Groom (resigned 20 April 2013)
 Ms Mia Handshin (appointed 25 October 2012)

Radiation Protection Committee

Ms Sharon Paulka
 Dr Gerald Laurence (until 6 December 2012)
 Ms Jill Fitch
 Ms Katheryn Taylor (resigned 29 November 2012)
 Dr Michael Lardelli
 Ms Jessica Burckhardt
 Mr Alex Eadie*
 Dr Pam Sykes*

*These members have resigned as employees within the public sector but continued to be members on the Radiation Committee, and therefore entitled to remuneration.

The number of members whose remuneration received or receivable falls within the following bands:

	2013	2012
	No. of members	No. of members
\$nil	6	4
\$1 - \$9,999	3	3
\$20,000 - \$29,999	7	5
\$30,000 - \$39,999	-	1
Total number of Board and Committee members	16	13

Remuneration of members reflects all costs of performing board/committee member duties including sitting fees, super contributions, salary sacrifice benefits and fringe benefits and any fringe benefits tax paid or payable in respect of those benefits. The total remuneration received or receivable by members was \$0.176m (\$0.174m).

In accordance with the Premier and Cabinet Circular No. 16, government employees did not receive any remuneration for board/committee duties during the financial year.

Unless otherwise disclosed, transactions between members and the Authority are on conditions no more favourable than those it is reasonable to expect the Authority would have adopted if dealing with the related party at arm's length in the same circumstances.

28 Cash flow reconciliation

	2013	2012
	\$'000	\$'000
Reconciliation of cash and cash equivalents at the end of the reporting period		
Cash and cash equivalents disclosed in the Statement of Financial Position	14,992	19,031
Cash and cash equivalents disclosed in the Statement of Cash Flows	14,992	19,031
Reconciliation of net cash provided by operating activities to net cost of providing services		
Net cash provided by operating activities	5,965	5,130
Less revenues from SA Government	(900)	(724)
Add payments to SA Government	998	-
Add/less non-cash items:		
Depreciation and amortisation expense	(853)	(989)
Net gain/(loss) on disposal of assets	(8)	(2)
Movement in assets and liabilities		
Increase/(decrease) in receivables	862	2,606
Increase/(decrease) in other assets	24	5
Decrease/(increase) in payables	475	(263)
Decrease/(increase) in employee benefits	20	(676)
Decrease/(increase) in provisions	(8)	(61)
Decrease/(increase) in other liabilities	(76)	232
Net benefit/(cost) of providing services	6,499	5,258

Environment Protection Authority
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29 Financial instruments/Financial risk management

Categorisation of financial instruments

Details of the significant accounting policies and methods adopted including the criteria for recognition, the basis of measurement, and the basis on which income and expenses are recognised with respect to each class of financial asset, financial liability and equity instrument are disclosed in Note 2 "Summary of Significant Accounting Policies".

Statement of Financial Position Line Item	2013		2012		Note number
	Carrying amount \$'000	Fair value \$'000	Carrying amount \$'000	Fair value \$'000	
Financial assets					
Cash and cash equivalents	14,992	14,992	19,031	19,031	17
Receivables (1) (2)	278	278	299	299	18
Financial liabilities					
Payables (1)	591	591	1,075	1,075	21

(1) Receivable and payable amounts disclosed here exclude amounts relating to statutory receivables and payables. In government, certain rights to receive or pay cash may not be contractual and therefore in these situations, the requirements will not apply. Where rights or obligations have their source in legislation such as levy receivables/payables, tax equivalents, commonwealth tax etc they would be excluded from the disclosure. The standard defines contract as enforceable by law. All amounts recorded are carried at cost.

(2) Receivables amount disclosed here excludes prepayments. Prepayments are presented in Note 18 in accordance with paragraph 78(b) of AASB 101. However, prepayments are not financial assets as defined in AASB 132 as the future economic benefit of these assets is the receipt of goods and services rather than the right to receive cash or another financial asset.

Fair Value

Department of SA Service Delivery does not recognise any financial assets or liabilities at fair value (refer to Note 2 Significant Accounting Policies and Note 17, 18, 21, 24 and 28).

Credit risk

Credit risk arises when there is the possibility of the Authority's debtors defaulting on their contractual obligations resulting in a financial loss to the Authority. The Authority measures credit risk on a fair value basis and monitors risk on a regular basis.

The carrying amount of financial assets as detailed in table above represents the Authority's maximum exposure to credit risk.

No collateral is held as security and no credit enhancements relate to financial assets held the the Authority.

The Authority has minimal concentration of credit risk. The Authority has policies and procedures in place to ensure that transactions occur with customers with appropriate credit history. The Authority does not engage in high risk hedging for its financial assets.

Allowances for impairment of financial assets are calculated on past experience and current and expected changes in credit rating. Currently the Authority does not hold any collateral as security for any of its financial assets. Other than receivables, there is no evidence to indicate that the financial assets are impaired. Refer to note 18 for information on the allowance for impairment in relation to receivables.

Ageing analysis of financial assets

The following table discloses the ageing of financial assets, past due, including impaired assets past due.

Financial assets item	Current (Not overdue) \$'000	Overdue for < 30 days \$'000	Overdue for 30–60 days \$'000	Overdue for > 60 days \$'000	Total \$'000
2013					
Not impaired					
Receivables	278	-	-	-	278
Impaired					
Receivables	-	-	-	-	-
2012					
Not impaired					
Receivables	284	-	11	4	299
Impaired					
Receivables	-	-	-	-	-

(1) Receivable and payable amounts disclosed here exclude amounts relating to statutory receivables and payables. In government, certain rights to receive or pay cash may not be contractual and therefore in these situations, the requirements will not apply. Where rights or obligations have their source in legislation such as levy receivables/payables, tax equivalents, commonwealth tax etc they would be excluded from the disclosure. The standard defines contract as enforceable by law. All amounts recorded are carried at cost.

Environment Protection Authority
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Maturity analysis of financial assets and liabilities

The following table discloses the maturity analysis of financial assets and financial liabilities.

Financial statements item	Contractual maturities			Carrying amount
	< 1 year	1-5 years	> 5 years	
	\$'000	\$'000	\$'000	\$'000
2013				
Financial assets				
Cash and cash equivalents	14,992	-	-	14,992
Receivables	278	-	-	278
<i>Total: Financial assets</i>	<u>15,270</u>	<u>-</u>	<u>-</u>	<u>15,270</u>
Financial liabilities				
Payables	591	-	-	591
<i>Total: Financial liabilities</i>	<u>591</u>	<u>-</u>	<u>-</u>	<u>591</u>
2012				
Financial assets				
Cash and cash equivalents	19,031	-	-	19,031
Receivables	299	-	-	299
<i>Total: Financial assets</i>	<u>19,330</u>	<u>-</u>	<u>-</u>	<u>19,330</u>
Financial liabilities				
Payables	1,075	-	-	1,075
<i>Total: Financial liabilities</i>	<u>1,075</u>	<u>-</u>	<u>-</u>	<u>1,075</u>

Liquidity risk

Liquidity risk arises where the Authority is unable to meet its financial obligations as they fall due. The Authority is funded principally from waste levies and annual licence fees. The Authority works with the Department of Treasury and Finance to determine the cash flows associated with its Government approved program of work and to ensure funding is provided through SA Government budgetary processes to meet the expected cash flows. The Authority settles undisputed accounts within 30 days from the date of the invoice or date the invoice is first received. In the event of a dispute, payment is made 30 days from resolution.

The Authority's exposure to liquidity risk is insignificant based on past experience and current assessment of risk.

Market risk

The Authority has no interest bearing liabilities as at the end of the reporting period. There is no exposure to foreign currency or other price risks.

Sensitivity analysis

A sensitivity analysis has not been undertaken for the interest rate risk of the Authority as it has been determined that the possible impact on profit and loss or total equity from fluctuations in interest rates is immaterial.

30 Events after the reporting period

There were no events that occurred after the reporting period for the year ended 30 June 2013.

31 The Environment Protection Fund

The following is a summary of the amounts included in the Fund. In reflecting these amounts in the Authority's financial statements, transactions between the Fund and the Authority have been eliminated.

Statement of Comprehensive Income for the year ended 30 June 2013

	2013	2012
	\$'000	\$'000
Expenses		
Employee benefits	326	315
Supplies and services	2,097	1,607
Grants and subsidies	96	40
Total: Expenses	<u>2,519</u>	<u>1,962</u>
Income		
Fees and Charges	2,587	2,780
Grants and contributions	4	7
Interest revenue	199	259
Other revenue	8	1
Total: Income	<u>2,798</u>	<u>3,047</u>
Net result	<u>279</u>	<u>1,085</u>

Environment Protection Authority
Notes to and forming part of the Financial Statements
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Statement of Financial Position as at 30 June 2013

	2013	2012
	\$'000	\$'000
Current assets		
Cash and cash equivalents	6,963	6,698
Receivables	287	273
Total: Current Assets	7,250	6,971
Total: Assets	7,250	6,971
Current liabilities		
Payables	263	263
Total: Current Liabilities	263	263
Total: Liabilities	263	263
Net Assets	6,987	6,708
Equity		
Retained earnings	6,987	6,708
Total: Equity	6,987	6,708

Statement of Changes in Equity for the year ended 30 June 2013

	Retained Earnings	Total
	\$'000	\$'000
Balance at 30 June 2011	5,623	5,623
Net result for 2011/2012	1,085	1,085
Balance at 30 June 2012	6,708	6,708
Net result for 2012/2013	279	279
Balance at 30 June 2013	6,987	6,987

Statement of Cash Flows for the year ended 30 June 2013

	2013	2012
	\$'000	\$'000
Cash flows from operating activities		
Cash inflows		
Fees and charges	2,567	2,675
Grant and contribution receipts	4	7
Interest received	205	259
Other revenues	8	1
Total: Cash Inflows	2,784	2,942
Cash outflows		
Employee benefit payments	(326)	(315)
Payments for supplies and services	(2,097)	(1,505)
Grant and contribution payments	(96)	(40)
Total: Cash Outflows	(2,519)	(1,860)
Net Cash Inflows from operating activities	265	1,082
Cash at the beginning of the financial year	6,698	5,616
Cash at the end of the financial year	6,963	6,698

Environment Protection Authority
Notes to and forming part of the Financial Statements
For the year ended 30 June 2013

32 Radiation Protection Function

The administrative unit has responsibility for radiation protection functions under the *Radiation Protection and Control Act 1982*.

