



Annual Report 2014–2015

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Front cover (clockwise from top left)
Loy Yang power station, Traralgon
Groundwater salt interception scheme, Buronga NSW
Dune regeneration, Leighton Beach WA
Electronic waste collection, ACT
Organic recycling project, ACT

Back cover (left to right)
Mugga Lane recycling, ACT
Spraying salvinia, Currency Creek NSW
Fuel consumption label

Chair's Foreword

The National Environment Protection Council (NEPC) was initiated as part of a Government agreement to ensure appropriate environmental measures are in place to protect the Australian people. The National Environment Protection Measures (NEPMs), are nationally consistent environmental standards, goals, or protocols relating to air, water, noise, site contamination, hazardous waste and recycling.

In 2014, NEPC signalled its intention to vary the Ambient Air Quality (AAQ) NEPM (created in 1998), in relation to the standards for air particles, reflecting the latest scientific understanding on health risks arising from particle pollution. The Ambient Air Quality NEPM establishes a nationally consistent approach to the development of benchmarks against which progress in managing air quality, including particle pollution, can be assessed.

The purpose of the variation is to update the AAQ NEPM to ensure that it reflects the latest scientific understanding to allow for adequate levels of health protection against the impacts of particle air pollution for the Australian community. This work will help to improve ambient air quality which is essential to the protection of the Australian population.

The post-2015 work programme will continue to see NEPC play an important role in planning, developing, and revising NEPMs as necessary to assist in the protection of the Australian environment and the health and wellbeing of the community. NEPC will also continue to remain involved in considering and implementing an integrated, national approach to key environmental issues.



A handwritten signature in black ink, appearing to read 'Greg Hunt', with a stylized, flowing script.

Greg Hunt

Chair

National Environment Protection Council

Members of the National Environment Protection Council

From 1 July 2014 to 30 June 2015

Jurisdiction	Member	Duration of membership
Commonwealth	The Hon. Greg Hunt MP Minister for the Environment	Full year
New South Wales	The Hon Mark Speakman MP NSW Minister for the Environment	2 April 2015–30 June 2015
	Hon. Rob Stokes MP Minister for the Environment and Minister for Heritage	1 July 2014–2 April 2015
Victoria	The Hon Lisa Neville MP Minister for Environment, Climate Change, and Water	4 December 2014–30 June 2015
	The Hon Ryan Smith MP Minister for Environment and Climate Change	1 July 2014–29 November 2014
Queensland	The Hon Steven Miles MP Minister for Environment and Heritage Protection; Minister for National Parks and the Great Barrier Reef	14 February 2014–30 June 2015
	The Hon Andrew Powell MP Minister for Environment and Heritage Protection	1 July 2014–13 February 2015
Western Australia	The Hon Albert Jacob MLA Minister for Environment; Heritage	Full year
South Australian	The Hon Ian Hunter MLC Minister for Sustainability, Environment and Conservation	Full year
Tasmania	The Hon Matthew Groom MP Tasmanian Minister for Environment, Parks, and Heritage	Full year
Australian Capital Territory	Mr Simon Corbell MLA Minister for the Environment Sustainable Development	Full year
Northern Territory	The Hon Gary John Higgins MLA Minister for the Environment	4 February 2015–30 June 2015
	The Hon Peter Chandler MLA Minister for the Environment	30 June 2014–4 February 2015

Contents

Chair's Foreword	iii
Members of the National Environment Protection Council	iv
Executive Officer's Report	1
Overview	2
Assessment of the Implementation and Effectiveness of NEPMs	5
National Environment Protection (Air Toxics) Measure	5
National Environment Protection (Ambient Air Quality) Measure	11
National Environment Protection (Assessment of Site Contamination) Measure	15
National Environment Protection (Diesel Vehicle Emissions) Measure	19
National Environment Protection (Movement of Controlled Waste between States and Territories) Measure	23
National Environment Protection (National Pollutant Inventory) Measure	31
National Environment Protection (Used Packaging Materials) Measure	37
Appendices	41
Appendix 1: Jurisdictional Reports on the Implementation and Effectiveness of the Air Toxics NEPM	43
<i>Commonwealth</i>	44
<i>New South Wales</i>	45
<i>Victoria</i>	46
<i>Queensland</i>	47
<i>Western Australia</i>	50
<i>South Australia</i>	52
<i>Tasmania</i>	53
<i>Australian Capital Territory</i>	55
<i>Northern Territory</i>	56
Appendix 2: Jurisdictional Reports on the Implementation and Effectiveness of the Ambient Air Quality NEPM	57
<i>Commonwealth</i>	58
<i>New South Wales</i>	60
<i>Victoria</i>	69
<i>Queensland</i>	73
<i>Western Australia</i>	78
<i>South Australia</i>	82
<i>Tasmania</i>	86
<i>Australian Capital Territory</i>	91
<i>Northern Territory</i>	93
Appendix 3: Jurisdictional Reports on the Implementation and Effectiveness of the Assessment of Site Contamination NEPM	97
<i>Commonwealth</i>	98
<i>New South Wales</i>	99
<i>Victoria</i>	100
<i>Queensland</i>	101
<i>Western Australia</i>	105
<i>South Australia</i>	106
<i>Tasmania</i>	108
<i>Australian Capital Territory</i>	109
<i>Northern Territory</i>	110

Appendix 4: Jurisdictional Reports on the Implementation and Effectiveness of the Diesel Vehicle Emissions NEPM	111
<i>Commonwealth</i>	112
<i>New South Wales</i>	114
<i>Victoria</i>	118
<i>Queensland</i>	120
<i>Western Australia</i>	122
<i>South Australia</i>	125
<i>Tasmania</i>	127
<i>Australian Capital Territory</i>	128
<i>Northern Territory</i>	130
Appendix 5: Jurisdictional Reports on the Implementation and Effectiveness of the Movement of Controlled Waste between States and Territories NEPM	133
<i>Commonwealth</i>	134
<i>New South Wales</i>	135
<i>Victoria</i>	137
<i>Queensland</i>	139
<i>Western Australia</i>	142
<i>South Australia</i>	144
<i>Tasmania</i>	146
<i>Australian Capital Territory</i>	148
<i>Northern Territory</i>	150
Appendix 6: Jurisdictional Reports on the Implementation and Effectiveness of the National Pollutant Inventory NEPM	153
<i>Commonwealth</i>	154
<i>New South Wales</i>	156
<i>Victoria</i>	158
<i>Queensland</i>	159
<i>Western Australia</i>	160
<i>South Australia</i>	162
<i>Tasmania</i>	164
<i>Australian Capital Territory</i>	165
<i>Northern Territory</i>	166
Appendix 7: Jurisdictional Reports on the Implementation and Effectiveness of the Used Packaging Materials NEPM	167
<i>Commonwealth</i>	168
<i>New South Wales</i>	170
<i>Victoria</i>	171
<i>Queensland</i>	172
<i>Western Australia</i>	174
<i>South Australia</i>	175
<i>Tasmania</i>	177
<i>Australian Capital Territory</i>	180
<i>Northern Territory</i>	182

Executive Officer's Report

The support work for the National Environment Protection Council (NEPC) in 2014–15 was undertaken during a period of substantial organisational change. NEPC is now being supported by a business services team of a few officers within the Australian Government Department of the Environment, instead of a larger, NEPC Service Corporation. This change required a consolidation and prioritisation of NEPC functions and activities.

Work has continued on projects that will help to ensure people enjoy the benefit of equivalent national protection from air, water, soil or noise pollution, including on issues such as the variation to the National Environment Protection (Ambient Air Quality) Measure, a document that will play a significant role in the National Clean Air Agreement and associated strategies.

One of the many legacy issues associated with the abolition of the Standing Council on the Environment and Water in 2013, and the subsequent abolition of the NEPC Service Corporation in 2014, was the ongoing management of funds contributed for a number of non-NEPC environmental projects. In addition to the provision of business services for NEPC related projects, the NEPC business services team is also responsible for providing assistance to Commonwealth, state and territory project officers responsible for delivering this legacy work programme.

The team acts to ensure efficiency and accountability when providing business services to NEPC and its associated state and territory agencies undertaking work on behalf of NEPC. This has been a key focus of the team's work during this period. For example, it has commenced development of a revised NEPC governance handbook, due for completion in the first quarter of 2016, and has been exploring a better system to manage and track the progress of NEPC projects and funds.

I look forward to my role in 2015–16, and will continue implementing the necessary governance reforms that commenced under my predecessor, Mr Consul O'Reilly, who I would like to thank for his hard work and dedication in the role of acting Executive Officer in the 2014–15 financial year.

I would also like to thank all NEPC stakeholders for their ongoing support during 2014–15.



Dr David Swanton
NEPC Executive Officer

Overview

About the National Environment Protection Council

The National Environment Protection Council is a statutory body with law-making powers established under the *National Environment Protection Council Act 1994* (Commonwealth), and corresponding legislation in other Australian jurisdictions.

The NEPC has two primary functions:

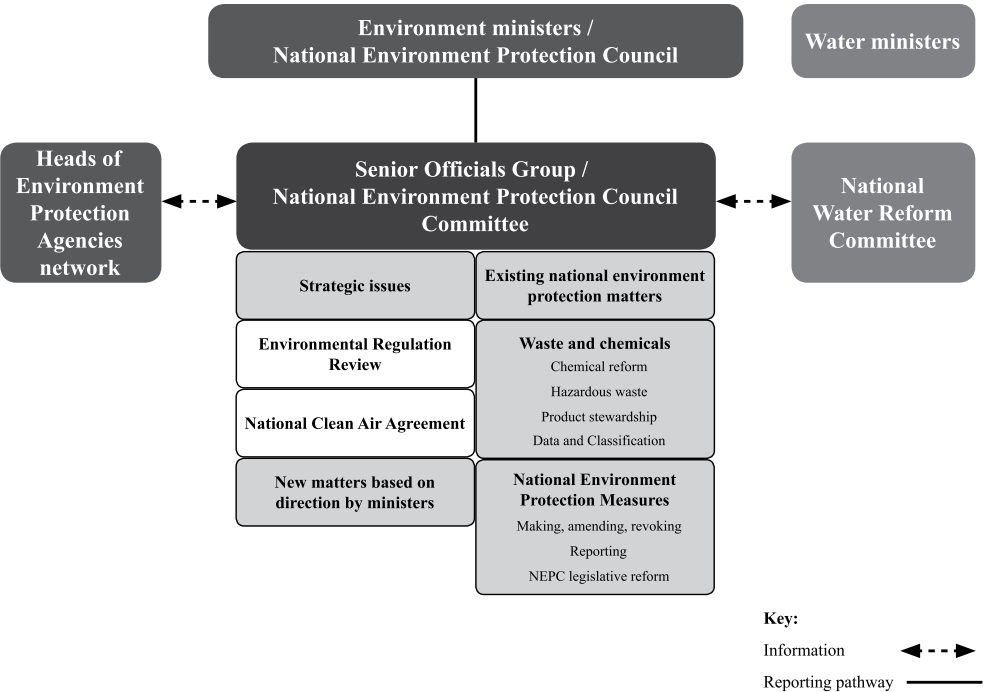
- 1. to make National Environment Protection Measures (NEPMs)
- 2. to assess and report on the implementation and effectiveness of NEPMs in participating jurisdictions.

Transitional Issues following abolition of the NEPC Service Corporation

The NEPC Service Corporation was a statutory authority which provided secretariat, project management, financial and administrative support to the SCEW and NEPC in the development of national environmental policy and NEPMs. All jurisdictions agreed to abolish the NEPC Service Corporation with effect from 1 July 2014. It was agreed that future operational support for NEPC would be provided by the Commonwealth Department of the Environment, supported by other operational areas within the Department, with all NEPC Service Corporation project and operational funds to be transferred to a Commonwealth Special Account, established with a legislative amendment to the National Environment Protection Council Act 1994 (Commonwealth).

The decision of the Ministers of the Environment (incorporating the National Environment Protection Council) of 24 April 2014 to streamline the future work programme included an agreement to proceed with a revised governance structure, as outlined below.

Governance structure for NEPC and the Meeting of Environment Ministers (MEM)



Inter-jurisdictional Relationships

The Council of Australian Governments decided in 2013 that where there are important areas of Commonwealth and state and territory cooperation required in portfolio areas outside its Council system, ministers may meet on an ad hoc basis. The Meeting of Environment Ministers (MEM) is now the primary multi jurisdictional forum in which national environmental issues are considered. As the membership of NEPC consists of all Australian environment ministers, the MEM meetings also incorporate NEPC meetings.

The following streamlined approach to multi-jurisdictional environmental work was agreed by Environment Ministers:

- Meetings of environment ministers are to occur on an ad hoc basis and run concurrently with meetings of NEPC as required. Agendas are to be focused on issues requiring multi-jurisdictional collaboration or decision.
- Meetings of the heads of jurisdictional environment agencies (Senior Officials Group) to be held on a regular basis—at least annually, and concurrently with NEPC Committee meetings.
- Matters under consideration will be organised into three key streams of work:
 - strategic issues
 - key existing projects relating to waste and chemicals and the National Plan for Clean Air until their completion
 - ongoing priorities relating to responsibilities under the National Environment Protection Council Acts, such as National Environment Protection Measures.
- ongoing communication between the Senior Officials/NEPC Committee groups and the Heads of Environmental Protection Agencies (HEPA) network. Where relevant, HEPA may be asked to take a role in progressing agenda items for the Senior Officials/NEPC Committee groups.
- New Zealand and the Australian Local Government Association representation by invitation when relevant subject matter is to be discussed.

About National Environment Protection Measures

The *National Environment Protection Council Act 1994* (NEPC Act) recognises the importance of communities and business in protecting Australia's environment, and that national outcomes are best achieved through regionally tailored approaches.

National Environment Protection Measures (NEPMs), created under the NEPC Act, can be used to establish nationally consistent environmental standards, goals, guidelines or protocols in relation to air, water, noise, site contamination, hazardous waste and recycling. A NEPM is a Commonwealth legislative instrument. Once a NEPM is made or varied, its implementation is the prerogative of each jurisdiction. Regulation is just one of a suite of implementation tools a jurisdiction may use.

NEPMs provide a single national framework to address one or more environmental issues, with the flexibility for local implementation to take into account variability between jurisdictions. This provides certainty and consistency for business and the community in the management of these environmental issues, while reducing the need for regulation.

Currently, there are seven NEPMs:

Air Toxics—sets out a nationally consistent approach to collection of data on toxic air pollutants (such as benzene) in order to deliver a comprehensive information base from which standards can be developed to manage these air pollutants to protect human health.

Ambient Air Quality—establishes a nationally consistent framework for monitoring and reporting on air quality, including the presence of pollutants such as carbon monoxide, lead and particulates. Work commenced in 2013–14 towards making a variation to this NEPM, which included a public consultation. It is expected the final variation will be completed by 2015–16.

Assessment of Site Contamination—provides a nationally consistent approach to the assessment of site contamination to ensure sound environmental management practices by regulators, site assessors, environmental auditors, landowners, developers and industry. It has been highly effective in providing authoritative guidance to practitioners in this field.

Diesel Vehicle Emissions—supports reducing pollution from diesel vehicles. Several jurisdictions operate a suite of programs to reduce exhaust emissions from diesel vehicles.

Movement of Controlled Waste—operates to minimise potential environmental and human health impacts related to the movement of certain waste materials, by ensuring that waste to be moved between states and territories is properly identified, transported and handled in ways consistent with environmentally-sound management practices.

National Pollutant Inventory—provides a framework for collection and dissemination of information to improve ambient air and water quality, minimise environmental impacts associated with hazardous wastes and improve the sustainable use of resources.

Used Packaging Materials—operates to minimise environmental impacts of packaging materials, through design (optimising packaging to use resources more efficiently), recycling (efficiently collecting and recycling packaging) and product stewardship (demonstrating commitment by stakeholders).

Governance

Financial management, work health and safety matters, fraud compliance and risk management are all covered by both the Commonwealth and the Department of the Environment's policies and procedures and are reported against in that department's annual report.

No freedom of information requests were received during the reporting year.

Financial Performance

Detailed financial matters are contained in the financial statements within the Department of the Environment's Annual Report 2014-15.

Procurement and Consultancies

All such activities are undertaken in accordance with relevant Commonwealth laws, policies and procedures. The NEPC business services section strived to ensure the core principle of value for money in all of the NEPC procurement activities.

NEPC Report on the Implementation of the
National Environment
Protection (Air Toxics)
Measure

National Environment Protection (Air Toxics) Measure

PART 1 — GENERAL INFORMATION

NEPM details

Title: National Environment Protection (Air Toxics) Measure.

Made by Council: 3 December 2004.

Commencement date: 20 December 2004 (advertised in *Commonwealth of Australia Special Gazette* No. S 52904, 20 December 2004).

NEPM goal (or purpose)

The goal of the National Environment Protection (Air Toxics) Measure is set out in clause 5 of the measure:

The national environment protection goal of this Measure is to improve the information base regarding ambient air toxics within the Australian environment in order to facilitate the development of standards following a Review of the Measure within eight years of its making.

Desired environmental outcomes

The desired environmental outcome of the National Environment Protection (Air Toxics) Measure is set out in clause 6 of the measure:

The desired environmental outcome of this Measure is to facilitate management of air toxics in ambient air that will allow for the equivalent protection of human health and well-being, by:

- 1. providing for the generation of comparable, reliable information on the levels of toxic air pollutants ('air toxics') at sites where significantly elevated concentrations of one or more of these air toxics are likely to occur ('Stage 1 sites') and where the potential for significant population exposure to air toxics exists ('Stage 2 sites').*
- 2. establishing a consistent approach to the identification of such sites for use by jurisdictions.*
- 3. establishing a consistent frame of reference ('monitoring investigation levels') for use by jurisdictions in assessing the likely significance of levels of air toxics measured at Stage 2 sites.*
- 4. adopting a nationally consistent approach to monitoring air toxics at a range of locations (e.g. near major industrial sites, major roads, areas affected by wood smoke).*

Evaluation criteria

The effectiveness of the National Environment Protection (Air Toxics) Measure has been assessed against the evaluation criteria for this NEPM.

PART 2—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

This part provides a summary of jurisdictional reports on implementation and the Council's overall assessment of the implementation of the NEPM.

Legislative, regulatory and administrative framework

Table 1: Summary of implementation frameworks

Jurisdiction	Summary of implementation frameworks
Commonwealth	<ul style="list-style-type: none"> The NEPM is implemented administratively.
New South Wales	<ul style="list-style-type: none"> The NEPM is implemented under the Protection of the Environment Operations (Clean Air) Regulation 2010 and the <i>Protection of the Environment Operations Act 1997</i>.
Victoria	<ul style="list-style-type: none"> The key legislative instrument is the State Environment Protection Policy (Air Quality Management).
Queensland	<ul style="list-style-type: none"> The NEPM is implemented under the <i>Environmental Protection Act 1994</i>, the Environmental Protection Regulation 1998, and the Environmental Protection (Air) Policy 2008.
Western Australia	<ul style="list-style-type: none"> The NEPM is implemented under the <i>National Environment Protection Council (Western Australia) Act 1996</i>, the <i>Environmental Protection Act 1986</i> and by programs in the Perth Air Quality Management Plan.
South Australia	<ul style="list-style-type: none"> The NEPM operates as an Environment Protection Policy under the <i>Environment Protection Act 1993</i>.
Tasmania	<ul style="list-style-type: none"> The NEPM is a State Policy under the <i>State Policies and Projects Act 1993</i>. The management of air toxics is included in the Tasmanian Air Quality Strategy 2006. Implementation is through the Environment Protection Policy (Air Quality) 2004 and the <i>Environmental Management Pollution Control Act 1994</i>.
Australian Capital Territory	<ul style="list-style-type: none"> The NEPM is implemented under the <i>Environment Protection Act 1997</i>.
Northern Territory	<ul style="list-style-type: none"> The key legislative instruments are the <i>Waste Management and Pollution Control Act 1998</i> and the <i>National Environment Protection Council (Northern Territory) Act 2004</i>.

Implementation issues arising

Table 2 summarises the implementation issues that arose throughout the 2014 reporting year (this NEPM has a calendar year reporting requirement). For implementation activities refer to jurisdictional reports as listed in Part 5.

Table 2: Summary of implementation issues arising

Jurisdiction	Summary of implementation issues arising
Commonwealth	<ul style="list-style-type: none"> No monitoring undertaken because the NEPM is implemented administratively. No issues reported.
New South Wales	<ul style="list-style-type: none"> No issues reported.
Victoria	<ul style="list-style-type: none"> No issues reported.
Queensland	<ul style="list-style-type: none"> Non-NEPM compliant monitoring undertaken.
Western Australia	<ul style="list-style-type: none"> Non-NEPM compliant monitoring undertaken.
South Australia	<ul style="list-style-type: none"> No issues reported.
Tasmania	<ul style="list-style-type: none"> No issues reported.
Australian Capital Territory	<ul style="list-style-type: none"> Previous desktop analysis has shown that air toxics are not an issue for the ACT airshed and no monitoring sites have been identified.
Northern Territory	<ul style="list-style-type: none"> Previous desktop analysis has shown that air toxics are not an issue for the NT airshed and no monitoring sites have been identified.

PART 3—JURISDICTIONAL REPORT ON ACTIVITIES UNDER THE NEPM

Identification of sites

No jurisdictions identified any new sites in the reporting period.

Reporting of monitoring of air toxics

In Victoria, air toxics monitoring was conducted for the NEPM-required 12 months at Morwell South due to the Hazelwood mine fire, as part of the Hazelwood Recovery project.

Queensland continued to monitor polycyclic aromatic hydrocarbons, including benzo[a]pyrene, at a stage 2 Woolloongabba roadside monitoring site, and selected air toxics using open path DOAS instrumentation at Springwood in South East Queensland and in central Gladstone

In October 2014, Western Australia concluded monitoring volatile organic compounds using an Open Path Fourier Transform Infrared Spectrometer (OP-FTIR) within urban areas adjacent to the Kwinana Industrial Area.