The following summarises income and expenditure attributable to radiation protection functions within the administrative unit excluding the allocation of overheads. In reflecting these amounts in the Authority's financial statements, transactions between the Radiation Protection division and the Statutory Authority have been eliminated.

Statement of Comprehensive Income for the year ended 30 June 2013
Radiation Protection Division

	2013 \$'000	2012 \$'000
Expenses		
Employee benefits	1,288	1,130
Supplies and Services	84	123
Total: Expenses	<u>1,372</u>	<u>1,253</u>
Income		
Radiation license fees	3,208	1,848
Sales	1	2
Grants and contributions	23	22
Total: Income	<u>3,232</u>	<u>1,872</u>
Net cost of / (benefit from) providing services	<u>(1,860)</u>	<u>(619)</u>

APPENDIX 3 PUBLICATIONS RELEASED OR UPDATED DURING 2012–13

Corporate publications

Environment Protection Authority Annual Report 1 July 2011 to 30 June 2012 (includes reporting under the Radiation Protection and Control Act 1982)

Round-table 2012 summary report

2012–15 Strategic Plan

Corporate Plan 2012–13

Compliance Plan 2013–14

Communications and Engagement Framework 2013–15

Guidelines

Compost Guideline

Emission testing methodology for air pollution (version 2)

Environment Protection (Waste to Resources) Policy 2010 – Guidelines on resource recovery processing

Environment Protection (Waste to Resources) Policy 2010 – Guidelines on approvals for resource recovery facilities

Information sheets

Licence prerequisites for operators of diagnostic X-ray apparatus

Implementation of the amended National Environment Protection (Assessment of Site Contamination) Measure 1999 in South Australia

Public consultations

Environment Protection (Water Quality) Policy 2012 and explanatory report

Proposed model for cost recovery of new authorisation application fees

Civil penalty calculations policy –proposed amendments

Environment Protection Regulations 2009

Draft Compost Guideline

National Pollutant Inventory

2013 NPI Newsletter

Reports

The South Australian monitoring, evaluation and reporting program (MERP) for aquatic ecosystems– context and overview

The South Australian monitoring, evaluation and reporting program (MERP) for aquatic ecosystems – rationale and methods for the assessment of nearshore marine waters

Aquatic Ecosystem Condition Reports – 2011 panel assessment of creeks and rivers in the Adelaide and Mount Lofty Ranges NRM region

Aquatic Ecosystem Condition Reports – 2012 panel assessment of creeks and rivers in the SouthAustralianAridLands and Northern & Yorke NRM regions

Lake Bonney SE – report of the consultation and the community's aspirational environmental values

A snapshot of pesticides in South Australian aquatic sediments

Water quality in the LowerLakes during a hydrological drought – water quality monitoring report

Aquatic ecological monitoring of invertebrates in the LowerLakes, South Australia 2009–11

Lower Murray River Irrigated Area Acidification Risk Project– preliminary monitoring report 2011–12

Guidelines for the assessment of noise from rail infrastructure

Infrasound levels near wind farms and in other environments

Low frequency noise near wind farms and in other environments

Analysis of resource recovery activities servicing metropolitan Adelaide

CDL Awareness and Support Research Report

Air quality monthly reports (July 2012–May 2013)

LowerLakes monitoring reports (July 2012–May 2013)

Adelaide Desalination Plant monitoring reports (July 2012–April 2013)

APPENDIX 4 FREEDOM OF INFORMATION STATEMENTS

The following details are provided as part of the information statement of the EPA under the provisions of section 9 of the *Freedom of Information Act 1991*.

Organisation structure and function

The EPA is South Australia's leading environmental regulator. It is responsible for the protection of air and water quality and for the control of pollution, waste, noise and radiation, to ensure the protection and enhancement of the environment. The EPA's organisational structure and functions are set out in this annual report.

Board and committees

Information on the EPA's boards and committees is set out in this annual report.

Effect of organisation functions on members of the public

The EPA encourages environmental responsibility throughout the business and community sectors and works collaboratively towards achieving a healthy environment alongside economic prosperity.

The role and objectives of the EPA are detailed in this annual report and are published in the EPA 2012–15 Strategic Plan.

Public participation in environment policy

The public is invited to participate in the development of environment protection policy (EPP) through:

- public consultation sessions during the development of specific EPPs and other policy initiatives
- regional round-table meetings
- specific issue forums.

The EPA also supported a number of programs to assist business and industry, community volunteers, teachers and students to become involved in protecting and enhancing the environment.

Public consultations undertaken during 2012–13 are detailed in this annual report.

Description of kinds of documents held by the EPA

Publications produced by the EPA can be accessed through the department's website at www.epa.sa.gov.au or requested, free of charge, by telephoning the customer service desk on (08) 8204 2004 or emailing epainfo@epa.sa.gov.

A list of 2012–13 EPA publications is set out in this annual report (Appendix 3). Other types of documents produced by the EPA include:

- administrative records
- asset maintenance records
- records and annual reports of boards and committees
- corporate and strategic planning records
- correspondence files
- financial records
- occupational health and safety records
- personnel records
- policy documents

- procedures and reference manuals
- survey and environmental reports and records.

Please note that some charges for Public Register documents may apply; however, the EPA has been working to reduce these costs. These include:

- applications for environmental authorisations
- environmental authorisations
- beverage container approvals
- details of prosecutions and other enforcement action under the EP Act.

Policy documents

In relation to corporate policy, the EPA refers to DEWNR corporate policies, except in instances where specific EPA policies have been developed. The following list details existing EPA internal operating policies:

IOP001 Guideline for the preparation of an internal office policy or procedure for the EPA

IOP002 Procedure for obtaining advice on sampling

IOP003 Procedure to be followed when requesting and receiving legal advice

IOP004 Learning and development policy and procedure

IOP010 Induction

IOP011 Guideline in preparing EPA board papers

IOP012 Vaccination protocol for field staff

IOP015 Responding to environmental emergencies and major pollution incidents

IOP016 Threshold criteria – matters for EPA Board consideration

IOP017 Guideline for the preparation of a cabinet submission

IOP018 Hazard incident injury reporting, investigation and management

IOP019 Mobile telephone policy

IOP021 Vehicle management

IOP022 Management of desk telephones

IOP023 Filling of positions during restructure

IOP024 Role and responsibilities of the Emergency Response Team

IOP025 Volumetric survey assessment

IOP026 Manifest audit process for liquid waste

IOP027 Weigh data audit process for solid waste

IOP028 A system for managing industry compliance audits

IOP029 Civil penalties

IOP031 Accredited licensing system

IOP032 EPA risk management policy

IOP033 The development and application of licence project plans

IOP034 EPA delegations policy

IOP035 Environment protection orders

- IOP036 Assessment of waste or recycling depots and activities producing listed waste for limited purposes
- IOP037 Checking licensee information for fee setting
- IOP038 Licence fee structure reform: the system and opportunities for fee reduction
- IOP039 When to charge a flat fee component for a licence
- IOP040 Assessment of applications to produce and/or use refuse derived fuel
- IOP041 EPA fraud and corruption prevention policy
- IOP042 Assessment of railway operations for limited purposes
- IOP043 Managing contraventions and referring matters to the Investigations Branch
- IOP044 Unauthorised waste activity – EPA response
- IOP045 Management of bona fide, leave and timekeeping records
- IOP046 Provision of public transport tickets for EPA business travel
- IOP047 Flexitime
- IOP048 Waste levy reduction for recycling and diversion
- IOP049 Asset management for whole of Environment Protection Authority (EPA)
- IOP050 Ensuring that the execution of instruments of delegation, and the use of the EPA seal, is legally correct, under the Environment Protection Act 1993
- IOP051 Complaints management policy
- IOP052 Managing significant projects in RCD
- IOP053 Guideline for producing EPA publications and webpages
- IOP054 RecFind Files and using the Occurrence Tables
- IOP055 Sponsorship policy and procedures
- IOP056 Leave without pay to work in an organisation external to the public sector (draft)
- IOP057 EPA Compliance Enforcement Strategy Committee (CESC) – Functions and guidelines
- IOP058 Waste levy risk assessment and classification
- IOP060 CDL: Compliance inspections – collection depots and retail premises
- IOP061 Guidelines for the use of the spot satellite personal tracker device
- IOP062 Late lodgement and payment penalties: the system and opportunities for penalty waiver or reduction.