All monitoring results were below the NEPM monitoring investigation levels.

No other jurisdictions undertook monitoring during the reporting period.

Reporting on assessment and action if any planned or taken to manage air toxics

In Victoria the monitoring investigation levels were exceeded in 2014 at Morwell South for Polycyclic Aromatic Hydrocarbons (PAH). However, this result was heavily influenced by the Hazelwood mine fire. Levels monitored during the 12 months after the fire have been well below the investigation level. Other substances were below investigation levels. Therefore no further action to manage air toxics beyond existing programs was undertaken in Victoria.

As all other monitoring to date has shown air toxics in Australia to be well below monitoring investigation levels, no jurisdiction engaged in any specific strategies or actions to manage them.

Repeat identification of stage 1 and stage 2 sites

No new monitoring sites were identified.

PART 4—ASSESSMENT OF NEPM EFFECTIVENESS

The monitoring investigation levels continue to provide a nationally consistent benchmark for assessing and comparing the concentration of ambient air toxics from diverse monitoring sites.

Most jurisdictions agree that the NEPM has been effective in providing an impetus to investigate available data and in identifying locations most likely to experience significant population exposure to elevated levels of air toxics.

PART 5—REPORTING ON IMPLEMENTATION BY JURISDICTIONS

The annexes to this report are in Appendix 1 (see page 43).

NEPC Report on the Implementation of the
National Environment
Protection (Ambient
Air Quality) Measure

National Environment Protection (Ambient Air Quality) Measure

PART 1 — GENERAL INFORMATION

NEPM details

Title: National Environment Protection (Ambient Air Quality) Measure

Made by Council: 26 June 1998

Commencement Date: 8 July 1998 (advertised in *Commonwealth of Australia Gazette* No. GN 27, 8 July 1998, p. 2211)

NEPM goal (or purpose)

The goal of the National Environment Protection (Ambient Air Quality) Measure is set out in clause 6 of the Measure as follows:

The National Environment Protection Goal of this Measure is to achieve the National Environment Protection Standards as assessed in accordance with the monitoring protocol (Part 4) within ten years from commencement to the extent specified in Schedule 2 column 5.

Desired environmental outcomes

The desired environmental outcome of the National Environment Protection (Ambient Air Quality) Measure is set out in clause 5 of the Measure as follows:

The desired environmental outcome of this Measure is ambient air quality that allows for the adequate protection of human health and well-being.

Evaluation criteria

The effectiveness of the National Environment Protection (Ambient Air Quality) Measure has been assessed against the evaluation criteria for this NEPM.

PART 2 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

This part provides a summary of jurisdictional reports on implementation and the Council’s overall assessment of the implementation of the NEPM.

Legislative, regulatory and administrative framework

Table 1: Summary of implementation frameworks

Jurisdiction	Summary of implementation frameworks
Commonwealth	<ul style="list-style-type: none"> The Commonwealth implements the NEPM administratively. However, it is not required by the NEPM to undertake monitoring as it does not have authority over regions with a population of 25 000 or more.
New South Wales	<ul style="list-style-type: none"> The NEPM is implemented under the <i>Protection of the Environment Operations Act 1997</i> and the Protection of the Environment Operations (Clean Air) Regulation 2010 as well as commitments outlined in its forward plan: NSW 2021
Victoria	<ul style="list-style-type: none"> The key legislative instruments are the State Environment Protection Policy (Ambient Air Quality) and the State Environment Protection Policy (Air Quality Management) made under the <i>Environment Protection Act 1970</i>.

Jurisdiction	Summary of implementation frameworks
Queensland	<ul style="list-style-type: none"> The NEPM is implemented under the <i>Environmental Protection Act 1994</i>, the <i>Environmental Protection Regulation 1998</i>, and the <i>Environmental Protection (Air) Policy 2008</i>.
Western Australia	<ul style="list-style-type: none"> The NEPM is implemented under the <i>National Environment Protection Council (Western Australia) Act 1996</i>, the <i>Environmental Protection Act 1986</i> and by programs under the <i>Perth Air Quality Management Plan</i>.
South Australia	<ul style="list-style-type: none"> The transitional provisions in the <i>Environment Protection (Miscellaneous) Amendment Act 2005</i> enable the NEPM to continue to operate as an <i>Environment Protection Policy</i>.
Tasmania	<ul style="list-style-type: none"> The NEPM is implemented under through the <i>Environmental Management Pollution Control Act 1994</i>, the <i>Environment Protection Policy (Air Quality) 2004</i>, the <i>Environmental Management and Pollution Control (Distributed Atmospheric Emissions) Regulations 2007</i> and the <i>Tasmanian Air Quality Strategy 2006</i>. The NEPM is a state policy under the <i>State Policies and Projects Act 1993</i>.
Australian Capital Territory	<ul style="list-style-type: none"> The NEPM is implemented by the <i>Environment Protection Regulation 1997</i> under the <i>Environment Protection Act 1997</i>.
Northern Territory	<ul style="list-style-type: none"> The key legislative instruments are the <i>Waste Management and Pollution Control Act 1998</i> and the <i>National Environment Protection Council (Northern Territory) Act 2004</i>.

Implementation issues arising

Table 2 summarises the implementation issues that arose throughout the 2014 reporting year (this NEPM has a calendar year reporting requirement). For implementation activities please refer to jurisdictional reports as listed in Part 5.

Table 2: Summary of implementation issues arising

Jurisdiction	Summary of implementation issues arising
Commonwealth	<ul style="list-style-type: none"> No monitoring undertaken because the NEPM is implemented administratively. No issues reported.
New South Wales	<ul style="list-style-type: none"> No issues reported.
Victoria	<ul style="list-style-type: none"> Data capture targets were not achieved for some pollutants at during the 3rd and 4th quarters at Brighton, Dandenong and Mooroolbark due to instruments being switched off during months when ozone levels were expected to be very low.
Queensland	<ul style="list-style-type: none"> Data capture targets were not achieved for sulfur dioxide at Stuart in Townsville and for lead at The Gap.
Western Australia	<ul style="list-style-type: none"> No issues reported.
South Australia	<ul style="list-style-type: none"> No issues reported.
Tasmania	<ul style="list-style-type: none"> Data capture targets for PM₁₀ were not achieved at Launceston.
Australian Capital Territory	<ul style="list-style-type: none"> Data capture targets were not achieved at Florey due to it becoming operational in February 2014.
Northern Territory	<ul style="list-style-type: none"> Technical issues with nitrogen dioxide analysers and a TEOM meant resulted in reduced data.

PART 3—JURISDICTIONAL REPORT ON ACTIVITIES UNDER THE NEPM

Detailed monitoring data are available in jurisdictional compliance reports which are available from www.nepc.gov.au.

During 2014, jurisdictions continued to work on a proposed variation to the NEPM particle standards and further preliminary work on the standards for the other NEPM pollutants. They also worked on emissions reduction projects including developing product standards for wood heaters and non-road spark ignition engines.

Most jurisdictions continued to focus on programs that reduce emissions from motor vehicles and wood heaters, with several jurisdictions reporting improvements in winter particulate levels as a result. A number of jurisdictions continued to investigate the sources, dispersal and management of emissions from mining, industry and planned burns to reduce their impact on local communities.

PART 4—ASSESSMENT OF NEPM EFFECTIVENESS

The NEPM continues to be valuable in the management and assessment of air quality in Australia. It provides a nationally consistent framework for the monitoring and reporting of air quality and nationally consistent benchmarks against which to assess quality.

Monitoring results show that NEPM standards are mostly being met and that Australia's air quality is generally good compared with international standards. Most jurisdictions consistently meet the standards and goals for nitrogen dioxide, carbon monoxide and sulfur dioxide (except in some areas with smelting activities).

Meeting the AAQ NEPM standards for ozone and particulates continues to be a significant challenge for larger metropolitan areas of a number of jurisdictions given pressures from a growing population, urban expansion, increased economic activity and the associated increase in motor vehicle use. Bushfires, controlled burning and windblown dust continue to cause exceedances of particulate levels in a number of jurisdictions, particularly those in eastern and southern Australia.

PART 5—REPORTING ON IMPLEMENTATION BY JURISDICTIONS

The annexes to this report are in Appendix 2 (see page 57).

NEPC Report on the Implementation of the
National Environment
Protection (Assessment
of Site Contamination)
Measure

National Environment Protection (Assessment of Site Contamination) Measure

PART 1 – GENERAL INFORMATION

NEPM details

Title: National Environment Protection (Assessment of Site Contamination) Measure

Made by Council: 10 December 1999

Commencement date: 22 December 1999 (advertised in *Commonwealth of Australia Gazette* No. GN 51, 22 December 1999, p. 4246)

NEPM goal (or purpose)

The goal of the National Environment Protection (Assessment of Site Contamination) Measure is set out in clause 5(1) of the Measure as follows:

The purpose of the Measure is to establish a nationally consistent approach to the assessment of site contamination to ensure sound environmental management practices by the community which includes regulators, site assessors, environmental auditors, landowners, developers and industry.

Desired environmental outcomes

The desired environmental outcome of the National Environment Protection (Assessment of Site Contamination) Measure is set out in clause 5(2) of the Measure as follows:

The desired environmental outcome for this Measure is to provide adequate protection of human health and the environment, where site contamination has occurred, through the development of an efficient and effective national approach to the assessment of site contamination.

Evaluation criteria

The effectiveness of the National Environment Protection (Assessment of Site Contamination) Measure has been assessed against the evaluation criteria for this NEPM.

PART 2 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

This part provides a summary of jurisdictional reports on implementation and the Council’s overall assessment of the implementation of the NEPM.

Legislative, regulatory and administrative framework

Table 1: Summary of implementation frameworks

Jurisdiction	Summary of implementation frameworks
Commonwealth	<ul style="list-style-type: none">• The NEPM is implemented administratively.
New South Wales	<ul style="list-style-type: none">• The NEPM operates by being an approved guideline under the <i>Contaminated Land Management Act 1997</i>.

Jurisdiction	Summary of implementation frameworks
Victoria	<ul style="list-style-type: none"> The key legislative instruments for administering the NEPM are: <ul style="list-style-type: none"> the State Environment Protection Policy (Prevention and Management of Contamination of Land) the State Environment Protection Policy (Groundwaters of Victoria) the Industrial Waste Management Policy (Prescribed Industrial Waste) the <i>Planning and Environment Act 1987</i>. The Environmental Audit System (Contaminated Land) provides the administrative framework for assessing site contamination.
Queensland	<ul style="list-style-type: none"> The <i>Sustainable Planning Act 2009</i> and the <i>Environment Protection Act 1994</i> are the key legislative instruments. The NEPM is applied through the Guidelines for the Assessment and Management of Contaminated Land in Queensland, May 1998. The Contaminated Land Auditor system under the <i>Environmental Protection Act 1994</i> provides a statutory framework for assessing site contamination.
Western Australia	<ul style="list-style-type: none"> The NEPM is implemented through the <i>Contaminated Sites Act 2003</i> and the Contaminated Sites Regulations 2006 and associated relevant technical guidelines.
South Australia	<ul style="list-style-type: none"> The <i>Environment Protection Act 1993</i> provides a legislative framework to manage site contamination, including prescribed technical guidelines.
Tasmania	<ul style="list-style-type: none"> The NEPM is a state policy under the <i>State Policies and Projects Act 1993</i>. The NEPM is implemented under the <i>Environmental Management and Pollution Control Act 1994</i>, the Environmental Management and Pollution Control (Underground Petroleum Storage Systems) Regulations and associated guidelines.
Australian Capital Territory	<ul style="list-style-type: none"> The NEPM is implemented by the Contaminated Sites Environment Protection Policy made under the <i>Environment Protection Act 1997</i>.
Northern Territory	<ul style="list-style-type: none"> The NEPM is implemented by audits of contaminated sites required under the NT planning process, legislative directive environmental audits as well as voluntary audits.

Implementation issues arising

The NEPM was amended in May 2013 and much jurisdictional activity in 2014–15 remained focused on implementing these amendments.

For detailed implementation activities, please refer to jurisdictional reports as listed in Part 5.

Table 2: Summary of implementation issues arising

Jurisdiction	Summary of implementation issues arising
Commonwealth	<ul style="list-style-type: none"> No issues reported.
New South Wales	<ul style="list-style-type: none"> Sought to resolve implementation issues in relation to applying NEPM criteria for asbestos, lead and benzo[a]pyrene (BaP), and more generally the limited number of Ecological Investigation Levels for contaminants.
Victoria	<ul style="list-style-type: none"> Continued to resolve implementation issues raised about the new focus on ecological values, how asbestos should be assessed and managed and managing broader policy implications for other areas such as prescribed industrial waste. The level of detailed understanding of the document remains a concern, as it appears only specialist scientists are reading the document in any detail.

Jurisdiction	Summary of implementation issues arising
Queensland	<ul style="list-style-type: none"> Continued to raise an inconsistency created by the amended NEPM with Queensland environmental legislation when dealing with the assessment of contaminated groundwater.
Western Australia	<ul style="list-style-type: none"> Published updated technical guidelines to ensure their consistency with the new NEPM ecological investigation levels.
South Australia	<ul style="list-style-type: none"> Continued developing draft revised guidance documents to ensure consistency with the amended NEPM and drafting an Environment Protection Policy to give effect to the amended NEPM.
Tasmania	<ul style="list-style-type: none"> No issues reported.
Australian Capital Territory	<ul style="list-style-type: none"> No issues reported.
Northern Territory	<ul style="list-style-type: none"> No issues reported.

PART 3—JURISDICTIONAL REPORT ON ACTIVITIES UNDER THE NEPM

Most jurisdictions have amended their implementation frameworks to fully meet the requirements of the amended NEPM.

All jurisdictions continue to report a high level of compliance with the guidelines as set out in the NEPM in the assessment and management of their contaminated sites.

A number of jurisdictions raised the contamination of groundwater and sediments with persistent organic pollutants, such as perfluorinated compounds such as PFOS and PFOA, primarily from firefighting training activities as an issue. These compounds are not specifically addressed by the NEPM. Future updates of the NEPM to provide advice about, and possible impacts of, these pollutants would be highly desirable.

Clause 9 of the NEPM sets out the information that jurisdictions are required to report. Please refer to jurisdictional reports in Part 5.

PART 4—ASSESSMENT OF NEPM EFFECTIVENESS

The NEPM, which was amended in May 2013 and is now almost fully implemented by all jurisdictions, continues to provide consistent, consolidated guidance to professional practitioners in assessing site contamination.

The recent amendments are well supported by environmental auditors and others in the site assessment industry and the consistency of site assessments and human health risk assessments submitted to agencies continues to improve across the country. However, given the time taken to undertake site assessments, it may still be too early to fully assess the effectiveness of the amended NEPM.

Both Victoria and Queensland are clarifying and resolving matters regarding the practical implications for practitioners and regulatory agencies about some aspects of the amended NEPM within their jurisdictions. These matters may not be completely resolved until there is a further revision of the NEPM, particularly relating to the management of contaminated groundwater.

PART 5—REPORTING ON IMPLEMENTATION BY JURISDICTIONS

The annexes to this report are in Appendix 3 (see page 97).

NEPC Report on the Implementation of the
National Environment
Protection (Diesel Vehicle
Emissions) Measure

National Environment Protection (Diesel Vehicle Emissions) Measure

PART 1 — GENERAL INFORMATION

NEPM details

Title: National Environment Protection (Diesel Vehicle Emissions) Measure

Made by Council: 29 June 2001

Commencement date: 18 July 2001 (advertised in *Commonwealth of Australia Gazette* No. GN 28, 18 July 2001, p. 2014)

NEPM goal (or purpose)

The goal of the National Environment Protection (Diesel Vehicle Emissions) Measure is set out in clause 10 of the Measure as follows:

The goal of this Measure is to reduce exhaust emissions from diesel vehicles, by facilitating compliance with in-service emissions standards for diesel vehicles.

Desired environmental outcomes

The desired environmental outcome of the National Environment Protection (Diesel Vehicle Emissions) Measure is set out in clause 11 of the Measure as follows:

The desired environmental outcome of this Measure is to reduce pollution from in-service diesel vehicles.

Evaluation criteria

The effectiveness of the National Environment Protection (Diesel Vehicle Emissions) Measure has been assessed against the evaluation criteria for this NEPM.

PART 2 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

This part provides a summary of jurisdictional reports on implementation and the Council's overall assessment of the implementation of the NEPM.

Legislative, regulatory and administrative framework

Table 1: Summary of implementation frameworks

Jurisdiction	Summary of implementation frameworks
Commonwealth	<ul style="list-style-type: none"> The NEPM is implemented administratively. The NEPM is supported by the Australian Design Rules under the <i>Motor Vehicle Standards Act 1989</i>, <i>Fuel Quality Standards Act 2000</i> and fuel tax credit arrangements.
New South Wales	<ul style="list-style-type: none"> The key legislative instruments are the <i>Protection of the Environment Operations Act 1997</i> and the Protection of the Environment Operations (Clean Air) Regulation 2010.
Victoria	<ul style="list-style-type: none"> The primary legislative tools are the Environment Protection (Vehicle Emissions) Regulations 2013 under the <i>Environment Protection Act 1970</i>.

Jurisdiction	Summary of implementation frameworks
Queensland	<ul style="list-style-type: none"> The NEPM is implemented by the <i>National Environment Protection Council (Queensland) Act 1994</i>.
Western Australia	<ul style="list-style-type: none"> The NEPM is implemented by the <i>National Environment Protection Council (Western Australia) Act 1996</i>, the <i>Environmental Protection Act 1986</i>. Vehicle emissions in Western Australia are regulated under the <i>Road Traffic (Vehicles) Act 2012</i> and Road Traffic (Vehicles) Regulations 2014.
South Australia	<ul style="list-style-type: none"> The transitional provisions in the <i>Environment Protection (Miscellaneous) Amendment Act 2005</i> enable the NEPM to continue to operate as an Environment Protection Policy. Vehicle emissions in South Australia are regulated under Road Traffic (Vehicle Standards) Rules 1999.
Tasmania	<ul style="list-style-type: none"> The NEPM is a state policy under the <i>State Policies and Projects Act 1993</i>.
Australian Capital Territory	<ul style="list-style-type: none"> The key legislative instrument is the Road Transport (Vehicle Registration) Regulation 2000.
Northern Territory	<ul style="list-style-type: none"> Vehicle performance standards are enforced under the <i>Motor Vehicles Act (NT)</i>.

Implementation issues arising

Table 2 summarises the implementation issues that arose throughout the 2013–14 reporting year. For implementation activities refer to jurisdictional reports as listed in Part 5.

Table 2: Summary of implementation issues arising

Jurisdiction	Summary of implementation issues arising
Commonwealth	<ul style="list-style-type: none"> No issues reported.
New South Wales	<ul style="list-style-type: none"> No issues reported.
Victoria	<ul style="list-style-type: none"> No issues reported.
Queensland	<ul style="list-style-type: none"> No issues reported.
Western Australia	<ul style="list-style-type: none"> No issues reported.
South Australia	<ul style="list-style-type: none"> The Regency Park Emissions Test Facility remained closed in 2014 due to high maintenance costs and reliability issues. Private sector involvement is being sought to provide alternative services.
Tasmania	<ul style="list-style-type: none"> No specific issues were reported, however the NEPM is of limited relevance because diesel vehicles are not major contributors to air emissions in urban areas.
Australian Capital Territory	<ul style="list-style-type: none"> No specific issues were reported, however the NEPM is of limited relevance because diesel vehicles are not major contributors to air emissions in the ACT airshed.
Northern Territory	<ul style="list-style-type: none"> No specific issues were reported, however the NEPM is of limited relevance because diesel vehicles are not major contributors to air emissions in urban areas.

PART 3—JURISDICTIONAL REPORT ON ACTIVITIES UNDER THE NEPM

Jurisdictions continue to run a number of programs to monitor and reduce emissions from their diesel fleets. Most jurisdictions run a smoky vehicle reporting program, with the exception of the Commonwealth, South Australia and the Australian Capital Territory.

New South Wales continued to run diesel retrofit programs for both on- and off-road vehicles. New South Wales, Victoria, Queensland and Western Australia operated diesel vehicle emission testing and repair or maintenance programs.

For details of individual programs and initiatives, please refer to jurisdictional reports as listed in Part 5 below.

PART 4—ASSESSMENT OF NEPM EFFECTIVENESS

While there are some limitations on the ability to quantify the overall effectiveness of the NEPM based initiatives implemented to date, jurisdictions report that the NEPM continues to help reduce emissions from diesel vehicles across Australia and is a useful component of the broader framework to manage vehicle emissions.

A number of jurisdictions continued to note increases in the numbers of registered on- and off-road diesel vehicles resulting in these becoming an increasingly higher proportion of their in-service fleets. Fleet turnover, combined with the introduction of more stringent vehicle emissions regulations, means considerable progress is being made toward achieving NEPM goals through national initiatives including the Australian Design Rules and fuel quality standards, particularly for smaller vehicles.

PART 5—REPORTING ON IMPLEMENTATION BY JURISDICTIONS

The annexes to this report are in Appendix 4 (see page 111).

NEPC Report on the Implementation of the
National Environment
Protection (Movement of
Controlled Waste between
States and Territories)
Measure

National Environment Protection (Movement of Controlled Waste between States and Territories) Measure

PART 1 — GENERAL INFORMATION

NEPM details

Title: National Environment Protection Council (Movement of Controlled Waste between States and Territories) Measure

Made by Council: 26 June 1998

Commencement date: 8 July 1998 (advertised in the *Commonwealth of Australia Gazette* No. GN 27, 8 July 1998, p. 2212)

NEPM goal (or purpose)

The desired Goal for the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure is set out in clause 11 of the Measure as follows:

The National environment protection goal of this Measure is to assist in achieving the desired environmental outcomes set out in clause 12 by providing a basis for ensuring that controlled wastes which are to be moved between states and territories are properly identified, transported, and otherwise handled in ways consistent with environmentally sound practices for the management of such wastes.