ABBREVIATIONS

ABC	AdelaideBrighton Cement
ABC CLG	Adelaide Brighton Cement Community Liaison Group
ACWQIP	Adelaide Coastal Water Quality Improvement Plan
AECRs	Aquatic Ecosystem Condition Reports
AELERT	Australasian Environmental Law Enforcement Regulators neTwork
Air NEPM	National Environment Protection (Ambient Air Quality) Measure
CDL	Container Deposit Legislation
CO	carbon monoxide
COAG	Council of Australian Governments
CRC CARE	Cooperative Research Centre for Contamination and Remediation of the Environment
DAC	Development Assessment Commission
DCE	dichloroethene
DEWNR	Department of Environment, Water and Natural Resources
DMITRE	Department for Manufacturing, Innovation, Trade, Resources and Energy
DfW	Department for Water
DPTI	Department of Planning, Transport and Infrastructure
EIS	environmental impact statement
EIP	environment improvement program
EPA	Environment Protection Authority
EP Act	Environment Protection Act 1993
EPHC	Environment Protection and Heritage Council
EPMP	Environmental Protection and Management Program
EPO	environment protection order
ER&D	Environment Resources and Development Court
FAQs	Frequently Asked Questions
FOI	Freedom of information
IDU	Illegal Dumping Unit
KCA	Kimberly–ClarkAustralia&New Zealand
LAMP	Licensing Administration Modernisation Project
MAR	Managed Aquifer Recharge
NEPM	National Environment Protection Measure
NPI	National Pollutant Inventory
NRM	Natural Resources Management
NWI	National Water Initiative
NO _x	oxides of nitrogen

OECD	Organisation for Economic Co-operation and Development
OHSW&IM	Occupational Health Safety Welfare and Injury Management System
P&DR	Performance and Development Review
PCE	perchloroethene
PM ₁₀	particulate matter less than 10 micrometres (µm) in diameter
PM _{2.5}	particulate matter less than 2.5 micrometres (µm) in diameter
PRC	Planning Review Committee
PSRP	Public Sector Renewal Program
RIS	Regulatory Impact Statement
RMS	Risk Management System
RPC Act	Radiation Protection and Control Act 1982
S@W	Sustainability at Work
SAAL	South Australian Arid Lands
SASP	South Australia's Strategic Plan
SCEW	Standing Committee for Environment and Water
SLAT	Sustainability Licence Assessment Tool
SO ₂	sulphur dioxide
SoE	State of the Environment
SOC	Senior Officials Committee
SOI	Statement of Intent
SWARA	Southern Region Waste Resource Authority
TCE	trichlorethene
µg/m ³	micrograms per cubic metre
VSCAP	Voluntary site contamination assessment proposal
W2R Policy	Environment Protection (Waste to Resources) Policy 2010
WWTP	Waste Water Treatment Plant
WQIP	water quality improvement plan
ZWSA	ZeroWaste SA

Environment Protection Authority

Annual Report on the administration of the Radiation Protection and Control Act 1982

1 July 2012 to 30 June 2013

Annual Report on the administration of the Radiation Protection and Control Act 1982
1 July 2012 to 30 June 2013

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LETTER OF TRANSMITTAL

The Hon Ian Hunter, MLC
Minister for Sustainability, Environment and Conservation
Parliament House
North Terrace
ADELAIDE
South Australia 5000

Dear Minister

I am pleased to present the Annual Report on the administration of the *Radiation Protection and Control Act 1982* for the period 1 July 2012 to 30 June 2013, for tabling in Parliament in accordance with section 22 of the Act.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Campbell Gemmell', with a stylized flourish at the end.

Dr Campbell Gemmell
Chief Executive
Environment Protection Authority

25 September 2013

FOREWORD

I am pleased to present the Annual Report on the administration of the *Radiation Protection and Control Act 1982* (RPC Act) for the 2012–13 financial year.

This report provides me with an opportunity to update you on the key projects, initiatives and achievements of the Environment Protection Authority (EPA) in exercising its regulatory powers and functions under the RPC Act.

While the 2012–13 year presented us with great opportunities and successes, we were also saddened by the loss of our much valued Radiation Protection Committee member, Dr Gerald Laurence in December 2012. Dr Laurence was a distinguished supporter and promoter of radiation protection in Australia, and the longest serving member of the Committee, having been a member with expertise in the scientific uses of radiation since the Committee's inception in 1982.

During the financial year, the Radiation Protection Branch of the EPA, while modest in size, progressed a variety of wide-ranging reforms and initiatives to ensure that our community is appropriately protected from radiation. As you will read in the report, the EPA also responded to a large number of enquiries from the public, licensees and government regarding regulatory requirements, radiation exposures and health risks.

Of significant note was the progression of new authorisations under the RPC Act. These new authorisations include a licence to possess a radiation source, a facilities licence, and to provide for accreditation of third party service providers. In addition, progress was also made in the expansion and implementation of the third party accredited testing program for diagnostic X-ray equipment. As you will read on page 11 of this report, the number of applications to register dental, medical and veterinary imaging apparatus has increased significantly in South Australia over the last several years, and the testing program will help ensure X-ray equipment in the state is appropriately regulated.

The EPA's radiation laboratory once again remained a valuable resource during the year, not only for us, but also for licensees and other stakeholders requiring accurate measurement and verification of radiation parameters and calibration of radiation monitoring equipment. The EPA played an instrumental role in collaborating with the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and the Federal Department of Resources, Energy and Tourism (DRET) in monitoring environmental radiation at Maralinga, and with the Australian Nuclear Science and Technology Organisation (ANSTO) in conducting cross calibration of instrumentation and methods, and in enhancing the analysis of environmental radiation.

In the year ahead, we will focus our radiation protection efforts on reviewing regulations under the RPC Act, continuing the implementation of new licences to possess a radiation source, bedding down the third party testing program for dental, medical and veterinary X-ray apparatus, enhancing the collaboration of government agencies in the regulation of mining and mineral processing operations where radioactive materials are involved, as well as identifying management solutions for potential orphan sources.

We look forward to building upon the great work that we achieved during this financial year and I sincerely thank the members of the Radiation Protection Committee and EPA staff for their concerted efforts, and their active contribution and valued advice during 2012–13.



Dr Campbell Gemmell
Chief Executive
Environment Protection Authority

INTRODUCTION

This report provides information on the administration of the *Radiation Protection and Control Act 1982* (RPC Act) during the financial year 2012–13 by the Environment Protection Authority (EPA) in carrying out its RPC Act functions.

The RPC Act is committed to the Minister for Sustainability, Environment and Conservation, who has delegated roles, functions and powers under the Act and its Regulations (pursuant to section 8) to the Chief Executive (CE) of the EPA. The CE further delegates responsibilities for the administration and enforcement of the RPC Act to officers of the EPA.

The purpose of the RPC Act is to ensure the health and safety of people and to protect the environment from the harmful effects of radiation. The Act provides for the control of activities related to radioactive substances and radiation apparatus. Section 22 requires the EPA to present a report to the Minister on the administration of the RPC Act at the end of each financial year for tabling in both houses of the South Australian Parliament.

The EPA provides administrative support to the Radiation Protection Committee, which is an expert advisory body established under section 9 of the RPC Act. This Committee advises the Minister and the EPA on the granting of licences under the RPC Act, radiation protection matters that it considers significant, and matters that have been referred to the Committee.

When carrying out its RPC Act functions, the EPA manages the review of the legislation and the adoption of national standards, codes of practice and agreements for radiation protection. It also manages sources of radiation through the registration and inspection of radiation sources and practices, and the licensing of individuals who use or handle radioactive substances or operate radiation apparatus (X-ray machines and cosmetic tanning units). The EPA also licenses mining and mineral processing operations such as uranium mines and mineral sands mines, and facilities prescribed in the legislation, including legacy sites such as Maralinga and the old Radium Hill uranium mine.

Officers of the EPA Radiation Protection Branch, who are appointed as authorised officers under section 16 of the RPC Act, undertake surveillance of sources of radiation used in South Australia to ensure compliance with the RPC Act and associated Regulations. Officers of the EPA Investigations Branch appointed as authorised officers under the RPC Act, investigate alleged breaches of the RPC Act and Regulations.

As at 30 June 2013, the Radiation Protection Branch have 12.35 full-time equivalent (FTE) scientific and technical staff and two FTE clerical staff responsible for administration of the RPC Act.

STRATEGIC DIRECTIONS

Strategic planning for radiation protection and control

The goal of the EPA in carrying out its RPC Act functions is to protect the community and the environment from the health risks associated with ionising and non-ionising radiation by regulating sites, mines, equipment and users of radiation. This goal forms part of the [2012–15 Strategic Plan](#).

During 2012–13, the work focused on:

- in consultation with other departments and operators, maintaining systems to effectively regulate the uranium mining industry through a regulatory framework that allows cost-effective, risk-based and equitable regulation of uranium mines
- maintaining effective legislation that incorporates national and international standards by developing proposals for updating the RPC Act and associated Regulations
- implementing the *National Directory for Radiation Protection* (National Directory), particularly the new licence to possess a radiation source required under section 29A of the RPC Act
- ensuring compliance with requirements to manage radioactive sources and waste safely
- progressing the introduction of third party accredited testing of dental and medical X-ray machines
- adopting a harms-based approach to addressing key issues in radiation protection.

KEY PROJECTS AND INITIATIVES

Managing South Australia's mining development

In 2012–13, the EPA continued to contribute to the management of South Australia's uranium and mineral sands mining operations during a period of increased exploration and development. The EPA assessed licences and other mining and mineral processing applications, provided guidance to exploration companies, and worked with operators, state government agencies and the Commonwealth to ensure that proposed and current operations effectively meet their health and environment protection obligations under the RPC Act.

The EPA worked with the Department of Manufacturing, Innovation, Trade, Resources and Energy (DMITRE) to improve the uranium mining regulatory framework.

Participation at a national level involved projects aimed at preparing uranium mines for dose assessment recommendations, and leading a project to develop nationally consistent approaches to the ongoing management of sites contaminated by radioactive material.

Review of the RPC Act

The EPA prepared drafting instructions for proposed changes to the RPC Act to meet its national commitments and enhance the administration and enforcement provisions. The changes include:

- prescribing the objects of the Act, radiation protection principles and general duty provisions, consistent with requirements of the National Directory for Radiation Protection (National Directory)
- conforming with the Council of Australian Governments (COAG) agreements regarding security of radiation sources and, in particular, providing for the administration and enforcement of the *Code of Practice for Security of Radioactive Sources* (Security Code), published by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)
- prescribing a number of new provisions aimed at improving enforcement mechanisms and bringing the RPC Act into line with provisions under the *Environment Protection Act 1993*
- prescribing a new section to create a new risk-based offence for causing a radiation risk or serious radiation risk.

During 2012–13, Parliamentary Counsel provided the EPA with a Radiation Protection and Control Bill for comment. The EPA prepared an [explanatory note](#) and communication engagement strategy for consultation on the Bill.

Changes to the Regulations under the RPC Act

The following regulations were gazetted on 2 February 2012 to give effect to the changes made to the RPC Act in 2010 and an increase in fees for licences and registrations:

- Radiation Protection and Control (Ionising Radiation) Variation Regulations 2012
- Radiation Protection and Control (Non-Ionising Radiation) Variation Regulations 2012.

These regulations came into operation on 1 March 2012, with the exception of regulations 180E and F of the Radiation Protection and Control (Ionising Radiation) Variation Regulations 2012 relating to the licence to possess a radiation source (section 33A of the RPC Act). This came into operation on 1 July 2012.

The expiry of the Radiation Protection and Control (Ionising Radiation) Regulations 2000 (IR Regulations) was postponed for one year from 1 September 2012 in accordance with the provisions of the Subordinate Legislation (Postponement of Expiry) Regulations 2012. This was published in the South Australian Government Gazette on 30 August 2012.

Introduction of the licence to possess a radiation source

The requirement to hold a licence to possess a radiation source, under section 33A of the RPC Act, came into force on 1 July 2012. This requires owners (people and organisations) to hold a licence to possess a registrable ionising radiation apparatus, a commercial cosmetic tanning unit, a registrable sealed radioactive source, or occupy premises where unsealed radioactive substances are handled or kept. People and organisations intending to take possession of a radiation source must obtain a licence before taking possession. Holders of a licence-to-possess include universities, hospitals, dentists, veterinarians, chiropractors, geological survey companies, industrial radiography companies and engineering companies. People and organisations that are subject to radiation protection standards and controls required under section 23A, 24 or 29A of the RPC Act are not required to hold a licence under section 33A. This implements a commitment by South Australia under the National Directory.

A key condition of the licence was the completion of a radiation management plan (RMP), which details the risks associated with the radiation sources covered by a particular licence to possess and the means of managing and mitigating the risks associated with their use or storage.

During 2012–13, the EPA committed significant resources to enable the new licences to possess to be implemented, including the preparation and development of information for licence-holders and the provision of advice on the expected contents of RMPs for a wide range of uses. As there was a large number of enquiries regarding the requirements and contents of RMPs, further work will be undertaken to expand and improve the information on RMPs on the EPA website.

The licence was progressively phased in during 2012–13 when the annual renewals of registrations of radiation sources became due. In the case of commercial cosmetic tanning units, the owners were required to obtain a licence to possess in July 2012.

By the end of 2012–13, most owners of radiation sources had been granted a licence. The EPA received and processed 747 licence applications.

In 2013–14 significant EPA resources will be required for the enforcement of the licences, particularly in the pursuit of non-compliance, such as owners of radiation sources not meeting licensing requirement.

Code of Practice for the Security of Radioactive Sources

During 2012–13, provisions for the implementation of the national Security Code, published by the ARPANSA, were included in the draft Radiation Protection and Control Bill. Future changes to the RPC Act will facilitate the EPA's enforcement of the requirements of the Security Code, including the security of high-activity radioactive sources, and mandate security background checks for persons permitted to independently access such sources.

Radioactive waste management

The EPA maintained its surveillance of radioactive waste material in the state and required businesses to submit an annual audit of radioactive material in their possession, including details of the radioactive sources they regarded as 'waste'.

Under regulations 137 and 138 of the IR Regulations, the EPA approved annual radioactive waste management plans (RWMP) of organisations that use or store unsealed radioactive material. These organisations include:

- universities
- pathology laboratories
- hospitals
- private nuclear medicine facilities
- veterinary clinics

- a water-testing company
- scientific laboratories.

Mining waste

Radioactive tailings and residues from mining or mineral processing activities are managed in accordance with both industry best practice and authorisations and approvals granted under the *Code of Practice on Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing* or Mining Code (2005). The code is applied to all mining and mineral processing operations licensed or registered under the RPC Act.

Radiation emergency response

The EPA is responsible for providing expert advice to the fire services to assist in their responses to incidents and emergencies involving radioactive material. EPA officers also provide training to other emergency service agencies and personnel who respond to incidents and emergencies involving radioactive substances, as outlined later in this report.

During 2012–13 there was one incident that required attendance by the EPA. However, no radioactive material was found to be present and, therefore, the incident posed no risk from radiation.

On 10 April 2013, EPA officers participated in an emergency response exercise, Exercise ARES, an operational exercise designed to test and analyse the State Multi Agency Response Team's (SMART) response, control, coordination and rendering of safe actions to a simulated major radiological incident, and to refine the SMART standard operating procedure (SOP). In addition to evaluating the intelligence-gathering and evidence-collecting capabilities of SMART, the exercise afforded all agencies involved the opportunity to practise their own call-out procedures. The exercise, conducted at the State Administration Centre at Magill, gave officers of the EPA a valuable insight into the communications, and command and control mechanisms for responding to a terrorist radiological attack in South Australia.

EPA officers participated in the following emergency response-related committees:

- State Chemical, Biological, Radiological and Nuclear (CBRN) Committee
- State CBRN Committee–Scientific Advisory Group
- State CBRN Committee–Training Advisory Group.

In addition, officers of the EPA were involved in two separate training courses in emergency response management.

Regulation of solaria

The Radiation Protection and Control (Cosmetic Tanning Units) Regulations 2008 (Tanning Units Regulations) and the Radiation Protection and Control (Non-ionising Radiation) Regulations 2008 (NIR Regulations) have been in force since 14 March 2008 and 1 March 2009, respectively.

The Tanning Units Regulations require solarium businesses to comply with the *Australian and New Zealand Standard AS/NZS 2635:2008–Solaria for cosmetic purposes*, and the NIR Regulations require operators of cosmetic tanning units to be licensed under section 31(1)(b) of the RPC Act. In order to obtain a licence, applicants are required to demonstrate appropriate knowledge of the health effects of UV radiation and the regulatory requirements for solarium by passing a licence examination prepared and administered by the EPA.

From 1 July 2012 owners of radiation sources are required to hold a licence to possess a radiation source under section 33A of the RPC Act. Solarium owners were among the first owners of radiation sources

required to hold such a licence. In 2012–13 the EPA prepared guidance information for solaria owners on the requirements for the licence and developing a suitable radiation management plan.

On 25 October 2012, the Minister for Sustainability, Environment and Conservation, jointly with the Minister for Health and Ageing, announced that the South Australian Government will ban the commercial use of solaria from 31 December 2014. This decision was a consequence of international research into the commercial use of solaria that indicated the use of solaria increased the risk of adverse health effects on users, including the development of melanomas. Since 2009 the World Health Organization has classed UV-emitting tanning devices, such as solaria, as 'carcinogenic to humans', based on epidemiological studies of their use and the incidence of skin cancer.

At the time of the announcement, the EPA informed all solaria business owners the government's reasons for imposing the ban and also explained the availability of the government's telephone referral service for small business operators seeking information and business advice. Business owners were also invited to write to the EPA with any comments relating to the ban. The EPA received approximately 550 submissions from solaria businesses and clients, and wrote to each acknowledging their correspondence and reiterating the availability of business advice.

Until the ban on solaria takes effect, all licensing and regulatory requirements for solaria under the RPC Act will remain in place.

At the end of 2012–13 there were 22 businesses operating tanning units, compared with 27 in 2011–12, and 35 in 2010–11. There were 68 licensed operators compared with 75 at the end of 2011–12 and 101 at the end of 2010–11.

South Australian Health and Medical Research Institute (SAHMRI) Cyclotron

The South Australian Health and Medical Research Institute (SAHMRI) is being built adjacent to the new Royal Adelaide Hospital site. SAHMRI notified the EPA in August 2011 of its intention to install a cyclotron to produce nuclear medicine isotopes in the facility. It is anticipated that the cyclotron will be installed and ready for commissioning in the second quarter of 2013–14.

During 2012–13, the EPA worked with SAHMRI planning and development officers, contractors and radiation shielding designers and staff regarding radiation safety requirements for the cyclotron and compliance with the RPC Act and Regulations. An EPA officer also met with staff working at the site regarding radiation safety. The EPA has received a draft radiation management plan for the cyclotron facility for assessment.