Desired environmental outcomes

The desired environmental outcome for the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure is set out in clause 12 of the Measure as follows:

The desired environmental outcomes of this Measure are to minimise the potential for adverse impacts associated with the movement of controlled waste on the environment and human health.

Evaluation criteria

The effectiveness of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure has been assessed against the evaluation criteria for this NEPM.

PART 2—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

This part provides a summary of jurisdictional reports on implementation and the Council's overall assessment of the implementation of the NEPM.

Legislative, regulatory and administrative framework

Table 1: Summary of implementation frameworks

Jurisdiction	Summary of implementation frameworks
Commonwealth	<ul style="list-style-type: none"> The NEPM is implemented administratively.
New South Wales	<ul style="list-style-type: none"> The key legislative instruments are the <i>Protection of the Environment Operations Act 1997</i> and the <i>Protection of the Environment Operations (Waste) Regulation 2005</i>.
Victoria	<ul style="list-style-type: none"> The key legislative instruments are the <i>Environment Protection Act 1970</i>, the <i>Environment Protection (Industrial Wastes Resource) Regulations 2009</i>, and the <i>Industrial Waste Management Policy (Movement of Controlled Waste between States and Territories) 2001</i>.
Queensland	<ul style="list-style-type: none"> The key legislative instruments are the <i>Environmental Protection Act 1994</i> and the <i>Environmental Protection (Waste Management) Regulation 2000</i>. Requirements for the licensing of controlled waste transporters are included in the <i>Environmental Protection Regulation 2008</i>.
Western Australia	<ul style="list-style-type: none"> The primary legislative instrument is the <i>Environmental Protection (Controlled Waste) Regulations 2004</i>.
South Australia	<ul style="list-style-type: none"> The NEPM operates as an Environment Protection Policy under the <i>Environment Protection Act 1993</i> through a transitional provision in the <i>Environment Protection (Miscellaneous) Amendment Act 2005</i> and is implemented through conditions attached to environmental authorisations.
Tasmania	<ul style="list-style-type: none"> The NEPM is a state policy under the <i>State Policies and Projects Act 1993</i>. The NEPM is implemented under the <i>Environmental Management and Pollution Control Act 1994</i>.
Australian Capital Territory	<ul style="list-style-type: none"> The key legislative instruments are the <i>Environment Protection Act 1997</i> and the <i>Environment Protection Regulations 2005</i>.
Northern Territory	<ul style="list-style-type: none"> The key legislative instruments are the <i>Waste Management and Pollution Control Act 1998</i> and the <i>Dangerous Goods (Road and Rail Transport) Act (NT)</i>.

Implementation issues arising

During 2014–15, the Commonwealth continued to work on a program of hazardous waste reform. A study into the feasibility of a consistent national approach to tracking the inter- and intra-state movement of controlled wastes was conducted, which recommended work to commence on building the first part of such a system in 2015–16.

Victoria reports that there continues to be close consultation between the state and territory agencies, established under the NEPM agreement. However, there continues to be a decline in compliance by the waste industry. The total amount of controlled waste that was brought into Victoria during the reporting year was 24,290 tonnes. This was a slight decrease of 908 tonnes from the amount reported in 2013–14.

During 2014–15, six companies were identified as having transported controlled waste into Queensland without authorisation. Consequently, four warning notices were issued and two educational letters were issued by EHP relating to transportation of controlled waste into Queensland without authorisation.

PART 3—JURISDICTIONAL REPORT ON ACTIVITIES UNDER THE NEPM

The Commonwealth continued to work in three areas related to hazardous waste—data collection, data reporting and infrastructure. A major project on hazardous waste infrastructure and data was completed that identified significant issues with current hazardous waste tracking arrangements as data sources, including absent tonnages.

Victoria again focused on the transportation of industrial waste from Victoria to both limit the possibility of the movement of waste from Victoria and ensure that Victorian waste is taken to permitted facilities in Victoria. This is a multi-faceted strategy that targets generators, consignors and transporters of industrial waste. Victoria will work with its counterparts in NSW and Queensland to deliver this strategy.

Western Australia issued six consignment authorisations for the movement of controlled waste into Western Australia during 2014–15.

In New South Wales, substantial changes to the waste regulatory framework were introduced under the Protection of the Environment Operations (Waste) Regulation 2014. Discrepancies continue to be low, with 99.3% of transport certificates having no discrepancies.

The Northern Territory is exploring options for an electronic database to facilitate better cohesion with tracking requirements under the NEPM.

There was an increase in the amount of controlled waste transported into Queensland from other Australian States and Territories. The total amount of waste transported into Queensland for 2014–15 was 33,570 tonnes which is a 5.8% increase from the 2013–14 year.

In March 2015, the South Australian online tracking of waste ('WasteTracker') became operational. The online system was adapted from the NSW online tracking of waste and assists waste producers, transporters and operators of waste facilities to apply for consignment authorisations and complete waste transport certificates.

Movements have continued into the ACT from most jurisdictions for the treatment of polychlorinated biphenyl free contaminated oil by Transformer Maintenance Services Australia Pty Ltd and from the surrounding NSW regions for the treatment of clinical waste by SteriHealth Canberra.

In Tasmania, the driving force in achieving the NEPM goal has been ongoing consultation between waste producers, transporters and the Department of Primary Industries, Parks, Water and Environment on controlled waste matters, particularly in relation to reducing the amount of controlled waste generated at source.

The tables below provide a national summary of the data for quantities of each waste category transported. The waste categories group the 73 waste streams and constituents listed in Schedule A of the NEPM into 15 broader types.

Table 2: Summary of total movements of controlled waste within Australia, imports by states and territories for the period — 1 July 2014–30 June 2015

Code	Description	ACT	Ex-Terr*	NSW	NT	QLD	SA	TAS	VIC	WA	Total
A	Plating & heat treatment	0.00		0.04		3.00	0.00	0.00	0.00	0.00	3.04
B	Acids	0.00		11,392.96		21.00	300.23	6.00	83.38	0.00	11,803.57
C	Alkalis	0.00		516.21		413.00	234.47	0.20	125.37	0.00	1,289.25
D	Inorganic chemicals	0.00		47,285.49		359.00	134,153.87	3,701.22	6,473.04	315.00	192,287.62
E	Reactive chemicals	0.00		5.94		395.00	57.09	0.02	17.84	0.00	475.89
F	Paints, resins, inks, organic sludges	0.00		1,679.62		578.00	1,971.67	12.00	2,046.36	0.00	6,287.65
G	Organic solvents	0.00		356.67		101.00	176.57	30.00	2,838.31	0.00	3,502.55
H	Pesticides	0.00		19.08		249.00	0.00	0.00	2,044.82	0.00	2,312.90
J	Oils	395.20		4,547.01	547.87	10,334.00	2,486.10	65.00	4,268.46	0.00	22,643.64
K	Putrescible/organic waste	385.00		12,132.78		6,008.00	0.50	92.15	4,057.82	0.00	22,676.25
L	Industrial washwater	0.00		0.00		0.00	0.00	0.00	170.55	0.00	170.55
M	Organic chemicals	0.00		836.88		6,123.00	34.34	0.00	123.16	0.00	7,117.38
N	Soil/sludge	49.61		3,349.20		8,839.00	815.71	37.50	574.66	289.20	13,954.88
R	Clinical & pharmaceutical	261.02		518.53		130.00	120.69	0.06	1,354.19	2.80	2,387.29
T	Misc.	7.50		2,526.11		18.00	80.29	3.50	112.44	0.00	2,747.84
	Total (tonnes)	1098.33		85,166.52	547.87	33,571.00	140,431.53	3,947.65	24,290.40	607.00	289,660.30

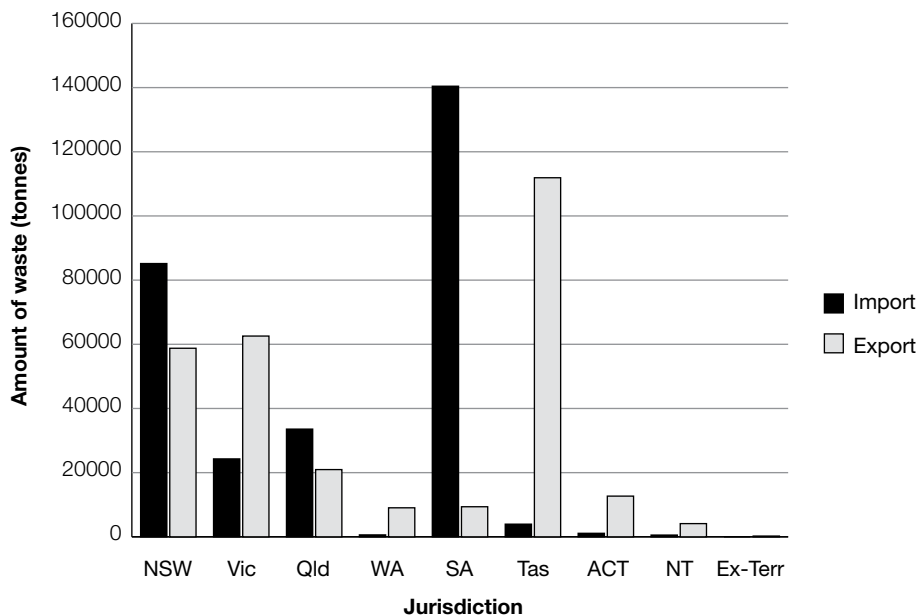
Note: Information regarding External Territories (Ex-Terr) has been provided only since the reporting year 2009–10.

Table 3: Summary of total movements of controlled waste within Australia, exports by states and territories for the period—1 July 2014–30 June 2015

Code	Description	ACT	Ex-Terr*	NSW	NT	QLD	SA	TAS	VIC	WA	Total
A	Plating & heat treatment	0.04	0	0	1	0	0	2	0	0	3.04
B	Acids	0.48	6	100.53	35.89	23.8	0.32	0	11,624.39	11.79	11,803.2
C	Alkalis	5.51	0.2	226	186.04	34.52	252.57	0.28	579.98	5.07	1,290.17
D	Inorganic chemicals	826.94	1.22	18,755.15	990.1	13,696.51	6,318.74	110,425.29	36,283.27	4,991.09	192,288.31
E	Reactive chemicals	0.14	0.02	413	1.3	0	0	0	61.59	0	476.05
F	Paints, resins, inks, organic sludges	2.02	2	1,705.16	36.34	959.85	171.7	0	2,866.85	543.35	6,287.27
G	Organic solvents	8	30	1,635.51	0.01	467.99	137.83	859	88.92	274.99	3,502.25
H	Pesticides	0	0	151	0	297.26	56.21	124	2.61	1681	2,312.08
J	Oils	747.15	65	102,86.85	2,404.24	2,647.98	1,312.89	274.18	3,766.11	1,139.79	22,644.19
K	Putrescible/organic waste	7,756.88	92.15	9889.5	1	0.42	561	0	4,375.48	0	22,676.43
L	Industrial washwater	0	0	78	0	34	0	0	0	58	170
M	Organic chemicals	46.17	0	6238.5	2	290.97	94.82	22	402.77	22	7,119.23
N	Soil/sludge	440.71	37.5	8,608.61	291	1,563.57	58.13	180	2,502.42	272.28	13,954.22
R	Clinical & pharmaceutical	341.06	0.06	617.02	104.57	899.69	388	16.9	7.78	9.22	2384.3
T	Misc.	2,511.07	3.5	64.69	65.36	40.08	21	1	7.63	33.07	2747.4
	Total (tonnes)	12,686.17	237.65	58,769.52	4,118.85	20,956.64	9,373.21	111,904.65	62,569.8	9041.65	289,658.14

Note: Information regarding External Territories (Ex-Terr) has been provided only since the reporting year 2009–10.

Figure 1: Tonnage of controlled waste moved into or out of Australia*



*Note: Information regarding Australia's External Territories has been provided only since the reporting year 2009–10 (and in Figure 1, the scale of the vertical axis does not allow for the 239.19 tonnes of waste exported from Australia's External Territories to be visually represented).

Figure 2: Tonnage of controlled waste moved within Australia 1999–2015

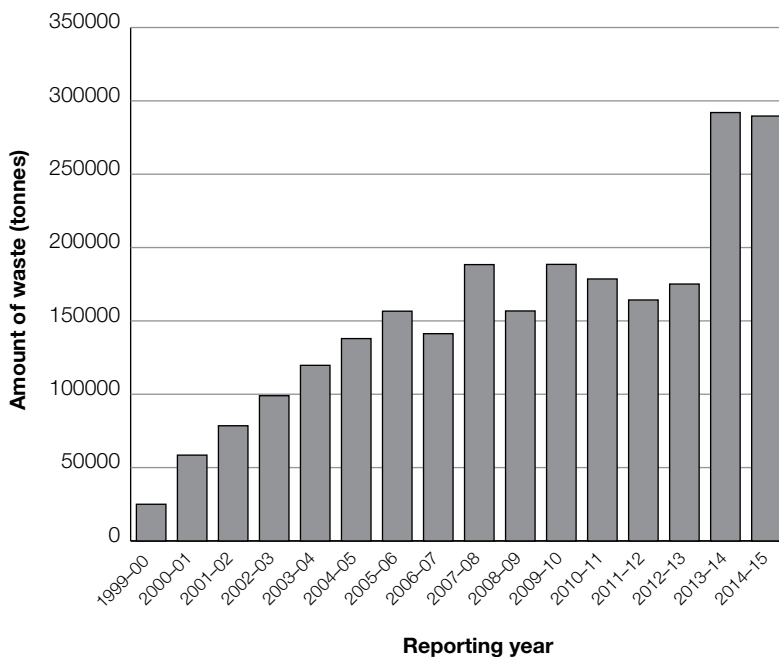
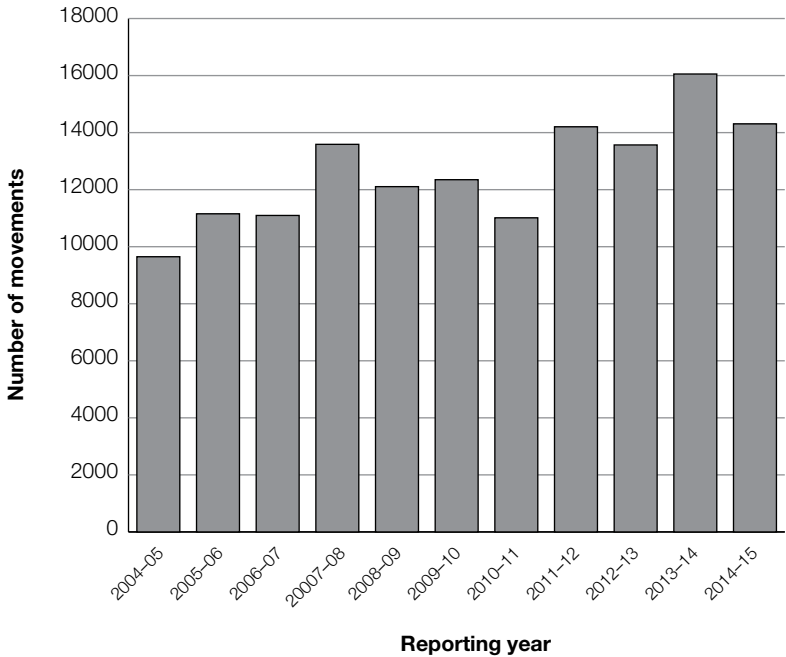


Figure 3: Number of movements of controlled waste within Australia 2004–15*



*Note: Information regarding number of movements has been provided only since the reporting year 2004–05.

PART 4—ASSESSMENT OF NEPM EFFECTIVENESS

Jurisdictions reported that the NEPM continues to provide an effective means of tracking the interstate movement of controlled waste between states and territories. The NEPM also continues to be an effective tool in minimising the potential for adverse impacts associated with the movement of controlled waste on human health and the environment. There remains a high level of communication and cooperation between jurisdictions for this NEPM, particularly regarding the appropriateness of issuing consignment authorisations and discrepancies in wastes moving between states and territories.

PART 5—REPORTING ON IMPLEMENTATION BY JURISDICTIONS

The annexes to this report are in Appendix 5 (see page 133).

NEPC Report on the Implementation of the
National Environment
Protection (National
Pollutant Inventory)
Measure

National Environment Protection (National Pollutant Inventory) Measure

PART 1 — GENERAL INFORMATION

NEPM details

Title: National Environment Protection (National Pollutant Inventory) Measure

Made by Council: 27 February 1998

Commencement date: Clauses 1 and 2 of the Measure commenced on the date of Gazettal 4 March 1998 (advertised in *Commonwealth of Australia Gazette* No. S 89, 4 March 1998, p. 1) with the remaining provisions of the Measure commencing on 1 July 1998.

NEPM goal (or purpose)

The environment protection goals are established by clause 6 of this Measure as follows:

The national environment protection goals established by this Measure are to:

- (a) *collect a broad base of information on emissions and transfers of substances on the reporting list, and*
- (b) *disseminate the information collected to all sectors of the community in a useful, accessible and understandable form.*

In summary, the National Pollutant Inventory (NPI) NEPM provides the framework for the development and establishment of the NPI which is an internet database designed to provide publicly available information on the types and amounts of certain chemicals being emitted to the air, land and water.

Desired environmental outcomes

The desired environmental outcomes, as set out in clause 5 of the Measure, are:

- (a) *the maintenance and improvement of:*
 - (i) *ambient air quality; and*
 - (ii) *ambient marine, estuarine and fresh water quality;*
- (b) *the minimisation of environmental impacts associated with hazardous wastes; and*
- (c) *an improvement in the sustainable use of resources.*

Evaluation criteria

The effectiveness of the National Environment Protection (National Pollutant Inventory) Measure has been assessed against the evaluation criteria for this NEPM.

PART 2—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

This part provides a summary of jurisdictional reports on implementation and the Council's overall assessment of the implementation of the NEPM.

Legislative, regulatory and administrative framework

Table 1: Summary of implementation frameworks

Jurisdiction	Summary of implementation frameworks
Commonwealth	<ul style="list-style-type: none"> The NEPM is implemented administratively.
New South Wales	<ul style="list-style-type: none"> The key legislative instrument is the Protection of the Environment Operations (General) Regulation 2009 under the <i>Protection of the Environment Operations Act 1997</i>.
Victoria	<ul style="list-style-type: none"> The key legislative instrument is the Industrial Waste Management Policy (National Pollutant Inventory) 1998 under the <i>Environment Protection Act 1970</i>.
Queensland	<ul style="list-style-type: none"> The NEPM is implemented under the <i>Environmental Protection Act 1994</i> and the Environmental Protection Regulation 2008.
Western Australia	<ul style="list-style-type: none"> The key legislative instrument is the Environmental Protection (NEPM-NPI) Regulations 1998 under the <i>Environmental Protection Act 1986</i>.
South Australia	<ul style="list-style-type: none"> The NEPM operates as an Environment Protection Policy under the <i>Environment Protection Act 1993</i>.
Tasmania	<ul style="list-style-type: none"> The NEPM is a state policy under the <i>State Policies and Projects Act 1993</i> and is implemented through the <i>Environmental Management and Pollution Control Act 1993</i>.
Australian Capital Territory	<ul style="list-style-type: none"> The key legislative instrument is the <i>Environment Protection Act 1997</i>.
Northern Territory	<ul style="list-style-type: none"> The NEPM is implemented by the Environment Protection (National Pollutant Inventory) Objective established under the <i>Waste Management and Pollution Control Act 1998</i>.

Implementation issues arising

A summary of implementation issues arising during 2013–14 (the NPI NEPM reporting year is a year behind the current annual report year) can be found in Table 2. For implementation activities refer to jurisdictional reports as listed in Part 5.

Table 2: Summary of implementation issues arising

Jurisdiction	Summary of implementation issues arising
Commonwealth	<ul style="list-style-type: none"> There was an increase in the number of complaints related to defects in the behaviour of the NPI database
New South Wales	<ul style="list-style-type: none"> Identified some NPI data users failing to access transfer data due to search function capability.
Victoria	<ul style="list-style-type: none"> Several reports of difficulty in using the NPI online reporting system and specifically the MS Excel calculation tools.
Queensland	<ul style="list-style-type: none"> No issues reported
Western Australia	<ul style="list-style-type: none"> Some smaller industrial facilities require above-average reporting guidance due to the lack of dedicated personnel.
South Australia	<ul style="list-style-type: none"> Aggregate emissions data are required for reliable comparison with industry emissions, however inadequate funding levels do not currently permit appropriate resourcing for the updating of aggregate emissions data (last done in 2003).
Tasmania	<ul style="list-style-type: none"> The reduction in funding to the NPI by the Commonwealth is of concern as it will severely reduce the capacity for on-going expansion and enhancement of the NPI.
Australian Capital Territory	<ul style="list-style-type: none"> There was a continued need to train reported using the online reporting system due to staff turnover.
Northern Territory	<ul style="list-style-type: none"> The NT does not perform aggregate emissions data (AED) modelling as required by the NPI NEPM. AED includes diffuse sources of emissions such as fuel stations, motor vehicles and other non-road engines.

PART 3—ASSESSMENT OF NEPM EFFECTIVENESS

Memoranda of Understanding (MoUs) have been signed at heads of agency level between each jurisdiction and the Commonwealth. These expire on 30 June 2015.

The MoUs set out those NEPM matters to be agreed by individual jurisdictions and the Commonwealth.

Website and Public Awareness

Reporting information is available on the NPI website at www.npi.gov.au. The number of visitors to the NPI website increased from 205,451 in 2012–13 to 242,112 in 2013–14.

The free phone line and the public email box have been used to inform the public. Approximately 10 calls a month were received and responses to 200 emails received were provided.