Third party accredited testing of dental, medical and veterinary X-ray apparatus

The number of applications to register dental, medical and veterinary imaging apparatus has increased significantly in South Australia over the last several years, as shown in Figure 1.

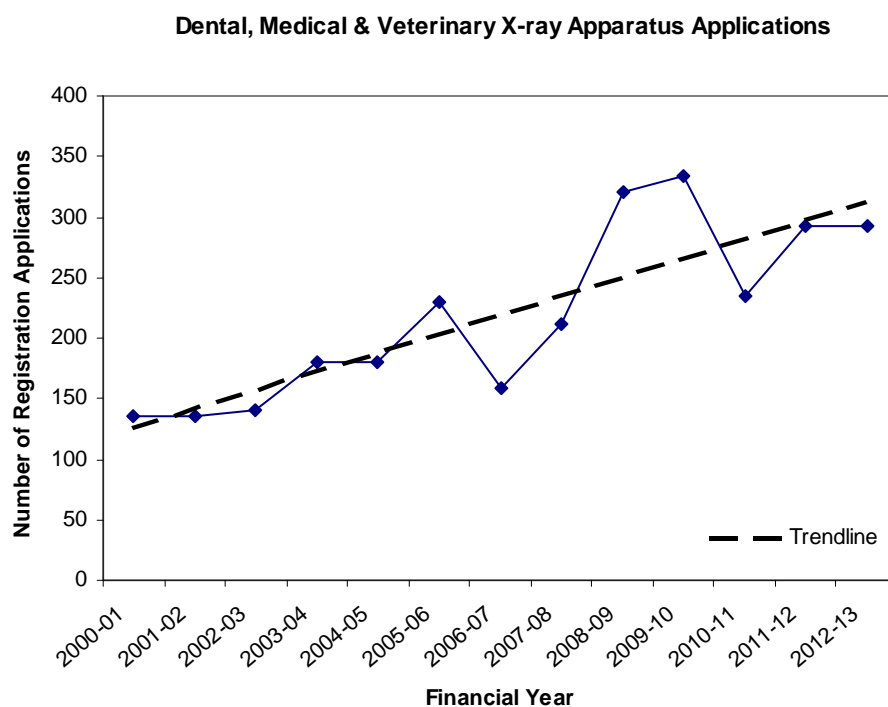


Figure 1 Number of registration applications for dental, medical and veterinary X-ray apparatus for 2000–13

To reflect national approaches for the compliance testing of X-ray apparatus and to enhance the registration of dental and medical X-ray apparatus under section 32 of the RPC Act, the EPA established a project to introduce third party accredited testing of dental, medical and veterinary X-ray apparatus. Progress with the Third Party Certification (TPC) program, which is being implemented in four stages, is outlined below:

- Stage 1: dental plain radiography X-ray units – fully implemented in 2009–10.
- Stage 2: fixed, portable and mobile X-ray units used for medical, chiropractic and veterinary plain radiography – fully implemented in 2011–12.
- Stage 3: orthopantomogram (OPG), fluoroscopy and mammography X-ray apparatus
- Stage 4: computed tomography (CT), and dental cone beam CT apparatus.

During 2012–13 the EPA refined Stages 1 and 2 testing and consistently provided detailed feedback to accredited testers to ensure they maintained a high standard in testing the apparatus for compliance.

The EPA made significant progress in implementing Stage 3 of the TPC program. In December 2012, OPG apparatus was the first in Stage 3 to be introduced into the TPC program. As a result, many OPG apparatus have been tested and the EPA continued to provide feedback to testers to further refine and enhance their skills in testing this type of apparatus.

The second and most recent introduction to Stage 3 of the TPC program was mammographic apparatus. The protocol for testing mammographic apparatus uses the Royal Australian and New Zealand College of Radiologists (RANZCR) *Medical Physicists' Quality Control Tests* to ensure that the consistently high standard of apparatus required for accreditation with the college is achieved for all apparatus in South Australia. By the end of 2012–13 the protocols for testing mammographic apparatus had been distributed to testers, with an invitation to seek accreditation to test the apparatus.

The EPA proposes to introduce the final apparatus type from Stage 3, namely fluoroscopic apparatus, into the TPC program in the first quarter of 2013–14. The EPA anticipates that Stage 4, consisting of computed tomography (CT) and dental cone beam CT apparatus, will commence in the first quarter of 2013–14.

A continued focus for the EPA will be compliance enforcement of such non-compliance issues as owners failing to have their apparatus tested by an accredited tester and/or their apparatus being non-compliant and required changes not being implemented.

Community information and advice on non-ionising radiation

The EPA advises government, industry and the public about radiation safety and the health risks associated with non-ionising radiation. It continually reviews ongoing research on this issue.

Sources of non-ionising radiation include mobile telephones and base stations, powerlines, lasers and solariums used for cosmetic purposes. The harmful effects from exposure to high levels of non-ionising radiation are well known, but it is less clear whether there are harmful effects from chronic low-level exposure.

The EPA responded to a large number of enquiries from the public on the potential risks from exposure to the extremely low-frequency magnetic fields associated with electricity in homes and powerlines. It continued to make available to the public, a simple-to-use magnetic-field-strength meter, which has proved to be very useful for educating the public and allaying concerns of parents in relation to the potential risks to children from exposure to magnetic fields.

Laboratory and technical services

The EPA's radiation laboratory has facilities for carrying out radiation monitoring and surveillance, calibrating radiation survey equipment, including radon and radon progeny monitors, and analysing environmental samples using gamma spectroscopy and liquid scintillation techniques. The laboratory was used to support EPA compliance activities at mines sites, and other radiation facilities.

During 2012–13, laboratory staff actively participated in EPA radiation monitoring projects and prepared for emergency response activities. Staff undertook continuous improvement of laboratory methods, including upgrading and automating equipment to improve the efficiencies and precision of environmental and occupational sample analysis. The EPA also fostered collaboration with ARPANSA and the Department of Resources, Energy and Tourism (DRET) in relation to Maralinga and proposed future joint inspections and monitoring with ARPANSA.

Collaboration with the Australian Nuclear Science and Technology Organisation (ANSTO) allows the EPA to conduct cross calibration and enhance analyses of environmental radiation, including low-radioactivity dust and soil contamination.

Laboratory staff are actively participating in a radon progeny coordination group led by ARPANSA and are developing new requirements and monitoring methods in line with the new International Commission on Radiological Protection (ICRP) recommendations for dose conversion factors for exposures to radon progeny.

The laboratory facilities were made available, under supervision by EPA staff, to uranium mining companies and radiation consultants. The EPA provided assistance with equipment calibrations, cross comparison and cross calibration of laboratory methods, and analyses of samples such as high-volume air sampler filters, soil, water and vegetation, as well as spills investigations.

The laboratory facilities continued to be used for educational purposes, including training in radiation monitoring for emergency response officers from the Metropolitan Fire Service (MFS), SA Ambulance Service, SA Police (SAPOL), and with research projects conducted by students from the University of Adelaide.

RADIATION PROTECTION COMMITTEE

The functions and legislative responsibilities of the Radiation Protection Committee (the Committee), as set out in section 12 of the RPC Act, are to:

- advise the Minister in relation to the formulation of Regulations under the RPC Act
- advise the Minister in relation to the granting of licences under the Act, including the conditions to which they should be subject
- investigate and report on any other matters relevant to the administration of the Act at the request of the Minister or of its own motion.

The Committee plays an important role in advising the Minister and the EPA on all aspects of radiation protection in the mining of radioactive ores, and in the medical, industrial, scientific and public uses of ionising and non-ionising radiation.

The Committee consists of 10 members, one of whom is the Presiding Member, appointed by the Governor of South Australia. The Act requires that the Presiding Member be an officer or employee of the Department of the Minister to whom the RPC Act is committed (that is, the EPA). The specific membership qualifications and expertise relevant to the administration of the RPC Act are prescribed in section 9 of the RPC Act. Section 10 provides that the Governor may appoint a suitable person to be a deputy member of the Committee.

The EPA provides the Committee with administrative support and seeks the its advice on strategic issues and issues related to the expertise of its members.

Meeting outcomes

During 2012–13, the Committee met on three occasions and considered many of the matters addressed in this report. It provided expert advice on strategic issues and matters brought for advice and discussion.

Strategic issues discussed at the meetings included:

- key radiation protection issues in South Australia
- radiation matters contained in the draft State of the Environment (SoE) Report
- the draft Radiation Protection and Control Bill, explanatory information and communication plan.

The Committee considered several radiological issues faced in South Australia, including:

- the need for adequate training of medical specialists using fluoroscopy to reduce radiation exposures to patients and staff
- radiation doses from CT examinations, and the issue that a significant number of CT examinations could be replaced with MRI
- the risks associated with medical interventional radiology
- the shortage of diagnostic imaging medical physicists in SA
- management of radon exposures in underground mines.

The Committee's main advice on the draft SOE Report was that the report should be used to inform the community and express radiation exposures in the context of national radiation sources and background.

The Committee reviewed a Bill to revise the RPC Act and the accompanying explanatory report and communication engagement strategy for the draft Bill. The Committee also provided advice and comments for EPA consideration during the review of the legislation.