On-line reporting

The Commonwealth continued to maintain the NPI website and database search engine. This work ensured that relevant and up to date information is accessible to the public and other key stakeholders.

There was a slight decrease (59) in the number of online reporters in 2013–14. While the online reporting system training has been well received, it is acknowledged that further training is essential.

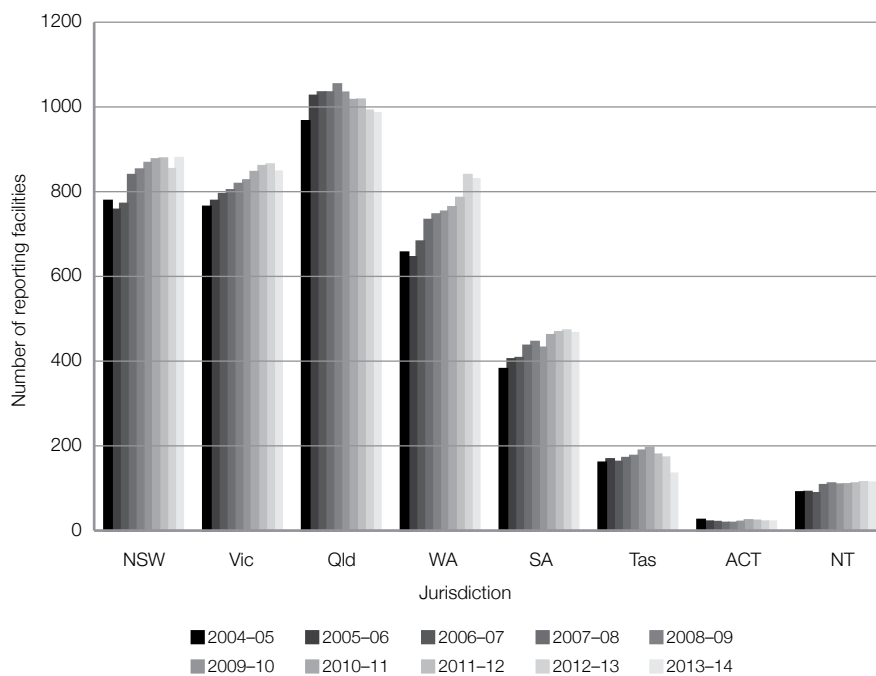
Most jurisdictions have conducted industry training programs to assist reporters to use the Online Reporting System. These training programs vary from one-on-one sessions with new reporters to more formal group sessions. The high level of turnover in industry, new small business enterprises and staff within jurisdictions are the main reasons for the need for continued training.

Industry facility reporting

- The number of facilities reporting to the National Pollutant Inventory (NPI) fell from 4,333 in 2012–13 to 4,274 in 2013–14.

Figure 4 below shows that the number of facilities reporting to the NPI in all jurisdictions over the past ten years.

Figure 4: NPI facility reports received by jurisdictions 2004–05 to 2013–14



PART 4—REPORTING ON IMPLEMENTATION BY JURISDICTIONS

The annexes to this report are in Appendix 6 (see page 153).

NEPC Report on the Implementation of the
National Environment
Protection (Used
Packaging Materials)
Measure

National Environment Protection (Used Packaging Materials) Measure

PART 1 — GENERAL INFORMATION

NEPM details

Title: National Environment Protection (Used Packaging Materials) Measure

Commencement date: July 2005

NEPM goal (or purpose)

The environment protection goal is established by clause 6 of this Measure as follows:

The goal of the Measure is to reduce environmental degradation arising from the disposal of used packaging and conserve virgin materials through the encouragement of re-use and recycling of used packaging materials by supporting and complementing the voluntary strategies in the National Packaging Covenant.

Desired environmental outcomes

The desired environmental outcomes from the combination of the Australian Packaging Covenant and the Measure are to minimise the overall environmental impacts of packaging by pursuing the Covenant performance goals:

1. **Design:** *optimise packaging to use resources efficiently and reduce environmental impact without compromising product quality and safety.*
2. **Recycling:** *efficiently collect and recycle packaging.*
3. **Product Stewardship:** *demonstrate commitment by all signatories.*

Evaluation criteria

The effectiveness of the National Environment Protection (Used Packaging Materials) Measure has been assessed against the evaluation criteria for this NEPM.

PART 2 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

This part provides a summary of jurisdictional reports on implementation and the Council's overall assessment of the implementation of the NEPM.

Legislative, regulatory and administrative framework

Table 1: Summary of implementation frameworks

Jurisdiction	Summary of implementation frameworks
Commonwealth	<ul style="list-style-type: none"> The Commonwealth's implementing legislation applies only to its jurisdictional territories and to brand owner companies with over 50% government ownership such as Australia Post.
New South Wales	<ul style="list-style-type: none"> The NEPM is implemented by the Protection of the Environment Operations (Waste) Regulation 2005.

Jurisdiction	Summary of implementation frameworks
Victoria	<ul style="list-style-type: none"> The NEPM is implemented by the Waste Management Policy (Used Packaging Materials) 2006, under the <i>Environment Protection Act 1970</i>.
Queensland	<ul style="list-style-type: none"> The NEPM is implemented by the Waste Reduction and Recycling Regulation 2011.
Western Australia	<ul style="list-style-type: none"> The NEPM is implemented by the Environmental Protection (NEPM-UPM) Regulations 2013 under the <i>Environment Protection Act 1986</i>.
South Australia	<ul style="list-style-type: none"> The NEPM is legally enforced by the Environment Protection (Used Packaging Materials) Policy 2012.
Tasmania	<ul style="list-style-type: none"> The NEPM is implemented under the <i>Environmental Management and Pollution Control Act 1994</i>. The NEPM is a state policy under the <i>State Policies and Projects Act 1993</i>.
Australian Capital Territory	<ul style="list-style-type: none"> The NEPM is implemented by the Used Packaging Materials Industry Waste Reduction Plan under the <i>Waste Minimisation Act 2001</i>.
Northern Territory	<ul style="list-style-type: none"> The NT Government is not a signatory to the Australian Packaging Covenant, and there are no known major brand owners based in the NT who are likely to have obligations under the NEPM. There is provision under the <i>Waste Management and Pollution Control Act 1998</i> to enforce the NEPM if needed.

Implementation issues arising

Table 2 summarises the implementation issues that arose throughout the 2014–15 reporting year. For detailed implementation activities refer to jurisdictional reports as listed in Appendix 7.

Table 2: Summary of implementation issues arising

Jurisdiction	Summary of implementation issues arising
Commonwealth	No issues reported.
New South Wales	<ul style="list-style-type: none"> To the end of 2014–15 <i>Waste Less, Recycle More</i> has awarded \$66.9 million to infrastructure, \$12.5 million to businesses, and \$5.7 million to litter, including 103 litter projects. It has also resulted in 7,241 businesses having free waste assessments through the Bin Trim program, and engagement with the Australian Packaging Covenant through a co-funded program, which resulted in the awarding of \$2.95 million for waste projects.
Victoria	<ul style="list-style-type: none"> The need for further work on the methodology for auditing brand owners under clause 16(4) of the NEPM has been identified.
Queensland	<ul style="list-style-type: none"> No issues reported.
Western Australia	<ul style="list-style-type: none"> The Environmental Protection (NEPM-UPM) Regulations 2013 were enacted on 25 September 2013.
South Australia	<ul style="list-style-type: none"> In 2014–15, South Australia continued to strengthen its relationship with Industry and other jurisdictions to ensure national consistency around the enforcement of the National Environment Protection (Used Packaging Materials) Measure 2011 (NEPM).
Tasmania	<ul style="list-style-type: none"> No issues reported.
Australian Capital Territory	<ul style="list-style-type: none"> In 2014–15 the ACT Government initiated a review of the <i>Waste Minimisation Act 2001</i> as part of its consideration of a more robust regulatory framework to support the Territory achieving its waste policy objectives
Northern Territory	<ul style="list-style-type: none"> No issues reported.

PART 3—JURISDICTIONAL REPORT ON ACTIVITIES UNDER THE NEPM

The NEPM sets out the information that jurisdictions are required to report on. This information has been provided by jurisdictions in their individual reports listed in Appendix 7.

A number of jurisdictions increased their NEPM advice, collaboration and compliance activities, while others focused on brand owner surveys or projects either funded by the Australian Packaging Covenant or under state-based waste reduction or recycling programs.

The NEPM contributes to better environmental outcomes by providing a regulatory safety net for the Australian Packaging Covenant.

Figure 1: Australian Packaging Covenant signatories at 30 June 2015

JURISDICTION	NUMBER OF SIGNATORIES
ACT	5
NSW	375
QLD	66
SA	54
TAS	17
VIC	364
WA	50
TOTAL	848

Kerbside recycling

Local government authorities have continued to collect data on the composition of kerbside recycling waste streams. The amount and type of data collected in each jurisdiction varies and, therefore, no direct comparison between jurisdictions can be made.

Further information is available in jurisdictional reports as listed in Appendix 7.

Complaints, investigations and prosecutions

Victoria reported that two complaints were received regarding compliance with the Waste Management Policy.

PART 4—ASSESSMENT OF NEPM EFFECTIVENESS

At the end of June 2015, there were 931 covenant signatories, of which 927 were compliant.

In line with Schedule 3 of the Australian Packaging Covenant, the APC Secretariat continues to refer non-signatory, non-compliant and potential brand owners to jurisdictions for further action. That there have been no complaints, investigations or prosecutions reported by jurisdictions indicates that the APC is working well, and the NEPM provides a sound statutory basis for it.

The NEPM remains a less effective mechanism in the Northern Territory as the major contributors to the waste stream are brand-owners not based in the Territory.

PART 5—REPORTING ON IMPLEMENTATION BY JURISDICTIONS

The annexes to this report are in Appendix 7 (see page 167).

Appendices

Appendix 1: Jurisdictional Reports on the Implementation and Effectiveness of the Air Toxics NEPM

Commonwealth

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for the Commonwealth by the Hon. Greg Hunt MP, Minister for the Environment, for the reporting year ended 30 June 2015

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

- The Commonwealth implements the National Environment Protection (Air Toxics) Measure (Air Toxics NEPM) administratively and ensures that its obligations under the *National Environment Protection Act 1994* are met.
- In 2014–15 the Commonwealth identified no Commonwealth sites on which there was a potential for significant population exposure to elevated levels of air toxics.
- At their meeting on 26 February 2015, Australia's Environment ministers committed to finalising a National Clean Air Agreement by July 2016. Ministers released a discussion paper, *Working towards a National Clean Air Agreement*, which highlighted ministers' commitments to consult broadly and explore partnerships with the community and industry on areas of priority including strengthening ambient air quality reporting standards for sulphur dioxide, nitrogen dioxide and ozone under the Ambient Air Quality NEPM.
- In addition to agreeing to establish new ambient air quality reporting standards for particles by mid 2015, Ministers agreed to clarify the application of the reporting standards to environmental regulation.
- In 2014–15, the Commonwealth, in collaboration with the States and Territories, continued to progress work to reduce emissions from nationally significant sources. The Commonwealth-led initiatives focused on wood heaters, which are a source of PM₁₀ emissions, and non-road spark ignition engines and equipment (NRSIEE), such as gardening equipment and marine outboard engines, which emit high levels of PM₁₀, nitrogen dioxide and chemicals that lead to ozone formation.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

The Air Toxics NEPM provides a framework for assessing the ambient levels of specified air toxics in a range of locations and improving the information base regarding ambient air toxics in Australia.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for New South Wales by the Hon. Rob Stokes MP, Minister for the Environment and Minister for Heritage (from 24 April 2014 to 2 April 2015) and the Hon. Mark Speakman, Minister for the Environment and Minister for Heritage (from 2 April to 30 June 2015) for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Legislative, regulatory and administrative framework

The implementation of the National Environment Protection (Air Toxics) Measure (NEPM) in New South Wales is coordinated by the Environment Protection Authority. Under Part 3, Clause 8 of the NEPM, the identification of Stage 1 and Stage 2 sites for monitoring of air toxics was required within 12 months of NEPM commencement in 2004. New South Wales completed the desktop analysis and reported the results in the implementation report for the reporting year ended 30 June 2005.

Under Part 3, Clause 9 of the NEPM, monitoring of air toxics is required at Stage 2 sites (i.e. sites prioritised for monitoring based on the potential for significant population exposure). NSW conducted ambient monitoring for the five NEPM air toxics at two Stage 2 sites in the Sydney metropolitan area using a 1-day-in-6 cycle for a full year from October 2008 to October 2009, and reported the results in the implementation report for the reporting year ended 30 June 2010.

The Protection of the *Environment Operations Act 1997* and the Protection of the Environment Operations (Clean Air) Regulation 2010 provide the regulatory framework for action to address air emissions including managing air toxics in New South Wales.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

New South Wales has achieved the NEPM goal to estimate human exposure to the five NEPM air toxics using a consistent national framework, by conducting ambient monitoring at two Stage 2 monitoring sites in the Sydney metropolitan area. The monitoring demonstrated that the five NEPM air toxics are within monitoring investigation levels at all monitoring sites.

Reporting of monitoring of air toxics

New South Wales data collection commenced in October 2008 and concluded in October 2009.

The Turella site collected data on: formaldehyde and acetaldehyde; 19 polycyclic aromatic hydrocarbons including benzo(a)pyrene; and 41 volatile organic compounds including benzene, toluene and xylenes.

The Rozelle site collected data on: formaldehyde and acetaldehyde; and 41 volatile organic compounds including benzene, toluene and xylenes.

NEPM-compliant sampling and analysis methods were used.

Tables 1 to 5 of the NSW implementation report for the reporting year ended 30 June 2010 (www.scew.gov.au/system/files/resources/ee20bb51-e1cd-82b4-559c-699771b152e7/files/nepc-annual-report-09-10.pdf) summarise the monitoring results for the five air toxics—benzene, benzo(a)pyrene as a marker for polycyclic aromatic hydrocarbons, formaldehyde, toluene and xylenes.

The results clearly showed levels of air toxics were below the monitoring investigation levels. There were no occasions on which any of the air toxics monitored exceeded the monitoring investigation levels at any location. The most significant results were for benzo(a)pyrene, with levels of approximately 65 per cent of the NEPM monitoring investigation level.

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for Victoria by the Hon. Ryan Smith, Minister for Environment and Climate Change (until 29 November 2015) and the Hon. Lisa Neville MP, Minister for Environment, Climate Change and Water, for the reporting year ended 30 June 2015

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Victoria the NEPM is implemented by the State Environment Protection Policy (Air Quality Management) under the *Environment Protection Act 1970*.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

Since 2003, air toxic monitoring in Victoria has not measured levels exceeding the monitoring investigation levels (air quality objectives) in the NEPM.

Past air monitoring results generally aligned with the levels estimated in the Environment Protection Authority's (EPA) review of identification and prioritisation of potential Stage 1 and Stage 2 sites. The air modelling and air pollution inventory is not designed to capture some specific areas and diffuse sources (such as emissions from small to medium enterprises) to estimate the resulting local impact adequately.

Identification of Sites

- There were no new Air Toxics NEPM specific monitoring sites identified in Victoria in 2014.
- Due to the Hazelwood mine fire, air toxics monitoring was conducted during 2014 and completed at Morwell South as part of the Hazelwood Recovery project. The full details of this monitoring are covered in EPA Hazelwood Recovery Program air quality assessment—Morwell and surrounds, February 2014–May 2015 www.epa.vic.gov.au/our-work/publications/publication/2015/june/1601 on EPA Victoria's website.

Reporting of Monitoring of Air Toxics

- Monitoring for polycyclic aromatic hydrocarbons (PAH) was conducted at Morwell South monitoring station. The results showed that levels of benzo(a)pyrene were 0.4 ng/m³, this is above the investigation level of 0.3 ng/m³. This result was heavily influenced by levels during the emergency response phase which was 2.3 ng/m³. Ambient levels during the emergency recovery phase were well below the investigation level, so further investigation was not necessary.
- Monitoring also showed the levels for benzene, toluene and xylene measured were below monitoring investigation levels

Reporting on Assessment and Action if any planned or taken to manage air toxics

- The results of monitoring at all sites show that the monitoring investigation levels were exceeded at Morwell South for PAH. However this was heavily influenced by levels during the Hazelwood mine fire. Levels monitored during the 12 months after the fire have been well below the investigation level.
- Other substances were below investigation levels. Therefore no further action to manage air toxics beyond existing programs was undertaken.

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for Queensland by Hon. Stephen Miles MP, Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

- In Queensland, the Air Toxics NEPM is implemented under the *Environmental Protection Act 1994* (EP Act), the Environmental Protection Regulation 2008, and the Environmental Protection (Air) Policy 2008, with the NEPM monitoring investigation levels incorporated as air quality objectives.
- The Department of Environment and Heritage Protection (EHP) is responsible for the NEPM and the Department of Science Information Technology and Innovation (DSITI) manages, collates and interprets the air monitoring for EHP.
- Monitoring of polycyclic aromatic hydrocarbons (including benzo[a]pyrene) continued at the Stage 2 Woolloongabba roadside monitoring site in 2014–15.
- During the 2014–15 reporting period DSITI continued to monitor selected air toxics using open path DOAS instrumentation at Springwood in South East Queensland and in central Gladstone. While the DOAS monitoring methodology is not in accordance with the protocols set out in the NEPM, and the monitoring sites are not identified as Stage 2 sites, the data collected improves the government's knowledge of ambient concentrations of the majority of the toxic pollutants in Schedule 1 of the NEPM.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The Air Toxics NEPM has been effective in providing an impetus to investigate available data, such as the National Pollutant Inventory and the Air Emissions Inventory for the South East Queensland region and to identify the locations most likely to experience significant population exposure to elevated ambient concentrations of air toxics.

Identification of Sites

The analysis for identification and prioritisation of Stage 1 and Stage 2 sites, as required by the NEPM, was limited to the populous areas of South East Queensland. Two types of locations were identified as having the most potential for significant population exposure to air toxics—built-up residential areas close to heavily trafficked roads with significant congestion problems (e.g. Woolloongabba); and built up residential areas close to major petrochemical industries (e.g. Wynnum).

Table 1: Stage 2 Sites and Proposed Monitoring Program

Location of Stage 2 Sites	Air toxics with possible elevated levels	Air toxics to be monitored	Proposed timeframe for monitoring	Estimate of size of population likely to be exposed and identification of susceptible groups
Woolloongabba	Benzene, toluene, xylene, formaldehyde, benzo[a]pyrene	Benzene, toluene, xylene, formaldehyde, benzo[a]pyrene	2013–14	Residential population of 4,700; employed population of 10,000; inner city close to major roads and freeway
Wynnum	Benzene, toluene, xylene, formaldehyde, benzo[a]pyrene	Benzene, toluene, xylene, formaldehyde, benzo[a]pyrene	2016	Residential population of 12,200; close to major petrochemical industries

Reporting of Monitoring of Air Toxics

Monitoring of air toxics at Stage 2 sites in South East Queensland during the 2014–15 reporting period was limited to measurement of polycyclic aromatic hydrocarbons (including benzo[a]pyrene) at the Woolloongabba roadside monitoring site. Levels of benzene, toluene, xylenes and formaldehyde were monitored using an alternative differential optical absorption spectroscopy (DOAS) technique at ambient air quality monitoring network sites at Springwood and Springwood sites was motor vehicles. The Gladstone region contains a number of industrial facilities, including metals processing and power generation, and a major port. Results from these three monitoring sites for the 2014 year are provided below. Data collected (Tables 2 to 6) indicate that air toxics levels in Woolloongabba, Springwood and Gladstone are well below the NEPM investigation levels.

Table 2: Monitoring Results for Benzene

Site	Springwood	Central Gladstone
Monitoring method	DOAS	DOAS
Period of monitoring	1 Jan 14 to 31 Dec 14	1 Jan 14 to 31 Dec 14
Number of valid results	332	221
Maximum 24-hour average concentration	0.0014 ppm	0.0017 ppm
Annual average concentration (as arithmetic mean)	0.0009 ppm	0.0012 ppm
Arithmetic Standard Deviation of 24-hour average concentrations	0.0002 ppm	0.0002 ppm
Number of times monitoring investigation level exceeded*	0	0

* monthly, rather than 24-hour, sampling was conducted at Woolloongabba

Table 3: Monitoring Results for Toluene

Site	Springwood	Central Gladstone
Monitoring method	DOAS	DOAS
Period of monitoring	1 Jan 14 to 31 Dec 14	1 Jan 14 to 31 Dec 14
Number of valid results	340	317
Maximum 24-hour average concentration	0.0216 ppm	0.0049 ppm
Annual average concentration (as arithmetic mean)	0.0043 ppm	0.0021 ppm
Arithmetic Standard Deviation of 24-hour average concentrations	0.0017 ppm	0.0006 ppm
Number of times monitoring investigation level exceeded*	0	0

* monthly, rather than 24-hour, sampling was conducted at Woolloongabba

Table 4: Monitoring Results for Xylenes

Site	Springwood	Central Gladstone
Monitoring method	DOAS	DOAS
Period of monitoring	1 Jan 14 to 31 Dec 14	1 Jan 14 to 31 Dec 14
Number of valid results	338	319
Maximum 24-hour average concentration	0.0210 ppm	0.0220 ppm
Annual average concentration (as arithmetic mean)	0.0055 ppm	0.0093 ppm
Arithmetic Standard Deviation of 24-hour average concentrations	0.0019 ppm	0.0023 ppm
Number of times monitoring investigation level exceeded*	0	0

* monthly, rather than 24-hour, sampling was conducted at Woolloongabba

Table 5: Monitoring Results for Formaldehyde

Site	Springwood	Central Gladstone
Monitoring method	DOAS	DOAS
Period of monitoring	1 Jan 14 to 31 Dec 14	1 Jan 14 to 31 Dec 14
Number of valid results	342	328
Maximum 24-hour average concentration	0.0163 ppm	0.0034 ppm
Annual average concentration (as arithmetic mean)	0.0084 ppm	0.0020 ppm
Arithmetic Standard Deviation of 24-hour average concentrations	0.0025 ppm	0.0005 ppm
Number of times monitoring investigation level exceeded*	0	0

* monthly, rather than 24-hour, sampling was conducted at Woolloongabba

Table 6: Monitoring Results for Benzo[a]pyrene

Site	Woolloongabba
Monitoring method	TO-13A
Period of monitoring	1 Jan 14 to 31 Dec 14
Number of valid results ^a	12
Maximum monthly average concentration ^a	0.083 ng/m ³
Annual average concentration (as arithmetic mean)	0.028 ng/m ³
Arithmetic Standard Deviation of monthly average concentrations ^a	0.021 ng/m ³
Number of times monitoring investigation level exceeded	0

^a monthly, rather than 24-hour, sampling was conducted at Woolloongabba

Reporting on Assessment and Action if any planned or taken to manage air toxics

Progress toward improving the information base regarding ambient levels of air toxics within the Queensland environment has occurred by way of the desktop analysis, identifying sites likely to have the highest population exposure to air toxics, and ambient monitoring of benzene, toluene, xylene, formaldehyde and benzo[a]pyrene in Brisbane and Gladstone. Past and current monitoring does not suggest a problem with air toxics at the sites monitored.

Repeat Identification of Stage 1 and Stage 2 Sites

The analysis for identification and prioritisation of Stage 1 and Stage 2 sites, as required by the NEPM was limited to the populous areas of South East Queensland. The following sites were identified as Stage 2 sites representative of locations with the most potential for significant population exposure to air toxics:

- Ipswich Road, Woolloongabba—representative of a medium density residential area with potential for significant population exposure to air toxics from motor vehicle emissions; and
- Wynnum North Road, Wynnum North—representative of a low-medium density residential area with potential for significant population exposure to air toxics from industrial emissions

Western Australia

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Air Toxics) Measure for Western Australia by Hon. Albert Jacob MLA, Minister for Environment; Heritage for the reporting year ended 30 June 2015.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Legislative, regulatory and administrative framework

In Western Australia, the National Environment Protection (Air Toxics) Measure is implemented by the Department of Environment Regulation (DER) under the *National Environment Protection Council (WA) Act 1996* and the *Environmental Protection Act 1986*.

Air toxics emissions are also managed through the Perth Air Quality Management Plan (AQMP), a non-statutory mechanism established by the Western Australian Government. The objective of the AQMP is to ensure that clean air is achieved and maintained throughout the Perth metropolitan region. The AQMP identifies that, to achieve an overall improvement in Perth's air quality, further studies are required to determine major sources and concentrations of air toxics in the Perth metropolitan region. The initiatives within the AQMP are complementary to the Air Toxics NEPM.

Implementation issues arising

There have been investigations into levels of certain volatile organic compounds including benzene, toluene, ethylbenzene and xylenes undertaken during 2013 and 2014 using an open path fourier transform infrared spectrometer (OP-FTIR) within urban areas adjacent to the Kwinana Industrial Area. The OP-FTIR monitoring was completed in October 2014 totalling 69 sampling days. The advantage of the OP-FTIR is that it allows simultaneous monitoring of a range of volatile organic compounds at a higher temporal resolution than passive sampling or NEPM-compliant monitoring. A report on this study is being prepared and will be made available on the DER website www.der.wa.gov.au.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The NEPM has been effective in highlighting the need to investigate air toxics concentrations and providing monitoring investigation levels to which the results can be compared. The monitoring investigation levels provide a nationally consistent benchmark for assessing and comparing the concentrations of ambient air toxics from diverse monitoring sites and are an effective tool to inform government policy and programs on appropriate abatement actions.

Monitoring for air toxics in Western Australia has primarily been undertaken as part of specific studies. This has meant there are often a number of objectives to be satisfied when developing and implementing the monitoring programs. As a consequence, the NEPM monitoring protocol has not always been followed. The monitoring results from these studies are invaluable when assessing ambient air toxic concentrations across Western Australia.

An updated emissions inventory is currently being developed for the Perth Metropolitan Region. This inventory will include air toxics and will give Western Australia better information in identifying and prioritising air toxic sources in this area.

Reporting of monitoring of air toxics

The results of NEPM-compliant monitoring as well as the additional complementary air quality studies in 2007–08 and 2009 indicated that air toxics levels in Perth are low compared to international standards and below NEPM monitoring investigation levels. These studies have been summarised and published in the Background Air Quality Monitoring in Kwinana 2005 to 2010, which is available on the DER website www.der.wa.gov.au. Owing to these findings, no additional NEPM-compliant monitoring has been undertaken during the past 12 months.

Reporting on assessment and action if any planned or taken to manage air toxics

Past monitoring has indicated that levels of air toxics are below monitoring investigation levels and no further action is currently indicated.

Repeat Identification of Stage 1 and Stage 2 sites

No repeat identification of Stage 1 and Stage 2 sites is currently planned. The initial desktop analysis identified 13 Stage 1 sites for formaldehyde, of which three met the ranking criteria for polycyclic aromatic hydrocarbons Stage 1 sites. No Stage 1 sites were identified for benzene, toluene or xylene. Two priority categories (traffic volume and wood heater density) were used to identify two Stage 2 sites. The results of the air toxics monitoring at these two Stage 2 sites showed that the annual average concentrations for formaldehyde and benzo[*a*]pyrene were below NEPM monitoring investigation levels. As these two sites are representative of the Stage 1 sites initially identified, repeat identification of Stage 1 and Stage 2 sites is not needed at this time.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for South Australia by the Hon. Ian Hunter MLC, Minister for Sustainability, Environment and Conservation, for the reporting year ended 30 June 2015.

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

- The NEPM operates as an Environment Protection Policy under the *Environment Protection Act 1993*.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

As monitoring in other jurisdictions has shown, air toxics in Australia are well below monitoring investigation levels. South Australia has not engaged in any specific monitoring of air toxics during the reporting period.

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for Tasmania by the Hon. Matthew Groom MP, Minister for Environment, Parks and Heritage for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Tasmania the enabling legislation for the National Environment Protection (Air Toxics) Measure process is the Environmental Management and *Pollution Control Act 1994* (EMPCA). The process is implemented primarily through the EPA Division of the Department of Primary Industries, Parks, Water and the Environment (DPIPWE).

- NEPMs are adopted as state policies under the *State Policies and Projects Act 1993*, and the Air Toxics NEPM is put into effect under the Environment Protection Policy (Air Quality) 2004 (Air Policy) and the Tasmanian Air Quality Strategy 2006.
- Tasmania has undertaken extensive preliminary screening monitoring of air toxics in Tasmania between 2008 and 2011. Due to budgetary constraints air toxics monitoring was discontinued in 2011. No air toxics monitoring was undertaken in Tasmania during the reporting year ending 30 June 2015.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The monitoring conducted to date has improved the information base available in relation to ambient concentrations of air toxics in Tasmania.

Identification of Sites

In 2005, fourteen stage 1 sites were identified in a Desktop Analysis conducted in accord with the Air Toxics NEPM Desktop Analysis protocol.

Monitoring has now been conducted at 9 of these sites in the period 2008 to 2011. Some of the sites monitored were considered representative of other identified sites, in terms of land use (e.g. residential), proximity to traffic and geography. This has allowed an indicative evaluation of some unmonitored sites.

Monitoring was also undertaken at selected sites to determine concentrations of air toxics in areas affected by:

- domestic woodsmoke emissions;
- motor vehicle emissions, in Hobart; and
- industrial emissions.

The results of the last air toxics monitoring program undertaken by the Tasmanian EPA Division during the 2011 calendar year were reported in the 2011–12 annual implementation report.

Reporting of Monitoring of Air Toxics

Air Toxics monitoring undertaken to date in Tasmania was conducted predominantly using non-reference passive sampling techniques. Passive sampling allows for the possibility of longer sampling periods. As the levels of air toxic pollutants are likely to be low in Tasmania, the extended deployment period associated with passive samplers increased the likelihood of detection of these species.

The results of active sampling for PAH at two sites was reported in 2011. A program of active sampling at peak sites, for benzene, toluene, xylenes and formaldehyde was completed in 2011 and the results were included in the 2011–12 annual implementation report.

Due to budgetary constraints, no air toxics monitoring was conducted in Tasmania during the 2014–15 period. Consequently, the monitoring requirements for the Air Toxics NEPM must be evaluated as “not demonstrated” for the 2014 calendar year.

Reporting on Assessment and Action if any planned or taken to manage air toxics

There is no evidence to indicate that Air Toxics NEPM Monitoring Investigation Levels (MIL) would be exceeded at any of the sites monitored in Tasmania in previous years. No action to specifically reduce concentrations of air toxics has been taken.

Repeat Identification of Stage 1 and Stage 2 Sites

The Air Toxics NEPM set out a 2-stage process for selecting sites for monitoring. This involved a desktop assessment to identify “Stage 1” sites at which significantly elevated levels of one or more of the listed air toxics were expected to occur. A further desktop assessment was undertaken to identify “Stage 2” sites. These were Stage 1 sites that were judged to be a priority for monitoring on the basis of an assessment of the likelihood of significant population exposure to one or more of the listed air toxics.

Repeat identification of Stage 1 and Stage 2 sites has not been conducted.

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for the Australian Capital Territory by Mr Simon Corbell MLA, Minister for the Environment for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

No implementation issues have arisen during the reporting year.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The ACT Government has previously undertaken a desktop analysis which showed that air toxics are not an issue for the ACT airshed.

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for the Northern Territory by the Minister for the Environment for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Northern Territory Environment Protection Authority is responsible for the implementation of the NEPM in the Northern Territory through the provisions of the *Waste Management and Pollution Control Act 1998* and the *National Environment Protection Council (Northern Territory) Act*.

The Northern Territory undertook a desktop study in 2005 to identify Stage 1 and Stage 2 sites for the purposes of meeting obligations under the NEPM. No Stage 2 sites were identified and a long-term monitoring program has not been implemented.

A nine month monitoring program was completed in February 2006 to establish baseline conditions for Darwin. The results indicated that there are very low concentrations of benzene, toluene and xylenes (ortho, meta and para), well below the investigation levels set by the NEPM.

No further implementation activities were conducted in 2014–15. Reassessment of Stage 1 and Stage 2 sites may be required in the future, taking into account industrial development in the Darwin region. According to NEPM guidance, reassessment was required by 2009 but the previous studies indicate that concentrations of air toxics are at very low levels, well below the monitoring investigation levels of the NEPM.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The NEPM has provided the impetus and methodology for identifying sites most at risk of air toxics in the NT. Monitoring in 2005–06 provided baseline data for further consideration.

In 2014–15, no sites were evaluated or selected and no analyses were performed.

Appendix 2: Jurisdictional Reports on the Implementation and Effectiveness of the Ambient Air Quality NEPM

Commonwealth

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for the Commonwealth by the Hon. Greg Hunt MP, Minister for the Environment, for the reporting year ended 30 June 2015

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Commonwealth implements the National Environment Protection (Ambient Air Quality) Measure (Ambient Air Quality NEPM) administratively and ensures that its obligations under the *National Environment Protection Act 1994* are met.

The Commonwealth is not required to undertake any direct monitoring as there are currently no non self-governing Commonwealth territories or Commonwealth regions with a population above the 25 000 Ambient Air Quality NEPM protocol threshold. The monitoring plan for the Commonwealth is available from www.environment.gov.au/atmosphere/airquality/publications/cmp.html.

- At their meeting on 26 February 2015, Australia's environment ministers committed to finalising a National Clean Air Agreement by July 2016. Ministers released a discussion paper, *Working towards a National Clean Air Agreement*, which highlighted ministers' commitments to consult broadly and explore partnerships with the community and industry on areas of priority, including strengthening ambient air quality reporting standards for sulfur dioxide, nitrogen dioxide and ozone under the Ambient Air Quality NEPM.
- Ministers also agreed to consider specific actions in mid 2015 to establish new ambient air quality reporting standards for particles and to clarify the application of the reporting standards to environmental regulation.
- In 2014–15, the Commonwealth, in collaboration with the States and Territories, continued to progress work to reduce emissions from nationally significant sources. The Commonwealth-led initiatives focused on wood heaters, which are a source of PM₁₀ emissions, and non-road spark ignition engines and equipment (NRSIEE), such as gardening equipment and marine outboard engines, which emit high levels of PM₁₀, nitrogen dioxide and chemicals that lead to ozone formation.

The Commonwealth monitors fuel quality at all stages of the fuel supply chain to ensure it complies with the *Fuel Quality Standards Act 2000* (the Act). The objects of the Act are to:

- a) regulate the quality of fuel supplied in Australia in order to:
 - i. reduce the level of pollutants and emissions arising from the use of fuel that may cause environmental and health problems; and
 - ii. facilitate the adoption of better engine technology and emission control technology; and
 - iii. allow the more effective operation of engines; and
- b) ensure that, where appropriate, information about fuel is provided when the fuel is supplied.

In 2014–15, authorised fuel inspectors visited 432 sites and tested 1,425 samples for compliance with the Act. The Department monitored three injunctions including one enforceable undertaking, as a result of compliance action undertaken in previous years.

A statutory review of the *Fuel Quality Standards Act 2000* commenced in June 2015, and is due to report by early 2016. The review seeks to determine the efficiency, effectiveness and appropriateness of the Act in achieving its objects, and advise on options for improvement. Further information on the review is available from www.environment.gov.au/protection/fuel-quality/legislation/review-2015/

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The Ambient Air Quality NEPM provides a nationally consistent framework for the monitoring, reporting and assessment of ambient air quality in Australia.

A review of the Ambient Air Quality NEPM, completed in May 2011, found that it lead to a greater understanding of air quality in Australia which resulted in an improved understanding of the health impacts of air pollution on the community. The review made 23 recommendations for changes to help minimise risk to population health from air pollution. Some of these recommendations are currently being addressed through work to review and strengthen the reporting standards for particles as well as sulfur dioxide, nitrogen dioxide and ozone.

The data collected by participating jurisdictions for the six criteria pollutants listed in the Ambient Air Quality NEPM (carbon monoxide (CO), nitrogen dioxide (NO₂), photochemical oxidants as ozone (O₃), sulfur dioxide (SO₂), lead (Pb) and PM₁₀) remain essential for monitoring Australia's ambient air quality. This is a valuable resource for informing the development of the National Clean Air Agreement and its work plan, and for developing strategic approaches to manage Australia's air quality into the future.

Data collected through the Ambient Air Quality NEPM has previously informed significant reports including the State of the Air in Australia 1998–2008 report and Australia: State of the Environment 2011.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for New South Wales by the Hon. Rob Stokes MP, Minister for the Environment and Minister for Heritage (from 24 April 2014 to 2 April 2015) and the Hon. Mark Speakman, Minister for the Environment and Minister for Heritage (from 2 April to 30 June 2015) for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The New South Wales Government outlined its commitments to improving air quality under Goal 22 in its forward plan for New South Wales—NSW 2021.

The National Environment Protection (Ambient Air Quality) Measure (NEPM) is implemented under the *Protection of the Environment Operations Act 1997* and the Protection of the Environment Operations (Clean Air) Regulation 2010.

The *Protection of the Environment Operations Act 1997* provides the regulatory framework for managing air emissions in New South Wales, establishes a licensing scheme for major industrial premises and provides economic incentives for licensed businesses and industry to reduce pollution, including emissions to air.

The Protection of the Environment Operations (Clean Air) Regulation 2010 provides measures to control emissions from industry, motor vehicles and fuels, domestic solid fuel heaters and open burning.

In New South Wales, the Office of Environment and Heritage and the Environment Protection Authority work together to reduce impacts of air pollution. The Office of Environment and Heritage operates a comprehensive air quality monitoring network. The Environment Protection Authority develops and implements regulation, policies and programs to improve compliance with NEPM goals and protect public health.

The NEPM goal is a driver for these strategies and a benchmark against which progress in managing air quality can be assessed.

Air Quality Management in the Greater Metropolitan Region and Regional New South Wales

The Environment Protection Authority delivers a number of actions that target the pollutants of most concern in New South Wales. These include particles in the Greater Metropolitan Region and some regional centres and ground level ozone (and its precursors) during summer. These efforts are designed to reduce air emissions from industry, motor vehicles, commercial businesses and domestic sources. Industry emissions of oxides of nitrogen and sulfur dioxide are also a focus for action in some regional locations.

The following outlines key mechanisms for managing air quality and activities undertaken in 2014–15:

Managing particle emissions

In February 2015, sampling for the Lower Hunter Particle Characterisation Study was completed. Air was sampled for PM_{2.5} at four sites—Newcastle, Beresfield, Mayfield and Stockton, and also for PM₁₀ at Mayfield and Stockton. Following detailed analysis of samples to determine the likely sources of the particles, publication of the results is anticipated in 2016.

Diesel emissions

In February 2015, the Environment Protection Authority released the Diesel and Marine Emissions Management Strategy. It aims to improve air quality and public health in NSW by reducing harmful emissions from non-road diesel and marine sources such as shipping, equipment used in coal mines, locomotives, and industry activities licensed by the EPA.

Air emissions inventory

To improve community access to information and understanding of air pollution sources in local areas, the Environment Protection Authority's Air Emissions in my Community Web Tool presents aggregated data and charts for different geographic areas down to local council and postcode level.

Coal mines and Hunter region air quality

Coal mining and air quality in the Hunter region continued to be a major focus for air quality management during 2014/15. This included the Environment Protection Authority continuing to implement the Dust Stop program to reduce dust from coal mining activities.

The Environment Protection Authority has commenced work on the next phase of the Dust Stop program, the Hunter Valley Dust Reduction Scheme. This scheme is aimed at reducing dust emissions from coal mines during periods of predicted adverse weather.

Exhaust emissions from off-road diesels at coal mines make a significant contribution to fine particles and ozone precursors. Over 90 per cent of all exhaust emissions from off-road diesels at coal mines occur in the Upper Hunter Valley. The Environment Protection Authority conducted a detailed site-specific assessment of retrofitting, replacing or procuring EU/US compliant off-road diesels and adopting low sulfur diesel for all coal mines in NSW. In December 2014 the Environment Protection Authority released the NSW Coal Mining Benchmarking Study—Best Practice Measures for Reducing Non-Road Diesel Exhaust Emissions draft report, which provides a comprehensive outline of the study undertaken.

The Environment Protection Authority undertook an audit and compliance check of coal loading and unloading infrastructure and rolling stock as part of its efforts to reduce particulate pollution from carry-back coal and parasitic coal on coal trains. The report from this audit (Environment Compliance Report—Compliance audit of coal train loading and unloading facilities) is available on the Environment Protection Authority website.

Wood smoke reduction

The EPA continued its wood smoke reduction program in 2014, a comprehensive program which ran over the 2013 and 2014 winter seasons to help NSW local councils raise awareness about the health impacts of wood smoke and the benefits of correct wood heater operation, as well as to help their communities shift away from polluting wood heaters to cleaner forms of heating. Seventeen councils and four Regional Organisations of Councils participated in the 2014 winter season program.

The Environment Protection Authority continued working with the Commonwealth and other jurisdictions towards developing national measures for wood heater management, as well as participating in a review of the Australian Standards for wood heaters.

In March 2015 the EPA released for public comment a proposed amendment to the current wood heater regulatory framework under the Protection of the Environment Operations (Clean Air) Regulation 2010 to give local councils powers to introduce additional controls on wood heater installation. Public consultations closed in May 2015.

Smoky vehicle enforcement

The NSW Roads and Maritime Services (RMS), in partnership with the Environment Protection Authority, continued the M5 East Heavy Vehicle Emission Reduction Program, which commenced in March 2013. The program combines increased penalties for tunnel related offences and a diesel retrofit and repair initiative, and targets vehicles emitting excessive smoke in Sydney's M5 East tunnel. The detection rate for heavy vehicles emitting excessive smoke continuously for 10 seconds or more in the M5 East Tunnel has dropped from a monthly average of 38 between March 2013 and June 2014, to a monthly average of 8 detections between June 2014 and June 2015. Accordingly, the number of penalty notices issued has decreased from 259 in 2013–14 to 52 in 2014–15.

Clean Machine program

The Environment Protection Authority's Clean Machine Program (which commenced in 2011) concluded in June 2015. The program was executed through partnerships with local councils and private businesses to develop procurement of cleaner diesel equipment, best worksite practice for diesel emissions management and to retrofit heavily polluting equipment with subsidised exhaust after-treatment devices. Program partners were eligible for up to 90 per cent of co-funding for the retrofitting of older and more polluting diesel equipment.

By the end of June 2015, more than 40 organisations had participated in the program and 145 diesel machines were retrofitted. Retrofits have been estimated to reduce about 37 tonnes of diesel particles over the next 10 years, leading to an estimated public health benefit of \$8.1 million. Cleaner procurement and best worksite practice will also result in significant diesel emissions reductions and public health benefits.

Locomotives

Further to the 2013 report on locomotive emissions and potential control measures (Locomotive Emissions Project: Scoping Study of Potential Measures to Reduce Emissions from New and In-Service Locomotives in NSW and Australia), in January 2015 the EPA signed a Memorandum of Understanding with one of the key NSW rail operators to undertake a joint pilot project to assess the potential of Tier 0+ technology to reduce emissions from diesel locomotives in Australia. Tier 0+ emissions kits were developed in the US to bring older in-service diesel locomotives in line with more stringent 2008 US diesel locomotive emissions standards.

Vapour recovery at service stations

Stage 1 vapour recovery (VR1) captures volatile organic compounds (VOC) emissions expelled from underground petrol storage tanks at service stations as they are filled by road tankers. VR1 requirements took effect from July 2010 for 'new or modified' service stations, and from January 2015 for existing service stations supplying over 0.5 million litres per year.