Other matters on which the Committee provided expert advice included:

- the review of the IR Regulations 2000 and the Radiation Protection and Control (Transport of Radioactive Substances) Regulations 2003
- requirements for licensing nuclear medicine technologists to use PET/CT and SPECT/CT X-ray apparatus
- a request for an exemption from regulations regarding the use of Dual Energy X-ray Absorptiometry (DEXA) for body composition assessment
- progress with mining and mineral processing operations
- an exemption from regulation to permit nurse practitioners to authorise diagnostic X-ray procedures
- the Fundamentals for Protection Against Ionizing Radiation and update of Radiation Protection Series No 1, the Recommendations for Limiting Exposure to Ionizing Radiation and National Standard for Limiting Occupational Exposure to Ionizing Radiation (1995), republished in March 2002
- the development of guidance for users of portable hand-held X-ray fluorescence analysers
- the establishment of a Graduate Certificate in Radiation Management.

Membership

The current three-year term commenced on 26 May 2011 and expires on 25 May 2014. The members and deputy members at commencement of the reporting period are listed below.

Members	Section of Act	Deputy Members
Vacant	s9(2)(a)	Vacant
Dr S Constantine	s9(2)(a)	Dr MJ Nottage
C Kapsis	s9(2)(a)	LM Ricote
SM Paulka	s9(2)(a)	K Taylor
Dr GS Laurence	s9(2)(a)	PJ Collins
J Fitch	s9(2)(a)	Dr E Bezak
Dr ID Kirkwood	s9(2)(a)	Dr MI Kitchener
GG Marshall	s9(2)(a)	A Eadie
Dr PJ Sykes	s9(2)(a)	Dr MT Lardelli
T Circelli	s9(2)(a)	JV Burckhardt

Mr Circelli, an officer of the EPA, presided over two meetings, pending the appointment of a Presiding Member and Deputy. On 29 November 2012, K Taylor resigned from the position as deputy to SM Paulka. Dr GS Laurence passed away on 6 December 2012, and with his passing, the appointment of his deputy, PJ Collins, ceased.

Dr Laurence was a distinguished and stalwart supporter and promoter of radiation protection in Australia, and the longest serving in the Committee, having been as a member with expertise in the scientific uses of radiation from the Committee's inception in 1982. He made a significant contribution to the work of the EPA and the Committee, and assisted in the development of South Australia's radiation protection legislation, policies and procedures.

Dr JC Gemmell was appointed as the Presiding Member of the Committee, and Mr K Baldry as his deputy on 13 December 2013. The members and deputy members at the end of the reporting period are listed as follows:

Members	Section of Act	Deputy Members
Dr JC Gemmell	s9(2)(a)	K Baldry
Dr S Constantine	s9(2)(a)	Dr MJ Nottage
C Kapsis	s9(2)(a)	LM Ricote
SM Paulka	s9(2)(a)	Vacant
Vacant	s9(2)(a)	Vacant
J Fitch	s9(2)(a)	Dr E Bezak
Dr ID Kirkwood	s9(2)(a)	Dr MI Kitchener
GG Marshall	s9(2)(a)	A Eadie
Dr PJ Sykes	s9(2)(a)	Dr MT Lardelli
T Circelli	s9(2)(a)	JV Burckhardt

AUTHORISATIONS

All types of authorisation under the RPC Act are renewed annually. Table 1 gives the number of current authorisations under the RPC Act as at 30 June 2013, along with the number of new applications for authorisations approved during 2012–13.

Table 1 Authorisations under the RPC Act

Type of authorisation	Section of RPC Act	Number licensed/registered (as at 30 June 2013)	Number approved (2012–13)
Licence to use or handle radioactive substances	28	994	166
Licence to operate ionising radiation apparatus	31(1)(a)	4659	607
Licence to operate a non-ionising radiation apparatus (cosmetic tanning units)	31(1)(b)	81	31
Accreditation as a Third Party Service Provider	33(b)	22	3
Registration of ionising radiation apparatus	32	2035	219
Registration of sealed radioactive sources	30	633	30
Registration of premises in which unsealed radioactive substances are handled or kept	29	121	2
Licence to test for developmental purposes	23A	1	1
Licence to carry out mining or mineral processing	24	5	5
Facilities licence	29A	7	7
Licence to possess a radiation source	33A	747	747
Total		9305	1818

The number of applications received for the registration of medical, dental, chiropractic and veterinary X-ray apparatus during 2012–13 was 292 compared with 235 in 2010–11. The ongoing increase in applications in this area is mainly due to individual practices upgrading their X-ray equipment, for example, to digital and computer radiography X-ray machines.

It is estimated that during the period, there were approximately 7500 radiation workers in South Australia. This number includes workers licensed under sections 28 and 31 of the RPC Act, and workers who are not required to hold a licence but are employed in occupations that involve potential exposure to radiation. The latter includes workers at Olympic Dam, Beverley and Honeymoon uranium projects, workers in Type C premises, users of industrial radiation gauges, operators of fully enclosed industrial X-ray units who work

under the supervision of an appropriately licensed person, operators of cabinet X-ray units, and people assisting with medical, dental and veterinary X-ray procedures.

Where required under the provisions of the RPC Act, the radiation doses of radiation workers must be monitored using approved personal dosimeters supplied by a number of businesses. As a condition of their approval, the suppliers of dosimeters must provide both the employers of radiation workers and the EPA with the personal monitoring results. All doses received by radiation workers have been found to be well below the occupational limits prescribed in the Regulations under the RPC Act.

Licence to test for developmental purposes

Amdel Ltd Pilot Plant

A licence to carry out developmental testing operations for mining or processing of radioactive ores, under section 23A of the RPC Act, is currently held by Amdel Ltd Pilot Plant: Licence No. LM8.

During 2012–13 AMDEL sought a licence to carry out developmental testing of extraction of uranium from uranium ore at a pilot plant in Wingfield. Amdel was required to hold a licence under section 23A of the RPC Act, since the operation involves leaching of more than 10 tonnes of ore per year. The licence was granted on 23 October 2012.

Oban uranium project

Oban Energy Ltd (a subsidiary of Curnamona Energy Ltd) was originally granted a licence under section 24 of the RPC Act (No. LM6) to conduct developmental testing of mining or milling of radioactive ores at its Oban site, northwest of Broken Hill, in July 2010. During the period, Oban completed trials at the site and decided not to progress to full-scale mining. Operations at the site had therefore ceased. The EPA continued working with DMITRE to coordinate requirements for the rehabilitation of the site. Oban is required to hold a licence under section 23A until rehabilitation of the site has been completed to the satisfaction of the relevant regulatory agencies.

Licences to carry out mining or mineral processing

Licences to carry out operations for mining or mineral processing under section 24 of the RPC Act are currently held by:

- BHP Billiton (Olympic Dam Corporation) Pty Ltd (Olympic Dam operations): Licence No. LM1
- Heathgate Resources Pty Ltd (Beverley uranium project): Licence No. LM4
- Uranium One Australia Pty Ltd (Honeymoon uranium project): Licence No. LM5
- Murray Zircon mineral sand operation, Mindarie – Western Murray Basin: Licence No. LM9
- Iluka Resources Ltd Jacinth Ambrosia mineral sand operation, west of Ceduna: Licence No. LM10.

The licences are subject to conditions that include the requirement to comply with the ARPANSA Mining Code.

Uranium mining operations

The EPA oversees the regulatory compliance of the mining and processing of radioactive ores and related activities by auditing monitoring results, and conducting inspections and independent monitoring. Licence-holders also provide occupational and environmental radiation monitoring data, including dose assessments. All reports are examined, compared with the EPA's monitoring results, where appropriate, and reviewed with company officers.

Olympic Dam operations

During 2012–13, BHP Billiton (Olympic Dam Corporation) Pty Ltd submitted the *BHP Billiton Annual Radiation Report* and *LM1 Annual Licence Report for 2011–12*. These reports included an assessment of the adequacy and effectiveness of radiation protection measures. The dose summary indicated that the mean dose for all designated workers in the mine and processing plant was 3.2 millisieverts (mSv) and 2.2 mSv respectively, compared with the 20 mSv average annual limit for radiation workers. The maximum individual dose received was 7.0 mSv (35% of the 20-mSv limit).

The company also submitted the *BHP Billiton Annual Report of the Environmental Management and Monitoring Program for 2010–11*. The report confirmed that the radiological effects of the operation remain small and are confined to the mining lease area. It also confirmed that the annual radiation dose received by members of the public living in the Olympic Dam Village and Roxby Downs was less than the detection limit for the methods used (5% of the 1-mSv annual limit for members of the public).

During 2012–13 EPA officers visited the site for radiation review meetings and inspections.

Beverley uranium project

Heathgate Resources Pty Ltd's Beverley uranium project is located approximately 600 km north of Adelaide. The company's licence to conduct uranium mining operations at the site was renewed by the EPA for a further 12 months from 4 August 2012.

During 2012–13, Heathgate Resources completed the construction and commissioning of the Pannikan Satellite Plant, which is part of the Beverley North project and located approximately 9 km from the existing Beverley site.

Honeymoon uranium project

The Uranium One Australia Pty Ltd's Honeymoon uranium project site is located approximately 75 km northwest of Broken Hill. The company's licence to conduct uranium mining operations at the site was renewed by the EPA for a further 12 months from 6 October 2012.

The operation is producing uranium but still in commissioning status as it optimises its processes.

During 2012–13 EPA officers visited the site for periodic inspections. Reports on occupational radiation doses have been submitted and results to date have been consistent with similar operations.

Beverley Four Mile uranium project

In 2009 Quasar Resources and Alliance Craton Explorer Joint Venture applied for a licence under section 24 of the RPC Act to mine or mill radioactive ores at the Beverley Four Mile uranium project, however development of the project had remained on hold since then. The proposed mine is a uranium in-situ recovery operation. At the end of the 2012–13 the EPA received a new application for a licence under section 24 of the RPC Act to carry out mining or mineral processing at the Beverley Four Mile Project, which remains under assessment.

Transport of uranium ore concentrate

Uranium ore concentrate from the Olympic Dam, Beverley, Honeymoon and Energy Resources Australia Ranger (Northern Territory) mines is transported by road to Outer Harbor, in accordance with the regulations for the safe transport of radioactive substances. It is then exported from Outer Harbor for shipment overseas.

Transport of uranium ore concentrate was conducted without incident in the reporting period.

Mineral sand mining operations

The Murray Zircon mineral sand operation at Mindarie and Iluka Resources Ltd Jacinth Ambrosia mineral sand operation west of Ceduna, which were previously registered as premises where unsealed radioactive substances were used or handled under section 29 of the RPC Act, were granted licences to carry out mining or mineral processing under section 24 of the RPC Act.

The conditions of these licences also include the requirement to comply with the ARPANSA Mining Code.

Mindarie mineral sands project

The Mindarie mineral sands project is located approximately 150 km east of Adelaide in the Murray Mallee region of South Australia and comprises eight mineral sands strandlines located in nine separate mineral leases and two exploration licences.

Australian Zircon NL commenced operations at Mindarie in 2006 under a Certificate of Registration (No. 19308) for the storage and handling of unsealed radioactive substances but this was closed and put into administration by 2009. Murray Zircon subsequently acquired ownership of the Mindarie mineral sand mine.

In May 2012 the EPA received an application from Murray Zircon for a licence to carry out mining or mineral processing at the project. Licence LM9 was granted on 11 September 2012 and operational approval granted on 20 September 2012.

The project was officially opened by the Premier, the Hon Jay Weatherill on 23 May 2013. Murray Zircon produces heavy mineral concentrate for export. The site contains a mineral separation plant capable of producing ilmenite, zircon and rutile; however, this plant is not utilised by the new operators.

Jacinth Ambrosia mineral sands project

Iluka Resources's Jacinth Ambrosia Mine continues to operate. In January 2013, Iluka Resources applied for and was granted a licence (No. LM10) to carry out mining or mineral processing.

Facilities licences

During the period, several sites that were previously registered as premises under section 29 of the RPC Act applied for a facility licence under section 29A. The facilities licences granted during the period are as follows.

Former uranium mine and processing site

On 30 November 2012 DMITRE was granted facility licences (Licence Nos. LF3 and LF4) for the sites of the former Radium Hill uranium mine and the Port Pirie Treatment Plant.

Qube Pty Ltd Port Adelaide Facility

On 12 September 2012 Qube Pty Ltd was granted a facility licence (No. LF1) for the purposes of storing and handling heavy mineral concentrate at Berth 18, Ocean Steamers Road, Port Adelaide.

Qube Logistics Outer Harbor Storage Facility

On 27 September 2012 Qube Logistics was granted a facility licence (No. LF2) for the purposes of storing and handling heavy mineral concentrate at Coghlan Road, Outer Harbor.

Maralinga

On 30 October 2012, the former British atomic weapons test site at Maralinga (Section 400 land parcel) was granted a facility licence (No. LF7) in the name of Maralinga Tjarutja. The site includes burial trenches containing radioactive materials which were constructed during the Commonwealth Government's Maralinga Rehabilitation Project, completed in 2000. The site had previously been registered as a premises

under section 29 of the RPC Act since its handback from the Commonwealth to South Australia and the Maralinga Tjarutja.

The Maralinga Land and Environment Management Committee, which consists of one representative each from Maralinga Tjarutja, the Commonwealth Government and the EPA, met on site in September 2012. The committee oversees the site management activities and long-term radiation monitoring and surveillance of the site.

Flinders Logistics

On 10 January 2013 Flinders Logistics was granted a facility licence (No. LF8) for the purposes of storing and handling heavy mineral concentrate at Berth 29, Inner Harbor, Port Adelaide.

Iluka Resources Port Thevenard Storage Facility

On 31 January 2013 Iluka Resources Ltd was granted a facility licence (No. LF5) for the purposes of storing and handling heavy mineral concentrate at the HMC Storage and Handling Facility, Innes Avenue, Thevenard.

Patrick Ports Pty Ltd

On 30 June 2013 Patrick Ports Pty Ltd, was granted a facility licence (No. LF6) for the purposes of storing and handling heavy mineral concentrate at Berth 29, Minnipa Road, Inner Harbor, Port Adelaide.

Mine registered as premises

Prominent Hill Copper Mine

The Prominent Hill Copper mine, operated by Oz Minerals Pty Ltd, remained registered as premises under section 29 of the RPC Act, since the low concentrations of naturally occurring radioactive material (NORM) in the ore being mined remained below the activity concentration and quantity of radionuclides that would require a licence under sections 24 or 29A of the RPC Act.

EXEMPTIONS GRANTED UNDER THE RPC ACT

Under section 44 of the RPC Act, the Minister or delegate is empowered to grant exemptions from any specified provision of the RPC Act, provided such action would not endanger the health or safety of any person. The authority to grant exemptions has been delegated to the Chief Executive of the EPA, and further delegated to the Operations Director, Mining, Radiation and Regulatory Support, and Manager, Radiation Protection Branch.

After careful consideration the following exemptions from provisions of the RPC Act and Regulations were granted, subject to conditions specified in the exemption notices published in the *South Australian Government Gazette* on the date indicated:

- On 30 August 2012 a conditional exemption from regulation 18 of the IR Regulations (the requirement for employers to provide personal radiation monitors to employees) was granted to Osteoscan Pty Ltd in regard to persons who operate dual-energy X-ray absorptiometry apparatus.
- On 30 August 2012 a conditional exemption from the requirement to hold a licence under section 28 of the RPC Act (licence to use or handle a radioactive substance) was granted for employees engaged in small-scale mineral processing operations under a facility licence (section 29A).
- On 6 September 2012 persons employed in mining and mineral processing operations at facilities licensed under section 29A of the RPC Act were granted an exemption from the requirement to hold a licence to use or handle radioactive substances under section 28.
- On 31 January 2013 owners of an orthopantomographic apparatus were granted an exemption from the requirements of regulation 97(7)(b) of the IR Regulations, which stated that exposure switches could not be operable in parallel. This exemption was required as most new apparatus could not meet this regulatory requirement, and the EPA considered that exemption would not cause any risk to the public.
- On 31 January 2013 an exemption from the requirement of regulation 40 of the IR Regulations was granted to permit diagnostic radiographers to perform a diagnostic imaging procedure that nurse practitioners may authorise under the Medicare Benefits Schedule, except for fluoroscopic procedures.
- On 7 March 2013 an exemption from the requirement of regulation 40 of the IR Regulations was granted to permit diagnostic radiographers to perform diagnostic imaging procedures for abdominal pathology authorised by a nurse practitioner while the nurse practitioner is engaged in that capacity at the Southern Adelaide Palliative Services, Repatriation General Hospital. The exemption was granted as the imaging procedure was part of the scope of practice and used for clinical presentations of palliative patients.
- On 28 March 2013 owners of mammography and soft tissue apparatus were granted an exemption from the requirements of regulation 104(9) of the IR Regulations in relation to the size of the operator protective screen, provided that the protective screen referred to in sub-regulation 104 (2)(b) meets the requirements for a protective barrier in section 29.208.101 of the *Australian/New Zealand Standard Medical Electrical Equipment Part 2.45: Particular requirements for safety–Mammographic X-ray equipment and mammographic stereotactic devices*.
- On 28 March 2013 owners of mammography and soft tissue apparatus were granted an exemption from several outdated regulatory requirements [Regulations 99(1–5), 99(6)(b), 99(7), 99(8), 99(10), 99(12–15)] of the IR Regulations, provided that the apparatus complies with the requirements of the RANZCR *Medical Physicists' Quality Control Tests*, as amended from time to time. This exemption enables the registration of mammography apparatus that meet the requirements of the RANZCR and relevant sub-regulations of regulation 99.

RADIATION INCIDENTS AND ACCIDENTS

The Regulations under the RPC Act require radiation accidents to be reported promptly to the EPA by employers of radiation workers, owners of X-ray apparatus or sealed radioactive sources, and occupiers of premises where unsealed radioactive substances are used or handled. Radiation accidents include situations where the control of a radiation source has been lost or a person has received or may have received an accidental exposure to ionising radiation. The EPA investigates radiation accidents and incidents to determine the cause and remedial action that could be taken to prevent a recurrence.

During 2012–13 the EPA received 15 reports of radiation incidents involving medical practices and an incident that involved an industrial radiation source. None of these are known to have resulted in an adverse health outcome. Appropriate steps have been taken at medical departments and practices to reduce the risk of a recurrence of such incidents. Details of accidents and incidents involving exposure or potential exposure to radiation are provided to ARPANSA for the Australian Radiation Incidents Register and the details are confidential.

The incidents were found to have causes that are broadly similar to incidents reported elsewhere in Australia. A summary of the types of incidents is given below.

Medical

Eight incidents involved radiology departments. The main cause of the incidents was inadequate checking of a patient's ID (identity) or clinical notes. This has included patients responding to the wrong name when called, patients with similar names being mistaken, and diagnostic X-rays taken of the wrong location. In all these cases, staff were reminded of the importance of checking patient identification and clinical notes prior to radiographic procedure.