Stage 2 vapour recovery (VR2) captures VOC emissions expelled from vehicle petrol tanks during refuelling at petrol bowzers. All of the 10 service stations in Sydney, Newcastle, Wollongong and the Central Coast, which supply over 12 million litres per year, had installed VR2 equipment by January 2015.

Existing service stations in Sydney supplying between 3.5 and 12 million litres per year are required to install VR2 by 1 January 2017. Approximately 30% of these service stations have already installed VR2 equipment.

Once fully implemented, vapour recovery is expected to reduce VOC emissions in the Greater Metropolitan Region by approximately 5,000 tonnes per year.

Summer low volatility petrol

To manage ozone formation in the Sydney region, regulatory requirements limit petrol volatility to 62 kiloPascals (kPa) (a measure of vapour pressure) over the summer period from 15 November to 15 March each year. Petrol refiners, importers and blenders must test and report to the Environment Protection Authority on batch volatility. The petrol volatility limits reduce VOC emissions in the Sydney region by approximately 4 000 tonnes each summer.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The New South Wales Air Quality Monitoring Program is the largest in Australia, with a comprehensive monitoring network operated by the Office of Environment and Heritage. The NEPM network is a sub-set of the total Air Quality Monitoring Network operated by the Office of Environment and Heritage.

New South Wales achieved compliance with the NEPM during 2014 for carbon monoxide, nitrogen dioxide and sulfur dioxide, which all remain well below NEPM standards. Note that monitoring for lead as a regional pollutant ceased in New South Wales from January 2005 due to the extremely low concentrations of lead now found in ambient air.

During 2014 New South Wales did not comply with the NEPM for ozone and particles as PM_{10} (10 microns and smaller in diameter). Additionally, two stations in Sydney recorded annual average $PM_{2.5}$ levels above the $PM_{2.5}$ Advisory Reporting Standard. These exceedances are summarised below:

Ozone

During 2014, Bringelly, Camden, Campbelltown West and St Marys did not comply with the NEPM for ozone. High ozone levels were widespread in the region on 31 January and 23 November during hot summer conditions, when Bringelly and Camden exceeded both the 1-hour and 4-hour standards, and Campbelltown West and St Marys exceeded the 4-hour standard.

Particles

In order to comply with the NEPM for particles as PM_{10} , no more than five exceedance days of the 24-hour standard are allowed. During 2014, Wagga Wagga North was the only station that did not comply with the NEPM, recording 13 days above the standard. Fire records suggest nearby grass fires affected air quality on at least six of these days, while the Victorian bushfires in February 2014 led to exceedances on another five days. Smoke from the Victorian bushfires also affected Albury, which recorded five days above the standards during February.

For particles as $PM_{2.5}$ there is no NEPM standard. Results are reported against the 24-hour and 1-year Advisory Reporting Standards (ARS). During 2014, no stations in the network measuring $PM_{2.5}$ recorded concentrations in excess of the 24-hour $PM_{2.5}$ ARS, however, Chullora and Liverpool recorded annual averages above the 1-year Advisory Reporting Standard.

The NEPM standards for ozone and particles were met for most NEPM monitoring stations during 2014. However meeting the NEPM standards for ozone has remained a challenge for Sydney in most years, given pressures from increasing economic activity; increased motor vehicle use; growing population and urban expansion; and an upward trend in domestic emissions of volatile organic compounds (which are precursors of ozone) from sources such as paints, solvents, aerosols and small engines.

The particle goals (as PM_{10} and as $PM_{2.5}$) present a similar challenge in Sydney and some regions of New South Wales where relatively high use of solid fuel heaters produces elevated levels of particles in autumn and winter. Elevated particle levels can also result in rural population centres near coal mining and agricultural activities (e.g. Wagga Wagga North) due to the effects of these emission sources combined with the local climate and topography.

Informed by air quality monitoring, the air emissions inventory and other research studies, New South Wales has a range of programs in place which target the primary emission sources of ozone and particle pollution. Data from NEPM monitoring stations are presented below to enable an evaluation of whether the NEPM standards and goals were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the NEPM. For averaging times shorter than one year, compliance with the NEPM goal is achieved if:

- the standard for a pollutant is exceeded on no more than a specified number of days in a calendar year (one day per year for all pollutants except PM_{10} , which may be exceeded no more than five days per year)
- at least 75 per cent of data are captured in each quarter of the year.

Hourly updated data from the total New South Wales Air Quality Monitoring Network are reported at www.environment.nsw.gov.au/AQMS/aqi.htm.

Current and historical data is searchable and downloadable from www.environment.nsw.gov.au/AQMS/search.htm.

The New South Wales Air Quality Monitoring Plan is located at www.environment.nsw.gov.au/air/nepm/index.htm.

CO Carbon monoxide

(NEPM standard: 8 hours = 9.0ppm)

Station	Number of exceedences	NEPM goal compliance
Sydney		
Camden	0	Met
Campbelltown West	0	Met
Chullora	0	Met
Liverpool	0	Met
Prospect	0	Met
Rozelle	0	Met
Central Coast		
Wyang	0	Met
Illawarra		
Wollongong	0	Met
Lower Hunter		
Newcastle	0	Met

During 2014 compliance with the Ambient Air Quality NEPM goal for carbon monoxide was demonstrated at all sites in the Sydney, Illawarra and Lower Hunter regions.



Nitrogen dioxide

(NEPM standard: 1 hour = 0.12ppm, 1 year = 0.03ppm)

Station	1 hour		1 year	
	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Sydney				
Bringelly	0	Met	0.004	Met
Camden	0	Met	0.004	Met
Campbelltown West	0	Met	0.010	Met
Chullora	0	Met	0.013	Met
Liverpool	0	Met	0.010	Met
Prospect	0	Met	0.010	Met
Richmond	0	Met	0.004	Met
Rozelle	0	Met	0.011	Met
Central Coast				
Wyang	0	Met	0.005	Met
Illawarra				
Albion Park Sth	0	Met	0.004	Met
Wollongong	0	Met	0.008	Met
Lower Hunter				
Newcastle	0	Met	0.007	Met
Wallsend	0	Met	0.008	Met

No exceedances of the nitrogen dioxide 1-hour and annual standards were recorded in New South Wales during 2014. Compliance with the Ambient Air Quality NEPM goal was met at all sites in Sydney, Illawarra and Lower Hunter regions.



Ozone

(NEPM standard: 1 hour = 0.10ppm, 4 hours = 0.08ppm)

Station	1 hour		4 hours	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance
Sydney				
Bringelly	2	Not Met	3	Not met
Camden	2	Not Met	3	Not met
Campbelltown West	1	Met	2	Not met
Chullora	0	Met	0	Met
Liverpool	1	Met	1	Met
Oakdale	1	Met	1	Met
Prospect	1	Met	1	Met
Richmond	0	Met	0	Met
Rozelle	0	Met	0	Met
St Marys	0	Met	2	Not met
Central Coast				
Wyong	0	Met	0	Met
Illawarra				
Albion Park Sth	0	Met	0	Met
Kembla Grange	0	Met	0	Met
Wollongong	0	Met	0	Met
Lower Hunter				
Newcastle	0	Met	0	Met
Wallsend	0	Met	0	Met

Ozone levels above the 1-hour and 4-hour standards were recorded in Sydney during 2014. High ozone levels were widespread in the region on 31 January and 23 November during hot summer conditions, particularly in western and south western Sydney.

Ozone levels in the Illawarra, Lower Hunter and Central Coast regions remained below the standards throughout 2014.



Sulfur dioxide

(NEPM standard: 1 hour = 0.20ppm, 1 day = 0.08ppm, 1 year = 0.02ppm)

Station	1 hour		1 day		1 year	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Sydney						
Bringelly	0	Met	0	Met	0.000	Met
Campbelltown West	0	Met	0	Met	0.001	Met
Chullora	0	Met	0	Met	0.001	Met
Prospect	0	Met	0	Met	0.001	Met
Richmond	0	Met	0	Met	0.000	Met
Central Coast						
Wyong	0	Met	0	Met	0.001	Met
Illawarra						
Albion Park Sth	0	Met	0	Met	0.001	Met
Wollongong	0	Met	0	Met	0.001	Met
Lower Hunter						
Newcastle	0	Met	0	Met	0.001	Met
Wallsend	0	Met	0	Met	0.001	Met

The 1-hour, 24-hour and annual standards for sulfur dioxide were not exceeded in New South Wales during 2014. Compliance with the Ambient Air Quality NEPM goal was met throughout the Sydney, Lower Hunter and Illawarra regions.

PM₁₀ Particles as PM₁₀

(NEPM standard: 1 day = 50µg/m³)

Station	Number of exceedences	NEPM goal compliance
Sydney		
Bringelly	0	Met
Camden	0	Met
Campbelltown West	0	ND*
Chullora	0	Met
Liverpool	0	Met
Oakdale	1	Met
Prospect	0	Met
Richmond	0	Met
Rozelle	0	Met
Central Coast		
Wyong	0	Met
Illawarra		
Albion Park South	0	Met
Kembla Grange	1	Met
Wollongong	0	Met
Lower Hunter		
Beresfield	0	Met
Newcastle	2	Met
Regional		
Albury	5	Met
Bathurst	0	Met
Tamworth	1	Met
Wagga Wagga North	13	Not met

* ND (not determined)—station did not meet 75% data availability criteria as 25 days of data during the third quarter of 2014 was invalidated due to flow audit failure.

In 2014, while PM₁₀ levels above the national standard were recorded at a few monitoring stations, only Wagga Wagga North (13 days) recorded levels above the standard on more than five NEPM allowable days.

PM_{2.5}

Particles as PM_{2.5}
(NEPM standard: 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	Number of exceedences of daily standard	Annual average (µg/m ³)
Sydney		
Camden	0	6.3
Chullora	0	8.9
Earlwood	0	7.8
Liverpool	0	8.6
Richmond	0	6.8
Central Coast		
Wyong	0	5.5
Illawarra		
Wollongong	0	7.1
Lower Hunter		
Beresfield	0	7.5
Wallsend	0	6.7

Daily PM_{2.5} levels above the 24-hour Advisory Reporting Standard (25 µg/m³) were not recorded at any of the PM_{2.5} monitoring stations during 2014, however, annual averages above the ARS (8 µg/m³) were recorded at two stations in Sydney.

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Victoria by the Hon. Ryan Smith, Minister for Environment and Climate Change (to 29 November 2014) and the Hon. Lisa Neville MP, Minister for Environment, Climate Change and Water, for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Monitoring was performed in accordance with a modified state monitoring plan, National Environment Protection (Ambient Air Quality) Measure (NEPM) technical papers and Environment Protection Authority Victoria's National Association of Testing Authorities' accreditation.

Data capture targets of 75% were achieved, except for ozone monitoring at Brighton, Dandenong and Mooroolbark, where instruments were not operated during the winter months where it has been demonstrated that there are no ozone peaks.

There were no other significant implementation issues.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

- Victoria's air quality in 2014 was generally good. The major impact on Victoria's air quality was bushfires and the Hazelwood mine fire in the Latrobe Valley. Other measured impacts on Victoria's air quality during the year were associated with particles and ozone in the Port Phillip Region and particles in the Latrobe Valley.
- In the Port Phillip region in 2014 the goal of no more than 5 exceedances was not met for particles as PM_{10} (particles less than 10 μm in diameter) at Footscray and Geelong South, it was met at all other NEPM stations. All of the days when PM_{10} exceedances occurred in the Port Phillip region were attributed to dust, fire or urban emissions (12 days). Three of the nine exceedances at Geelong South were due to local dust events, the others were due to fire activity in January and February. In the Latrobe Valley region the goal for particles as PM_{10} was met at Traralgon.
- The 24-hour advisory reporting standard for $PM_{2.5}$ was exceeded at Alphington on three days and at Footscray on two days in the Port Phillip region. This was attributed to urban sources (1 day) and bushfire (4 days). The annual reporting standard (8 $\mu g/m^3$) was met for $PM_{2.5}$.
- At all NEPM stations operated during 2014, the carbon monoxide standard was not exceeded and compliance was demonstrated.
- At all NEPM stations operated during 2014, the nitrogen dioxide standards were not exceeded and compliance was demonstrated.
- At NEPM stations operated during 2014, compliance was not demonstrated at Brighton (Q3, Q4), Dandenong (Q3, Q4) and Mooroolbark (Q3, Q4) due to instruments being switched off during months when ozone levels were expected to be very low. At all other stations operating during 2014 compliance was demonstrated. During 2014 the one hour ozone standard was exceeded once at Alphington on 1 day (2 Feb 2014) and the four hour ozone standard was exceeded at Alphington, Brighton, Footscray and Mooroolbark. Exceedances in Melbourne due to photochemical smog linked with combustion products are common.
- At all NEPM stations operating during 2014, the sulfur dioxide standards were not exceeded and compliance was demonstrated. Annual mean values were close to the limits of detection.
- The data is presented in greater detail in Victoria's Monitoring Report 2014—Compliance with the National Environment Protection (Ambient Air Quality) Measure: www.epa.vic.gov.au/our-work/publications/publication/2015/june/1604

CO

Carbon monoxide

(NEPM standard: 8 hours = 9.0ppm)

Station	Number of exceedences	NEPM goal compliance
Alphington	0	Met
Geelong South	0	Met
Richmond	0	Met

NO₂

Nitrogen dioxide

(NEPM standard: 1 hour = 0.12ppm, 1 year = 0.03ppm)

Station	1 hour		1 year	
	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Alphington	0	Met	0.010	Met
Brighton	0	Met	0.008	Met
Footscray	0	Met	0.011	Met
Geelong South	0	Met	0.006	Met
Point Cook	0	Met	0.005	Met
Traralgon	0	Met	0.006	Met

O₃

Ozone

(NEPM standard: 1 hour = 0.10ppm, 4 hours = 0.08ppm)

Station	1 hour		4 hours	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance
Alphington	1	Met	1	Met
Brighton	0	Not Demonstrated	1	Not demonstrated
Dandenong	0	Not Demonstrated	0	Not demonstrated
Footscray	0	Met	1	Met
Geelong South	0	Met	0	Met
Melton	0	Met	0	Met
Mooroolbark	0	Not Demonstrated	1	Not demonstrated
Point Cook	0	Met	0	Met
Traralgon	0	Met	0	Met



Sulfur dioxide

(NEPM standard: 1 hour = 0.20ppm, 1 day = 0.08ppm, 1 year = 0.02ppm)

Station	1 hour		1 day		1 year	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Alphington	0	Met	0	Met	0.001	Met
Altona North	0	Met	0	Met	0.002	Met
Geelong South	0	Met	0	Met	0.001	Met
Traralgon	0	Met	0	Met	0.001	Met



Lead

(NEPM standard: 1 year = 0.50µg/m³)

Station	Annual average (µg/m ³)	NEPM goal compliance
N/A	N/A	N/A

- Following the phasing-out of leaded petrol, concentrations at the peak station, Collingwood, were below the level specified for discontinuing monitoring. Monitoring of lead in Melbourne ceased at the end of 2004. All other regions meet screening criteria as set out in the monitoring plan and all regions are assessed as complying with the standard and goal.



Particles as PM₁₀

(NEPM standard: 1 day = 50µg/m³)

Station	Number of exceedences	NEPM goal compliance
Alphington	4	Met
Brighton	2	Met
Dandenong	4	Met
Footscray	6	Not demonstrated
Geelong South	9	Not demonstrated
Mooroolbark	4	Met
Richmond	4	Met
Traralgon	3	Met

PM_{2.5} Particles as PM_{2.5}

(NEPM standard: 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 year	
	Number of exceedences	Annual average (µg/m ³)
Alphington	3	7.7
Footscray	2	7.1

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Queensland by Hon. Steven Miles MP, Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

- In Queensland, the Ambient Air Quality NEPM is implemented under the *Environmental Protection Act 1994* (EP Act), the Environmental Protection Regulation 2008, and the Environmental Protection (Air) Policy 2008, with the NEPM standards incorporated as air quality objectives.
- The Department of Environment and Heritage Protection (EHP) is responsible for the NEPM and the Department of Science Information Technology and Innovation (DSITI) manages, collates and interprets the air monitoring for EHP.
- Monitoring was conducted in five of the ten regions identified in the Monitoring Plan. Eleven of the nineteen sites nominated in the monitoring plan, and two additional reporting sites, were operational in 2014–15. Monitoring at four of the eight remaining sites concluded prior to 2014–15 due to completion of campaign monitoring or site closure following termination of the monitoring site lease by the property owner.
- Collection of PM_{2.5} data using Tapered Element Oscillating Microbalance (TEOM) instrumentation continued at two sites in South East Queensland (Rocklea and Springwood) and one site in Gladstone (South Gladstone) during 2014.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

- Queensland's monitoring results for 2014 indicate that the goal of the AAQ NEPM was met for all pollutants at all monitoring stations where there was sufficient data capture to assess compliance, except for sulfur dioxide and PM₁₀ in Mount Isa.
- While industry in Mount Isa has significantly reduced overall emissions of sulfur dioxide to the atmosphere in recent years (through capture and conversion to sulfuric acid), compliance with the NEPM one hour sulfur dioxide standard was unlikely to be achieved under previous regulatory controls. In May 2008 the Queensland Government amended the legislation regulating emissions from the Mount Isa smelters to bring these operations under the stricter controls contained within the *Environmental Protection Act 1994* (EP Act). In December 2011 the government issued an Environmental Authority (EA) to the smelter operator that applies contemporary environmental conditions to the site. Recognising that considerable further work and investment is required before smelter operations can achieve contemporary air quality standards, a Transitional Environmental Program (TEP) under the provisions of the EP Act was developed in April 2012 setting out a staged program of works to bring the site into compliance with NEPM air quality standards by 2016.
- The AAQ NEPM PM₁₀ 24-hour standard (the numerical threshold) was exceeded at Mountain Creek in South East Queensland and in Mount Isa in 2014. Only in Mount Isa did PM₁₀ levels fail to meet the NEPM goal of no more than 5 exceedances in a year. The exceedances in Mount Isa were all caused by windblown dust during dry conditions, with minimal or no contribution from industrial activities. The single exceedance at Mountain Creek was the result of bushfire smoke.
- The AAQ NEPM PM_{2.5} advisory 24-hour standard (the numerical threshold) was exceeded at South Gladstone on one day in 2014 due to bushfire smoke.
- There is no evidence that, on their own, particle emissions from industrial, commercial and domestic activities currently result in ambient concentrations above NEPM standards. However, with increasing motor vehicle use, compliance with the PM_{2.5} advisory standards, particularly the annual average criterion, in the longer term may be difficult to achieve in urban areas like South East Queensland.

2 Prior to 14 February 2015 the Minister for Environment and Heritage Protection was Andrew Powell.

Monitoring results

Data from relevant monitoring stations are presented in tabular form below to enable an evaluation of whether the NEPM standards and goal were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the NEPM. For averaging times shorter than one year, compliance with the NEPM goal is achieved if the standard for a pollutant is exceeded on no more than a specified number of days in a calendar year (one day per year for all pollutants except PM₁₀, which may be exceeded no more than five days per year) and at least 75% of data are captured in each quarter.

The data are presented in greater detail in the Queensland 2014 air monitoring report available at www.qld.gov.au/environment/pollution/monitoring/air-reports.

The monitoring plan for Queensland is available from www.qld.gov.au/environment/pollution/monitoring/air-reports.

The monitoring plan for Queensland is available from www.qld.gov.au/environment/pollution/monitoring/air-reports.

CO

Carbon monoxide

(NEPM standard: 8 hours = 9.0ppm)

Station	Number of exceedences	NEPM goal compliance
South East Queensland		
Woolloongabba	0	Met

NO₂

Nitrogen dioxide

(NEPM standard: 1 hour = 0.12ppm, 1 year = 0.03ppm)

Station	1 hour		1 year	
	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
South East Queensland				
Mountain Creek	0	Met	0.004	Met
Deception Bay	0	Met	0.005	Met
Rocklea	0	Met	0.007	Met
Springwood	0	Met	0.005	Met
Flinders View	0	Met	0.008	Met
Gladstone				
South Gladstone	0	Met	0.005	Met
Townsville				
Pimlico	0	Met	0.004	Met



Ozone

(NEPM standard: 1 hour = 0.10ppm, 4 hours = 0.08ppm)

Station	1 hour		4 hours	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance
South East Queensland				
Mountain Creek	0	Met	0	Met
Deception Bay	0	Met	0	Met
Rocklea	0	Met	0	Met
Springwood	0	Met	0	Met
Flinders View	0	Met	0	Met
Townsville				
Pimlico	0	Met	0	Met



Sulfur dioxide

(NEPM standard: 1 hour = 0.20ppm, 1 day = 0.08ppm, 1 year = 0.02ppm)

Station	1 hour		1 day		1 year	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
South East Queensland						
Springwood	0	Met	0	Met	0.001	Met
Flinders View	0	Met	0	Met	0.000	Met
Gladstone						
South Gladstone	0	Met	0	Met	0.002	Met
Townsville						
Pimlico	0	Met	0	Met	0.001	Met
Stuart	0	Not demonstrated ^a	0	Not demonstrated ^a	0.001	Not demonstrated ^a
Mount Isa						
Menzies	20	Not Met	1	Met	0.005	
The Gap	13	Not Met	0	Not demonstrated ^a	0.004	

^a Not demonstrated due to less than 75 per cent of data in one or more quarters

Pb**Lead**(NEPM standard: 1 year = 0.50µg/m³)

Station	Annual average (µg/m ³)	NEPM goal compliance
Townsville		
Coast Guard	0.29	Met
Mount Isa		
The Gap	Insufficient data	Not demonstrated ^a

^a Not demonstrated due to less than 75 per cent of data in one or more quarters

PM₁₀**Particles as PM₁₀**(NEPM standard: 1 day = 50µg/m³)

Station	Number of exceedences	NEPM goal compliance
South East Queensland		
Mountain Creek	1	Met
Rocklea	0	Met
Springwood	0	Met
Flinders View	0	Met
Gladstone		
South Gladstone	0	Met
Mackay		
West Mackay	0	Met
Townsville		
Pimlico	0	Met
Mount Isa		
The Gap	12	Not met

PM_{2.5} Particles as PM_{2.5}

(NEPM standard: 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 year	
	Number of exceedences	Annual average (µg/m ³)
South East Queensland		
Rocklea ^a	0	5.8
Springwood ^b	0	4.9
Gladstone		
South Gladstone ^a	1	6.0

a monitoring by TEOM Model 1405 instrumentation fitted with Filter Dynamics Measurement System (FDMS)

b monitoring by TEOM Model 1400 instrumentation in accordance with Technical Paper on Monitoring for Particles as PM_{2.5}

Western Australia

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Western Australia by Hon. Albert Jacob MLA, Minister for Environment; Heritage for the reporting year ended 30 June 2015.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia, The National Environment Protection (Ambient Air Quality) Measure is implemented by the Department of Environment Regulation (DER) under the *National Environment Protection Council (WA) Act 1996* and the *Environmental Protection Act 1986*.