Four incidents reported from radiotherapy departments were primarily caused by staff not strictly following procedures. This included patients and radiation beams being wrongly positioned, and the radiation dose being different from that prescribed. Each case was reviewed and no adverse medical outcomes were expected.

Three nuclear medicine incidents were reported to the EPA during the period. This included spillage of radiopharmaceutical, inadvertent exposure of a child following a diagnostic nuclear medicine procedure for the mother, and a patient undergoing a procedure and subsequently discovering that she was pregnant. Medical review of the cases involving the child and pregnant mother concluded that no adverse medical outcomes were expected.

Industry and mining

A higher than usual radiation dose was recorded on a personal radiation monitor. An initial investigation indicated that a fault with the person's X-ray fluorescence (XRF) analyser was a possible cause. However, it was subsequently discovered that the badge had been inadvertently exposed to an old radium dial compass.

Uranium mining operations in South Australia are required to record and report incidents and events (for example, spills of process materials) as part of approved radiation management plans and in accordance with the 'Bachmann Criteria', established for uranium mines in South Australia. During the period, four incidents were publicly reported and managed to completion under the approved incident-reporting procedures for uranium mines. One included a release of a uranium oxide product into the drum packaging area. Management of all incidents are overseen by the EPA to ensure that adequate investigations and mitigation measures are put in place.

There were no environmental or health impacts arising from any of the incidents.

[Details of environmental spill events](#) reported for Olympic Dam, Beverley and Honeymoon under the Bachmann Criteria are available via the DMITRE website.

NATIONAL ACTIVITIES

To ensure that South Australia's regulation of activities involving radiation keeps pace with international and national best practices, the EPA takes part in international and national activities. The EPA's involvement in these activities during 2012–13 is summarised below.

Radiation Health Committee

The Radiation Health Committee (RHC) was established under the *Australian Radiation Protection and Nuclear Safety Act 1998* (ARPANS Act). The RHC develops policies and prepares draft publications for the promotion of uniform national standards of radiation protection throughout Australia and its states and territories, and provides advice on matters relating to radiation protection to the Chief Executive Officer of ARPANSA and the Radiation Health and Safety Advisory Council.

Membership of the RHC includes radiation control officers who represent each of the states and territories. The South Australian representative is the EPA Operations Director, Mining, Radiation and Regulatory Support, who chairs this committee.

The EPA submitted a proposal to the RHC for the development of nationally consistent approaches to the management of sites contaminated with radiological material. The project was approved by the committee in July 2012 and will further strengthen EPA links with other jurisdictions.

[Summaries of meetings of the RHC](#) may be found on the ARPANSA website.

Radiation Health and Safety Advisory Council

The Radiation Health and Safety Advisory Council (RHSAC) is established under the ARPANS Act. It advises the Chief Executive Officer of ARPANSA on a range of matters, including emerging issues, matters of major concern to the community and the adoption of codes, standards, recommendations and policies on radiation protection and nuclear safety. During 2012–13, EPA Operations Director, Mining, Radiation and Regulatory Support, and a member of the South Australian Radiation Protection Committee were members of the council.

[Summaries of meetings of the RHSAC](#) can be found on the ARPANSA website.

National Directory for Radiation Protection

The National Directory was republished in July 2012 following Health Ministers' endorsement of Amendment 5, which had been approved by the RHC. This amendment:

- clarifies the radiation protection principles and, in particular, the justification principle that apply to ionising radiation
- adopts the *Code of Practice for Radiation Protection in Veterinary Medicine*, which ARPANSA published in July 2009 as Radiation Protection Series No. 17 (RPS 17)
- adopts the *Code of Practice for Radiation Protection in the Application of Ionising Radiation by Chiropractors*, which ARPANSA published in November 2009 as Radiation Protection Series No. 19 (RPS 19)
- corrects several typographical and editorial matters in Schedule 13, National Incident Reporting Framework.

Also during the period, the RHC endorsed Amendment 6 to the National Directory. The proposed amendment would be referred to the Australian Health Ministers' Advisory Council to seek Health Ministers' approval. The proposed amendment:

- amends Schedule 5 to exempt lighting products containing krypton-85 from authorisation requirements

- amends Schedule 6 to update the licensing requirements for chiropractors to use X-ray equipment for 'standard' procedures
- amends paragraph 2(b) of Schedule 9 to refer to the current *Code of Practice for the Safe Transport of Radioactive Material* (2008) RPS 2
- clarifies the incident reporting requirements in Schedule 13
- amends the glossary of the National Directory.

Australian National Radiation Dose Register (ANRDR)

In 2011 the EPA approved requests from BHP Billiton, Heathgate Resources and Uranium One to confidentially release the Olympic Dam, Beverley and Honeymoon uranium worker information to ARPANSA for the ANRDR. The three operating uranium mines are in the process of incorporating the ANRDR into their respective radiation management plans.

ARPANSA is developing a report which will provide an overview of radiation protection practices in the mineral sands industry in Australia, with a specific focus on doses to workers and how these doses are monitored and records are managed. This report will provide a basis for expansion of the ANRDR to cover occupationally exposed workers in the Australian mineral sands industry.

Interstate technical visits

An officer of the EPA attended the International Atomic Energy Agency (IAEA) *Training Meeting on Effective Regulatory and Environmental Management of Uranium Production*, held in Darwin from 13 to 17 August 2012. The training meeting was attended by delegates from radiation protection agencies of several African and Asian countries. The training meeting looked at uranium mining regulation in Australia and countries where Australian uranium companies operate. The meeting also included field visits to ERA Ranger mine at Jabiru and the Rum Jungle mine site.

INTERNATIONAL ACTIVITIES

IAEA consultancies

In November 2012 the EPA Operations Director, Mining, Radiation and Regulatory Support participated in an IAEA mission team to Mongolia as one of two expert consultants in the three-man team. During the one-week mission, the team, based in the capital Ulaanbaatar, assessed the Mongolian regulatory and radiation protection capabilities and regulatory infrastructure. The team spoke with senior government and regulatory agency personnel and visited hospital and research facilities. The team reviewed the regulatory system against the international standards documented in the IAEA Basic Safety Standards and reviewed capabilities against IAEA guidance and international best practice.

During May and June 2013, the EPA Operations Director, Mining, Radiation and Regulatory Support, took part in an IAEA 10-day expert review of uranium mining in the United Republic of Tanzania. The review looked at the operations and regulation of uranium exploration and projects, including a site visit to the proposed Mkuju River uranium mine project.

TRAINING AND CONFERENCES

Emergency response training

During 2012–13 the EPA provided training for members of the MFS and SAPOL in emergency procedures for first responders to radiation incidents. The training included a hands-on demonstration of the types of radiation that may be involved in radiation incidents and the capabilities of the laboratory services provided by the EPA.

Officers of the EPA participated in the following emergency response-related training:

- South Australian Chemical, Biological and Radiological Incidents and Emergencies (CBRIE) Course
- State Multi Agency Response Team (SMART) Training Course.

Conferences

Three officers of EPA Radiation Protection Branch attended all or part of the 37th Annual Meeting of the Australasian Radiation Protection Society in Sydney from 14–17 October 2012. The EPA presented three papers.

An officer also attended and presented at the South Pacific Environmental Radioactivity Association conference held in Sydney from 16 to 19 October 2012. Both conferences included a technical tour of the Opal research reactor at ANSTO Lucas Heights.

An office attended the Engineers and Physical Scientists in Medicine Conference held on the Gold Coast from 2–6 December 2012.

OTHER STATUTORY MATTERS

The EPA provides resources for administration of the RPC Act and, statutory reporting requirements concerning the following issues are contained in the EPA Annual Report 2012–13:

- financial performance of the Radiation Protection Committee
- account payment performance
- contractual arrangements
- occupational health, safety and welfare
- use of consultants
- human resources
- staffing
- equal employment opportunity
- disability action planning
- energy efficiency action plan reporting
- freedom of information
- overseas travel
- sustainability reporting.

ABBREVIATIONS

ARPANS Act	Australian Radiation Protection and Nuclear Safety Act 1998
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency
CBRN	chemical, biological, radiological and nuclear
CT	computed tomography
DEXA	Dual Energy X-ray Absorptiometry
DMITRE	Department of Manufacturing, Innovation, Trade, Resources and Energy
ED	emergency department
EPA	Environment Protection Authority
Gy	gray
IAEA	International Atomic Energy Agency
IR Regulations	Radiation Protection and Control (Ionising Radiation) Regulations 2008
MFS	Metropolitan Fire Service
Mining Code	Code of Practice for Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing (ARPANSA)
µSv	microsievert
mSv	millisievert
National Directory	National Directory for Radiation Protection (ARPANSA)
NIR Regulations	Radiation Protection and Control (Non-ionising Radiation) Regulations 2008
NORM	naturally occurring radioactive material
OPG	orthopantomogram
RANZCR	Royal Australian and New Zealand College of Radiologists
RHC	Radiation Health Committee (ARPANSA)
RHSAC	Radiation Health and Safety Advisory Council (ARPANSA)
RMP	radioactive management plan
RPC Act	Radiation Protection and Control Act 1982
RWMP	radioactive waste management plans
SAHMRI	South Australian Health and Medical Research Institute
SAPOL	South Australian Police
Security Code	Code of Practice for Security of Radioactive Sources (ARPANSA)

Tanning Units
Regulations

Radiation Protection and Control (Cosmetic Tanning Units) Regulations 2008