Implementation activities may be viewed in two categories:

- those activities related to implementing the monitoring and reporting protocol of the NEPM, plus other activities associated with the 'Future Actions' listed in the NEPM Impact Statement; and
- those activities within Western Australia (including regulatory activities) designed to ensure that the air quality is in compliance with the NEPM goal for each of the six pollutants.

In the first category, the Department of Environment Regulation (DER) has:

- continued to liaise with local governments and other organisations as required to facilitate the positioning and repositioning of fixed ambient monitoring stations.
- maintained monitoring of PM_{2.5} to facilitate the review and potential development of compliance NEPM standards for this pollutant in the future.

In the second category, DER has:

- continued to implement the Perth Air Quality Management Plan (AQMP). The AQMP is a whole of government plan aimed at improving and maintaining Perth's air quality. Implementation of a number of priority actions within the AQMP has commenced in addition to a number of ongoing programs. There continues to be a major focus on managing emissions from motor vehicles and wood heaters, via the CleanRun and BurnWise programs, respectively.
- continued to investigate and trial a number of new monitoring technologies designed to establish a better understanding of the sources and emissions of pollutants and the dispersion of these pollutants in targeted areas. This includes monitoring campaigns that survey air quality in residential and other sensitive areas, particularly where these areas may be impacted by industrial emissions.
- maintained community access to the regularly updated air quality index via DER's webpage (www.der.wa.gov.au/your-environment/air).

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

- The NEPM has provided a focus for air quality issues and driven all jurisdictions to work towards nationally consistent monitoring techniques and reporting. This has culminated in the development and approval of monitoring plans for all jurisdictions, including Western Australia. The NEPM standards and goals provide an additional impetus for the implementation of strategies and a useful benchmark against which air quality management can be assessed.
- Air quality management initiatives implemented in Western Australia have placed the State in a favourable position to achieve compliance with the NEPM goals in most circumstances. Sulfur dioxide and lead have been effectively controlled by industry regulatory means. Carbon monoxide, lead and nitrogen dioxide concentrations comply with the NEPM standards by comfortable margins due to clean fuel quality standards, national vehicle emissions standards and regulatory control of other sources. Ozone and PM₁₀ remain pollutants of concern in the Perth Region and are the focus of attention within the AQMP, particularly the management of domestic PM₁₀ sources. In other regions, PM₁₀ is the pollutant of most significance with respect to the NEPM standards.
- The data presented below, shows that Western Australia has met the NEPM goals for all pollutants in 2014.

Data from relevant monitoring stations are presented in tabular form below to enable an evaluation of whether the NEPM standards and goals were met at each monitoring station. The standards, with accompanying definitions and

explanations, appear in Schedule 2 of the NEPM. For averaging times shorter than one year, compliance with the NEPM goal is achieved if the standard for a pollutant is exceeded on no more than a specified number of days in a calendar year (one day per year for all pollutants except PM₁₀, which may be exceeded no more than five days per year) and at least 75% of data are captured in each quarter.

The data are presented in greater detail in the Annual Western Australia Air Monitoring Report available on the DER web site, along with the West Australian monitoring plan, at www.der.wa.gov.au/your-environment/air.

CO

Carbon monoxide

(NEPM standard: 8 hours = 9.0ppm)

Station	Number of exceedences	NEPM goal compliance
Perth		
North East Metro	0	Met
North Metro	0	Met
South East Metro	0	Met

NO₂

Nitrogen dioxide

(NEPM standard: 1 hour = 0.12ppm, 1 year = 0.03ppm)

Station	1 hour		1 year	
	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Perth				
North Metro	0	Met	0.006	Met
North East Metro	0	Met	0.006	Met
Outer North Coast	0	Met	0.002	Met
South Coast	0	Met	0.004	Met
Outer East Rural	0	Met	0.002	Met
South East Metro	0	Met	0.007	Met
Inner West Coast	0	Met	0.004	Met



Ozone

(NEPM standard: 1 hour = 0.10ppm, 4 hours = 0.08ppm)

Station	1 hour		4 hours	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance
Perth				
North East Metro	0	Met	0	Met
Outer North Coast	0	Met	0	Met
South Coast	0	Met	0	Met
Outer East Rural	0	Met	0	Met
South East Metro	0	Met	0	Met
Inner West Coast	0	Met	0	Met



Sulfur dioxide

(NEPM standard: 1 hour = 0.20ppm, 1 day = 0.08ppm, 1 year = 0.02ppm)

Station	1 hour		1 day		1 year	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Perth						
South Metro	0	Met	0	Met	0.002	Met
South Coast	0	Met	0	Met	0.001	Met
South East Metro	0	Met	0	Met	0.001	Met



Lead

(NEPM standard: 1 year = 0.50µg/m³)

Lead monitoring ceased on 31 December 2001 following the introduction of unleaded petrol. These management initiatives consequently resulted in sustained measurements at analytical limits of detection well below the standard.

PM₁₀ Particles as PM₁₀

(NEPM standard: 1 day = 50µg/m³)

Station	Number of exceedences	NEPM goal compliance
Perth		
North East Metro ¹	1	Met
North Metro ¹	1	Met
South East Metro ¹	0	Met
South-west		
Albany ¹	0	Met
Bunbury ¹	0	Met
Collie ¹	2	Met
Mid-west		
Geraldton ¹	4	Met

¹ Tapered Element Oscillating Microbalance (TEOM) operating continuously (unadjusted for temperature) and includes the manufacturers recommended equivalency factor of 1.03x + 3.00.

PM_{2.5} Particles as PM_{2.5}

(NEPM standard: 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 year	
	Number of exceedences	Annual average (µg/m ³)
Perth		
North East Metro ¹	1	8.1
North Metro ¹	1	7.6
Outer North Coast ¹	2	8.0
South East Metro ¹	2	8.1
South-west		
Bunbury ¹	1	7.8
Busselton ¹	1	7.2

¹—Tapered Element Oscillating Microbalance (TEOM) operating continuously (unadjusted for temperature) and includes the manufacturers recommended equivalency factor of 1.03x + 3.00.

Relationship between location descriptors and monitoring station location/names

Location descriptor	Station location
North East Metro	Caversham
North Metro	Duncraig
Outer North Coast	Quinns Rocks
South East Metro	South Lake

Location descriptor	Station location
Outer East Rural	Rolling Green
South Coast	Rockingham
Inner West Coast	Swanbourne
South Metro	Wattleup

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for South Australia by the Hon. Ian Hunter MLC, Minister for Sustainability, Environment and Conservation, for the reporting year ended 30 June 2015.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

- NEPM goal compliance for daily average PM_{10} was met at all metropolitan and Spencer Gulf monitoring stations this year. This is possibly due to higher than average rain fall especially during April and May (BoM 2014).
- NEPM standards and goals for CO , NO_2 and O_3 were met at all stations.
- The NEPM goal for lead was met at both NEPM monitoring stations in Port Pirie. In Port Pirie, exceedences of the 1-hour SO_2 standard were recorded on 68 occasions on 38 different days. There were 4 exceedences of the 24-hr standard for SO_2 . Therefore, the 1-hour and 24-hour SO_2 standards and goals were not met at Oliver Street station. However there was not an exceedence of the 1-year standard for SO_2 .
- Five new $PM_{2.5}$ monitors will be added onto the monitoring network in preparation for the NEPM variation in relation to $PM_{2.5}$ standard.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Data for South Australia shows that air quality was generally good during 1 January to 31 December 2014. The following observations were made following analysis of monitoring data for this period:

- For CO the standard and goal were achieved at Elizabeth Downs monitoring station.
- For NO_2 the 1-hour and 1-year standards and goals were met at all stations.
- For O_3 the 1-hour and 4-hour standards and goals were met at all stations.
- For SO_2 the 1-hour, 1-day and 1-year standards and goals were met at the Adelaide metropolitan stations. The 1-year standard and goal was met at Port Pirie Oliver Street station, however there were 38 exceedences of the 1-hour and 4 exceedences of the 1-day standards at Oliver Street station so the 1-hour and 1-day goals were not achieved.
- For Pb the goal was achieved at both NEPM monitoring stations in Port Pirie however the EPA along with the Nyrstar smelter is looking for continued reduction in lead emissions and thus a reduction in the health impact on the community.
- For PM_{10} there was 1 exceedence of the standard at Netley, Christie Downs and North Haven monitoring stations on three different days. In the Spencer region, there were 2 exceedences of the standard at Schultz Park and 3 at Oliver Street. The NEPM goal allows for 5 exceedences days per year, therefore the goal was achieved at all stations in both Adelaide metropolitan and Spencer region.
- For $PM_{2.5}$ the advisory reporting standards were met at the Netley and North Haven monitoring stations.

With regard to the SO_2 standards at Oliver Street Port Pirie, a transformation program is being implemented by Nyrstar in which it has reached a binding agreement with the State Government to invest over \$514 million to redevelop the Port Pirie smelter into an advanced polymetallic processing and recovery facility. The application of this technology has a range of environmental benefits which will deliver a significantly improved environmental footprint through reduced emissions profile including for SO_2 .

Data from relevant monitoring stations for the period of 1 January to 31 December 2014 are presented in tabular form below to enable an evaluation of whether the NEPM standards and goal were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the NEPM. For averaging times shorter than one year, compliance with the NEPM goal is achieved if the standard for a pollutant is exceeded on no more than a specified number of days in a calendar year (one day per year for all pollutants except PM_{10} , which may be exceeded no more than five days per year) and at least 75% of data is captured in each quarter.

The data are presented in greater detail in the Air Monitoring Report for South Australia, compliance with the National Environment Protection (Ambient Air Quality) Measure which is available from www.scew.gov.au/resource/national-environment-protection-ambient-air-quality-measure-annual-reporting

CO

Carbon monoxide

(NEPM standard: 8 hours = 9.0ppm)

Station	Number of exceedences	NEPM goal compliance
Adelaide		
ELI01—Elizabeth Downs	0	Met

NO₂

Nitrogen dioxide

(NEPM standard: 1 hour = 0.12ppm, 1 year = 0.03ppm)

Station	1 hour		1 year	
	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Adelaide				
ELI01—Elizabeth Downs	0	Met	0.003	Met
NOR01—Northfield	0	Met	0.006	Met
NET01—Netley	0	Met	0.008	Met
KEN01—Kensington Gardens	0	Met	0.005	Met
CHD01—Christie Downs	0	Met	0.004	Met
NHV01—North Haven	0	Met	0.005	Met



Ozone

(NEPM standard: 1 hour = 0.10ppm, 4 hours = 0.08ppm)

Station	1 hour		4 hours	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance
Adelaide				
ELI01—Elizabeth Downs	0	Met	0	Met
NOR01—Northfield	0	Met	0	Met
NET01—Netley	0	Met	0	Met
KEN01—Kensington Gardens	0	Met	0	Met
CHD01—Christie Downs	0	Met	0	Met
NHV01—North Haven	0	Met	0	Met



Sulfur dioxide

(NEPM standard: 1 hour = 0.20ppm, 1 day = 0.08ppm, 1 year = 0.02ppm)

Station	1 hour		1 day		1 year	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Adelaide						
NOR01—Northfield	0	Met	0	Met	0.000	Met
NHV01—North Haven	0	Met	0	Met	0.000	Met
Spencer						
PTP01—Pt Pirie Oliver Street	38	Not met	0	Not met	0.010	Met

Pb**Lead**(NEPM standard: 1 year = 0.50µg/m³)

Station	Annual average (µg/m ³)	NEPM goal compliance
Spencer		
PTP01—Pt Pirie Oliver Street	0.34	Met
PTP05—Pt Pirie Frank Green Park	0.14	Met

PM₁₀**Particles as PM₁₀**(NEPM standard: 1 day = 50µg/m³)

Station	Number of exceedences	NEPM goal compliance
Adelaide		
ELI01—Elizabeth Downs	0	Met
NET01—Netley	1	Met
CHD01—Christie Downs	1	Met
KEN01—Kensington Gardens	0	Met
NHV01—North Haven	1	Met
Spencer		
WHY07—Whyalla Schultz Park	2	Met
PTP01—Pt Pirie Oliver Street	3	Met

PM_{2.5}**Particles as PM_{2.5}**(NEPM standard: 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 year	
	Number of exceedences	Annual average (µg/m ³)
Adelaide		
NET01—Netley	0	7.4
NHV01—North Haven	0	6.8

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Tasmania by the Hon. Matthew Groom, Minister for Environment, Parks and Heritage for the reporting year ended 30 June 2015

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Tasmania the enabling legislation for the National Environment Protection (Ambient Air Quality) Measure (Air NEPM) process is the *Environmental Management and Pollution Control Act 1994* (EMPCA). The process is implemented primarily through the EPA Division of the Department of Primary Industries, Parks, Water and the Environment (DPIPWE).

National Environment Protection Measures are adopted as state policies under the *State Policies and Projects Act 1993*, and the Air NEPM is put into effect under the Environment Protection Policy (Air Quality) 2004 (Air Policy), the Environmental Management and Pollution Control (Distributed Atmospheric Emissions) Regulations 2007 and the Tasmanian Air Quality Strategy 2006.

The Air Policy includes specific reference to meeting the requirements of the Air NEPM through regulation of industry and management of diffuse sources like planned burning activities. The policy is available on the EPA's website at www.epa.tas.gov.au.

Woodsmoke from domestic wood heaters and from planned burning activities continues to be the primary air quality issue for Tasmania.

In the Tasmanian Air Quality Strategy, published in June 2006, a five-year process to assess compliance with the Air NEPM standards in Tasmania is detailed and strategies for achieving compliance where standards are not being met are specified. The strategy addresses the management of air quality in Tasmania and includes programs to further reduce domestic and industrial emissions of respirable particles in critical regions of the state.

The Environmental Management and Pollution Control (Distributed Atmospheric Emissions) Regulations 2007, gazetted in August 2007, provide a legal framework for programmes to reduce the emission of domestic wood smoke through controls on the import, sale and installation of wood heaters. The regulations also make the emission of excessive smoke from chimneys an offence and they restrict back-yard burning on suburban allotments.

In 2009 the EPA Division established a state-wide network of indicative level air monitoring stations referred to as the BLANKET (Base-Line Air Network of EPA Tasmania) network. During 2014–15 the network consisted of 29 fixed stations, including those co-located with the reference level stations at Hobart, Launceston and Devonport. This network of optical particle monitors, calibrated against reference level instruments, provides real-time information for understanding smoke concentration, movement and dispersal in the greater Tasmanian airshed. Air quality and meteorological data from the BLANKET network are published in near real-time on the EPA's web site.

Since 2009 planned burning activities undertaken by the forestry industry and by the Parks and Wildlife Service have been conducted using the *Coordinated Smoke Management Strategy* (CSMS) administered by the Forest Practices Authority (FPA). The CSMS requires burners to make daily bids for burn units in a given air shed. Bidding is managed by an automated web-based system. The total burn unit allocation is set with reference to meteorological and other considerations. Air quality data from the EPA Division's state-wide BLANKET network is used to facilitate an annual review process to increase the strategy's effectiveness. Monitoring data from the BLANKET network shows that the severity of planned burn smoke impacts has decreased since the implementation of the CSMS. Feedback from the users of the CSMS indicates that their ability to make more informed decisions concerning smoke movement and dispersion is facilitated by the BLANKET air quality monitoring network and the analyses carried out by the EPA Division.

In response to the growing understanding that poor winter-time air quality is widespread in many Tasmanian towns and urban areas, the *Domestic Smoke Management Program* (DSMP), an initiative of the EPA Division was started in 2012. The focus of the program is community education on air quality issues and how smoke emissions from domestic wood heaters can be significantly reduced through proper operation. The DSMP is realised through collaborative projects with local government known as the 'Burn Brighter this Winter' projects. Presently, officers of the EPA Division and from the Northern Midlands Council are working together on the 'Burn Brighter this Winter 2015' project which is focussed in Cressy, Longford and Launceston. The education and information

campaign is backed up with air quality data from nearby BLANkET stations, mobile air quality monitoring and from smoky chimney surveys. These kinds of data enable appropriate information to be conveyed to specific households.

The Tasmanian reference level air monitoring programme operates under an ISO:17025 compliant Quality System and holds NATA accreditation for the daily measurement of $PM_{2.5}$ and PM_{10} using the reference instruments and methods prescribed in the Air NEPM.

A reference level air monitoring station at Devonport was commissioned in December 2012. This station is equipped with gravimetric air samplers for reference measurements of daily averaged $PM_{2.5}$ and PM_{10} particulate concentrations, as well as two Tapered Element Oscillating Microbalances (TEOMs) to provide hourly-averaged $PM_{2.5}$ and PM_{10} data.

A reference level peak carbon monoxide (CO) monitoring station was established in Macquarie Street, Hobart at the end of 2010. Regular monitoring commenced in February 2011, and continued until the stations was decommissioned in February 2013. No exceedences of the NEPM standard for CO were recorded in this interval.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

Particulates ($PM_{2.5}$ and PM_{10})

The Air NEPM has made a significant contribution to improved urban air quality in Tasmania, by raising community awareness of air quality issues and supporting programmes aimed at reducing wood smoke pollution during winter. This has been particularly effective in Launceston, where a combination of a reduction in the number of wood heaters, and improved community co-operation has reduced winter PM_{10} levels, as measured at the Ti-Tree Bend reference monitoring station, over several decades.

Other ongoing programs to reduce the impacts of air pollution in Tasmania, driven at least in part by the Air NEPM and the associated air quality standards and goals, have been introduced in more recent years. These include the *Domestic Smoke Management Program* started in 2012 to address issues related to smoke from domestic wood heaters and the *Coordinated Smoke Management Strategy* established in 2009 to address issues related to smoke from planned burning activities.

Launceston

PM_{10}

No exceedences of the 24 hour PM_{10} standard of $50 \mu\text{g}/\text{m}^3$ were measured in Launceston in 2014. However, due to insufficient data it has not been possible to demonstrate, in accord with the requirements of the Air NEPM, that Launceston met the PM_{10} goal of no more than five exceedences of the PM_{10} standard in 2014.

$PM_{2.5}$

The 24-hour $PM_{2.5}$ advisory reporting standard of $25 \mu\text{g}/\text{m}^3$ was exceeded on 11 days in Launceston in 2014. Overall, the 2013 result is a considerable improvement on the 35 exceedence days observed when $PM_{2.5}$ monitoring was introduced in 2006. The annual average $PM_{2.5}$ concentration of $8.7 \mu\text{g}/\text{m}^3$ in 2014 did not meet the $PM_{2.5}$ advisory standard of less than $8 \mu\text{g}/\text{m}^3$ but is comparable with annual averages obtained in recent years.

Hobart

PM_{10}

Ambient air quality in Hobart continued to meet Air NEPM PM_{10} goal in 2014 with no exceedences of the $50 \mu\text{g}/\text{m}^3$ 24-hour PM_{10} standard. The validated data demonstrates, in accordance with the requirements of the Air NEPM that Hobart met the PM_{10} goal of no more than five exceedences of the PM_{10} standard in 2014.

$PM_{2.5}$

The 24-hour $25 \mu\text{g}/\text{m}^3$ advisory reporting standard for $PM_{2.5}$ was exceeded in Hobart on one occasion in 2014. The annual average $PM_{2.5}$ concentration of $6.7 \mu\text{g}/\text{m}^3$ was similar to that obtained in recent years and met the annual average $PM_{2.5}$ advisory standard of $8 \mu\text{g}/\text{m}^3$ for the seventh consecutive year since $PM_{2.5}$ monitoring started at the New Town station.

Devonport

PM₁₀

Ambient air quality in Devonport continued to meet Air NEPM PM₁₀ goal in 2014 with no exceedences of the 50 µg/m³ 24-hour PM₁₀ standard. The validated data demonstrates, in accordance with the requirements of the Air NEPM, that Devonport met the PM₁₀ goal of no more than five exceedences of the PM₁₀ standard in 2014.

PM_{2.5}

The 24-hour PM_{2.5} concentrations measured in Devonport did not exceed the advisory reporting standard of 25 µg/m³ on any day during 2014. The annual average PM_{2.5} concentration of 6.8 µg/m³ met the advisory standard of 8 µg/m³.

Carbon monoxide

The peak urban CO monitoring site in Macquarie Street, Hobart was closed in February 2013, after almost two years continuous operation. During this period, the highest hourly CO concentration measured at this high traffic CBD site never exceeded 4 ppm and the highest 8 hour average was 1.8 ppm. These data indicate that CO concentrations, generated by urban traffic in Tasmania, are unlikely to exceed the Air NEPM 8 hour CO standard of 9 ppm in the foreseeable future.

Data from relevant monitoring stations are presented in tabular form below to enable an evaluation of whether the NEPM standards and goal were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the NEPM. For averaging times shorter than one year, compliance with the NEPM goal is achieved if the standard for a pollutant is exceeded on no more than a specified number of days in a calendar year (one day per year for all pollutants except PM₁₀, which may be exceeded no more than five days per year) and at least 75% of data are captured in each quarter.

The reference level air quality data for 2014 will be presented in greater detail in the *Air Monitoring Report 2014—Compliance with the National Environment Protection (Ambient Air Quality) Measure*.

The monitoring plan for Tasmania is available from www.epa.tas.gov.au.

CO

Carbon monoxide

(NEPM standard: 8 hours = 9.0ppm)

Station	Number of exceedences	NEPM goal compliance
Hobart		
CBD—Macquarie Street	Station closed February 2013	Not demonstrated

NO₂

Nitrogen Dioxide

(NEPM standard: 1 hour = 0.12ppm, 1 year = 0.03ppm)

Station	1 hour		1 year	
	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Not monitored in Tasmania				



Ozone

(NEPM standard: 1 hour = 0.10ppm, 4 hours = 0.08ppm)

Station	1 hour		4 hours	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance
Not monitored in Tasmania				



Sulphur dioxide

(NEPM standard: 1 hour = 0.20ppm, 1 day = 0.08ppm, 1 year = 0.02ppm)

Station	1 hour		1 day		1 year	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Not monitored in Tasmania						



Lead

(NEPM standard: 1 year = 0.50µg/m³)

Station	Annual average (µg/m ³)	NEPM goal compliance
Monitoring discontinued in 1998		



Particles as PM₁₀

(NEPM standard 1 day = 50µg/m³)

Station	Number of exceedences	NEPM goal compliance
Hobart		
Metro—New Town	0	Met
Launceston		
Metro—Ti Tree Bend	0 Insufficient data	Not demonstrated
Devonport		
Metro—Devonport TAFE	0	Met

PM_{2.5}

Particles as PM_{2.5}
(NEPM standard: 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 year	
	Number of exceedences	Annual average (µg/m ³)
Hobart		
Metro—New Town	1	6.7
Launceston		
Metro—Ti Tree Bend	11	8.7
Devonport		
Metro—Devonport TAFE	0	6.8

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Australian Capital Territory by Mr Simon Corbell MLA, Minister for the Environment for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The ACT's ambient air quality monitoring was performed in accordance with the ACT's monitoring plan, National Environment Protection (Ambient Air Quality) Measure (NEPM), technical papers and ACT Health's National Association of Testing Authorities' accreditation.

The NEPM monitoring network in the ACT consisted of three monitoring stations in 2014 with the new Florey station starting to report data from 28 February 2014.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

Monitoring results demonstrate that the major impacts on Canberra's air quality in 2014, as in previous years, came from the accumulation of combustion particles from wood heaters in winter and hazard reduction burns.

The ACT Government acknowledges that wood smoke from domestic wood heaters is the largest source of air pollution in Canberra and has implemented a range of programs to address it. The monitoring results show that these programs have been effective in reducing wood smoke with particle levels continuing to trend down.

Whilst there were no exceedences of the PM₁₀ standard there were four exceedences of the PM_{2.5} advisory reporting standard measured at Monash. The three exceedences which occurred on 4, 10 and 23 February 2014 can be attributed to smoke coming from a number of hazard reduction burns in NSW, with the exceedence on 3 August 2014 being attributed to domestic wood heater emissions.

Data from relevant monitoring stations are presented in tabular form below to enable an evaluation of whether the NEPM standards and goal were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the NEPM. For averaging times shorter than one year, compliance with the NEPM goal is achieved if the standard for a pollutant is exceeded on no more than a specified number of days in a calendar year (one day per year for all pollutants except PM₁₀, which may be exceeded no more than five days per year) and at least 75% of data are captured in each quarter.

Compliance for the new Florey station has been reported as "ND" (not demonstrated) as it was only commissioned on 28 February 2014 and the minimum data availability requirement of 75% could not be achieved for the first quarter of the reporting year.

The data are presented in greater detail in the *ACT Air Quality Report 2014*, available through www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports.

CO

Carbon monoxide

(NEPM standard: 8 hours = 9.0ppm)

Station	Number of exceedences	NEPM goal compliance
Monash	0	Met
Florey	0	Not demonstrated



Nitrogen dioxide

(NEPM standard: 1 hour = 0.12ppm, 1 year = 0.03ppm)

Station	1 hour		1 year	
	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Monash	0	Met	0.005	Met
Florey	0	Not demonstrated	0.006	Not demonstrated



Ozone

(NEPM standard: 1 hour = 0.10ppm, 4 hours = 0.08ppm)

Station	1 hour		4 hours	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance
Monash	0	Met	0	Met
Florey	0	Not demonstrated	0	Not demonstrated
Civic	0	Met	0	Met



Particles as PM₁₀

(NEPM standard: 1 day = 50µg/m³)

Station	Number of exceedences	NEPM goal compliance
Monash	0	Met
Monash	0	Not demonstrated
Civic	0	Met



Particles as PM_{2.5}

(NEPM standard: 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 year	
	Number of exceedences	Annual average (µg/m ³)
Monash	0	7.1
Monash	0	5.9

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for the Northern Territory by the Minister for the Environment for the reporting year ended 30 June 2015.

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Northern Territory Environment Protection Authority was responsible for implementing the Ambient Air Quality NEPM in the Northern Territory through the provisions of the *Waste Management and Pollution Control Act 1998* and the *National Environment Protection Council (Northern Territory) Act*.

The major pollutants in the Darwin air shed are associated with controlled and uncontrolled bushfire activities in surrounding bushland.

The Northern Territory's ambient air monitoring program is undertaken in accordance with the approved monitoring plan. The administrative frameworks for implementation of the NEPM are in place.

During 2014–15 there were a number of technical issues with NO_x analysers and a TEOM resulting in reduced data for these parameters.

Monitoring in Alice Springs was not conducted during the reporting period. Particulates caused by vegetation burning and in the winter months by household heating have been noted as occasional issues in the area. Particulate levels in winter have declined as natural gas pipelines have been extended throughout the town leading to reduced dependence on wood as a heat source.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

Data from relevant monitoring stations are presented in tabular form below to enable an evaluation of whether the NEPM standards and goals were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the NEPM. For averaging times shorter than one year, compliance with the NEPM goal is achieved if the standard for a pollutant is exceeded on no more than a specified number of days in a calendar year (one day per year for all pollutants except PM₁₀, which may be exceeded no more than five days per year) and at least 75% of data are captured in each quarter.

The data are presented in greater detail in www.ntepa.nt.gov.au/waste-pollution/air

The monitoring plan for the Northern Territory is available from www.ntepa.nt.gov.au/waste-pollution/air

CO

Carbon monoxide

(NEPM standard: 8 hours = 9.0ppm)

Station	Number of exceedences	NEPM goal compliance
Winnellie	0	Met
Palmerston	2	Met



Nitrogen Dioxide

(NEPM standard: 1 hour = 0.12ppm, 1 year = 0.03ppm)

Station	1 hour		1 year	
	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Winnellie	0	Met	0.00278	Met
Palmerston	0	Met	0.00385	Met



Ozone

(NEPM standard: 1 hour = 0.10ppm, 4 hours = 0.08ppm)

Station	1 hour		4 hours	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance
Winnellie	0	Met	0	Met
Palmerston	0	Met	0	Met



Sulfur dioxide

(NEPM standard: 1 hour = 0.20ppm, 1 day = 0.08ppm, 1 year = 0.02ppm)

Station	1 hour		1 day		1 year	
	Number of exceedences	NEPM goal compliance	Number of exceedences	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Winnellie	0	Met	0	Met	0.00043	Met
Palmerston	0	Met	0	Met	0.00059	Met



Lead

(NEPM standard: 1 year = 0.50µg/m³)

Station	Annual average (µg/m ³)	NEPM goal compliance
The Northern Territory does not report on lead as there are no significant sources		

PM₁₀

Particles as PM₁₀

(NEPM standard: 1 day = 50µg/m³)

Station	Number of exceedences	NEPM goal compliance
Winnellie	7	Not met
Palmerston	4	Met

PM_{2.5}

Particles as PM_{2.5}

(NEPM advisory standard: 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 year	
	Number of exceedences	Annual average (µg/m³)
Winnellie	12	8.7
Palmerston	11	8.6

Appendix 3:

Jurisdictional Reports on the Implementation and Effectiveness of the Assessment of Site Contamination NEPM

Commonwealth

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for the Commonwealth by the Hon. Greg Hunt MP, Minister for the Environment, for the reporting year ended 30 June 2015

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Commonwealth implements the NEPM as guidelines under the *National Environment Protection Council Act 1994*.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

The Assessment of Site Contamination NEPM provides a consistent national methodology which is beneficial for achieving agency goals.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for New South Wales by the Hon. Rob Stokes MP, Minister for the Environment and Minister for Heritage (from 24 April 2014 to 2 April 2015) and the Hon. Mark Speakman, Minister for the Environment and Minister for Heritage (from 2 April to 30 June 2015) for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Environment Protection Authority considers the NEPM when making a decision on whether a contaminated site requires regulation under the *Contaminated Land Management Act 1997 (NSW)* and when conducting performance reviews of accredited contaminated site auditors. Overall, the NEPM has improved the efficiency of regulating contaminated sites in NSW.

During the year ending 30 June 2015, the Environment Protection Authority was notified of 32 potentially contaminated sites, finalised 54 site assessments, regulated 8 new contaminated sites and facilitated the remediation of 9 sites under the *Contaminated Land Management Act 1997 (NSW)*.

The Environment Protection Authority verifies that site audits and site audit statements have been undertaken with due regard to the NEPM through its quality assurance program. During the year ending 30 June 2015, accredited site auditors have issued a total of 257 audit statements; 188 statutory audits under the *Contaminated Land Management Act 1997 (NSW)* and 69 non-statutory audits.

The Environment Protection Authority is aware of some implementation issues in relation to applying NEPM criteria for asbestos, lead and benzo[a]pyrene (BaP), and more generally the limited number of Ecological Investigation Levels for contaminants.

The NEPM provides Health Screening Levels for asbestos contamination in soil. However, there is not a National Association of Testing Authorities (NATA) accredited method to determine the concentration of asbestos in soil. This provides challenges for those assessing soil potentially contaminated with asbestos in choosing an appropriate method to determine the concentration of asbestos in soil for comparison against the NEPM Health Screening Levels for asbestos in soil.

Ecological Screening Levels for BaP are considered to be of low reliability and applying the BaP Ecological Screening Levels may lead to an overly conservative approach to site assessment and remediation.

The limited number of Ecological Investigation Levels for contaminants is presenting challenges to efficient assessment of contaminated sites where there is no Ecological Investigation Level provided for common contaminants for example cadmium, manganese and mercury.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The Environment Protection Authority continues to liaise and coordinate with equivalent agencies in other jurisdictions. These relationships were established during the NEPM amendment process and have continued, allowing issues relating to the assessment of land contamination to be consistently managed in all jurisdictions.

The Environment Protection Authority is continuing to update relevant legislative instruments and guidance to incorporate or refer to the amendments.

Further consideration of the practical application of the amended NEPM criteria is likely to improve the effectiveness of the NEPM and the assessment of site contamination in New South Wales.

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for Victoria by the Hon. Ryan Smith, Minister for Environment and Climate Change (until 29 November 2015) and the Hon. Lisa Neville MP, Minister for Environment, Climate Change and Water, for the reporting year ended 30 June 2015

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The transition period to the ASC NEPM finished in May 2014 and there now seems to be widespread acceptance and use of it, in name.

The level of detailed understanding of the document has been a concern, as it appears only specialist scientists are reading the document in any detail.

Initial concerns remain:

- The amendment increased the focus on ecological assessment and consideration but presented fewer values against which to make this assessment. EPA has supported two industry working groups to enable them to better understand the ecological requirements of the NEPM; and begin undertaking research to fill the gaps. In the case of the latter, a research grant was recently obtained by the group to progress work to fill some of these gaps;
- Clarifying where the NEPM ends and other Victorian legislation begins, in particular, OH&S requirements in regard to asbestos. While Victorian agencies have clarified how asbestos should be assessed and managed (OH&S requirements should be met first, then where these do not overlap with the NEPM, the NEPM is implemented), the misconception appears to remain for some practitioners that Victoria accepts the less conservative NEPM requirements; and,
- Flow on implications for other policy areas that had been reliant on the original NEPM approaches and values. For example, there is a discrepancy between what is acceptable to remain on individual sites (for particular land uses) and what is accepted to landfill.

In response Victoria has sought to:

- Remind stakeholders that, the drafters of the document did not assume that its readers would know every element in detail (unless they are a specialist) but that readers would be aware of the content of the document and refer to the sections relevant to their projects as needed. In this way, it is anticipated that more detailed knowledge of the document will build over time.
- Support industry groups wishing to take the lead on rigorously developing values where there are value gaps.
- Determine if a guidance document or information bulletin might be necessary to make clear the asbestos requirements in Victoria. However, it was concluded that such a document would only repeat the WorkSafe requirements and would, thus, be a duplication of existing guidance.
- Clarify its Contaminated Environments Policy Framework in order to better support the implementation of the ASC NEPM.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

The amended NEPM continues to reinforce an existing framework for the management of contaminated sites in Victoria by providing consistent, consolidated guidance on the assessment of site contamination. Some improvements in the consistency of site assessment have resulted from use of the NEPM.

The NEPM amendments were considered likely to involve more detailed site assessments being undertaken in some cases. While these were likely to increase costs during the assessment phase, they were expected to result in overall cost savings for business as a result of more effective, timely and targeted remediation works.

Our experience continues to be that there is no evidence to suggest that the amendment has resulted in any other outcome. Indeed, the amendments to the NEPM continue to be well supported by environmental auditors and others in the site assessment industry, to the extent that there are works underway to develop a National Remediation Framework— this would not be a NEPM itself but would complement the ASC.

As noted, there have been several practical implications arising from the amendments to the NEPM, however, it is considered that continued use of the NEPM by practitioners coupled with ongoing policy development in the areas of waste and contaminated environments will assist in overcoming the issues that have arisen.

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for Queensland by Hon. Dr Steven Miles, Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef³ for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Department of Environment and Heritage Protection (EHP) is the central administering authority for contaminated land in Queensland under the *Environmental Protection Act 1994* (EP Act).

Changes to the way contaminated land is assessed and managed in Queensland are expected to commence on 30 September 2015 as part of a reform agenda initiated by EHP. The upcoming legislative changes to come into effect are part of the *Environmental Protection and Other Legislation Amendment Act 2014* (EPOLA) passed by Parliament on the 7 November 2014.

The changes will affect those people or organisations seeking to investigate, manage or clean up contamination under the *Environmental Protection Act 1994*, including those who wish to request a change to the status of land listed on the Environmental Management Register (EMR) or Contaminated Land Register (CLR).

The EPOLA amends the contaminated land provisions in the *Environmental Protection Act 1994* to clarify and simplify the requirements for the management of contaminated land and to require the mandatory certification of contaminated land investigation documents by an approved auditor.

The EPOLA completely restructures the contaminated land provisions, which are contained in chapter 7, part 8 of the *Environmental Protection Act 1994*. This enables a modernisation of legislative provisions and better integration of contaminated land requirements with the rest of the *Environmental Protection Act 1994* to assist EHP and the regulated community to better understand what is required for the proper management of contaminated land.

This restructure was necessary in order to require the mandatory certification of contaminated land investigation documents, which includes site investigation reports, validation reports and draft site management plans or draft amended site management plans, by an approved auditor before being submitted to EHP.

Previously, certification by an approved auditor was voluntary. This new approach now gives approved auditors, who are the experts in the field, responsibility for ensuring that contaminated land investigation documents meet the standard required to achieve good environmental outcomes.

The requirements and benefits of this new approach:

- supports the development of a more agile service delivery model for providing contaminated land technical assessment services to the construction industry;
- allows for further efficiencies to be achieved by facilitating involvement of the auditor at all stages of the project to fine tune the remediation and validation activities;
- internalises the costs of the technical assessment of contaminated land investigation documents in the development project (the user-pays principle) rather than those costs being borne by the community at large; and
- allows for market flexibility in providing appropriately qualified and experienced technical staff in response to demand for the technical assessment of contaminated land investigation documents.

The auditor's certification must verify that the contaminated land investigation document has met the regulatory content requirements which include a statement of uses or activities for which the site is suitable. This change complements the changes made to the Sustainable Planning Regulation 2009 (SP Regulation) in July 2014. Under Schedule 18 of the SP Regulation a compliance permit must be obtained from an approved auditor before carrying out specific high-risk land use changes on contaminated land.

The amendment act also allows EHP to recover its costs in circumstances where it is required to carry out those functions (for example in circumstances where an appropriately approved auditor is unavailable).

3 Prior to 14 February 2015 the Minister for Environment and Heritage Protection was Andrew Powell.

EHP will:

- continue to decide on draft site management plans (or draft amended site management plans) which have been certified by an approved auditor;
- update the Environmental Management Register (EMR) or Contaminated Land Register (CLR) based on auditor certified contaminated land investigation documents which comply with regulatory requirements; and
- oversee auditor appointment and performance.

Previous contaminated land reforms

In 2001, the former Environmental Protection Agency introduced a voluntary third party reviewer (TPR) process for reports on contaminated land assessment, management and remediation. The TPR requirement was an administrative measure and had no statutory basis in the *Environmental Protection Act 1994*. However, the department did require the use of TPRs for reports assessed and conditioned via development approvals under the *Sustainable Planning Act 2009*.

On 31 March 2013, the *Environmental Protection (Greentape Reduction) and Other Legislation Amendment Act 2012* (Greentape Reduction Act) commenced and established a statutory framework for the approval and regulation of auditors under section 567 of the *Environmental Protection Act 1994* replacing the Third Party Reviewers (TPRs) administrative system with the contaminated land auditor statutory framework.

Since implementation of the suite of regulatory reforms in 2013, EHP has approved 17 contaminated land auditors in Queensland establishing a market driven pool of technical specialists.

The following relevant operational data estimates associated with NEPM implementation were collected in the reporting period 2014–15:

- 117 site assessment and validation reports, many involving multiple sites, were reviewed for compliance with NEPM Sections 7 (1) and (2) prior to statutory decisions regarding Environmental Management Register and Contaminated Land Register (EMR/CLR) status of the subject land.
- EHP has appointed 8 contaminated land auditors, this year, through mutual recognition on the basis of approvals held in other jurisdictions for a total of 17 auditors. These auditor applications are assessed by an EHP approved technical panel who are engaged to review contaminated land auditor applications on behalf of EHP.
- 151 applications were forwarded to EHP, one under the *Sustainable Planning Act 2009*, 150 applications via the State Assessment and Referral Agency process, (42 new applications and 108 amendment applications) involving conditions for contaminated land issues relating to material change of use or lot reconfiguration of contaminated or potentially contaminated land.
- There were 21 information requests for additional site assessment information.
- 159 sites were finalised as being adequately assessed according to the NEPM, decontaminated, and removed from the EMR.
- 83 Site Management Plans were issued for development or use of a site, including those that were assessed and partially decontaminated with management of residual contamination for restricted land uses.
- 165 permits were issued for the transport and disposal of contaminated soil in accordance with NEPM Section 6 (4).

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The NEPM (and the amended NEPM) is a central reference document for the assessment of site contamination in Queensland, supported by Queensland's guidelines on contaminated land and, in instances of surface and groundwater contamination, the Environmental Protection Water Policy 2009. Its use is well established in contaminated land practices, leading to effective and practical site and development outcomes.

The use of the NEPM by contaminated land practitioners has been recognised by EHP through the provisions of the operational policy and guidelines relating to the assessment and management of contaminated land. All applications to EHP for statutory decisions about site contamination and changing the status of land on the EMR/CLR must demonstrate compliance with the current NEPM. This was strengthened by the introduction of the prescribed criteria under section 115C of the Environmental Protection Regulation 2008, which has been used by approved auditors to evaluate if a report or plan can be certified by the auditor. These prescribed criteria were structured to ensure that all relevant issues are considered as part of a site assessment, remediation and management to measure compliance with best practice standards.

As part of the EPOLA 2014 legislative changes expected to come into effect from 30 September 2015, section 115C of the Environmental Protection Regulation 2008 will be replaced by section 389 of the *Environmental Protection Act 2008*. In particular, section 389 (2) (iv) states that a contaminated land investigation document must include the extent to which the assessment of the land is in accordance with the contaminated land NEPM.

The NEPM as it stood in its 1999 form was used as an effective technical basis for site assessment for contaminated site professionals operating in Queensland. The amended NEPM took effect on 16 April 2013. Queensland moved to immediately implement the amended NEPM, which was possible because the statutory approvals process in Queensland is applied once works (or stages of works) are completed. References to the amended NEPM are in full use in Queensland on the basis that all submissions must reflect best practice at the time of submission.

The introduction of the amended NEPM has addressed previous limitations around adequate guidance for selected types of contamination affecting terrestrial ecosystems, vapour flux, aesthetic and management impacts of petroleum hydrocarbon compounds and fragments of cement bonded asbestos, issues commonly encountered on contaminated sites. Statutory approval conditions related to land development require current NEPM adherence. The quality control procedures applied by EHP in internal review of assessment reports involve a review of the practitioner's adherence to the current NEPM.

The establishment and implementation of the contaminated land auditor approval framework has successfully led to the certification of 17 auditors. The selection and approval of the persons to be auditors has been based on Schedule B9 of the amended NEPM. In addition, the acceptance of accredited auditors from other Australian jurisdictions continues to provide an additional check of consistency between Queensland and other Australian jurisdictions.

Instances where Queensland has experienced less than ideal effectiveness of the NEPM relate primarily to assessment of groundwater contamination. Under the Environmental Protection (Water) Policy 2009 (Water EPP), all Queensland waters including groundwater have prescribed environmental values and water quality objectives. These include site specific environmental values and water quality objectives for many waters, including groundwater, in schedule 1 of the Water EPP and default values and objectives for other waters under section 6 (2) of the policy. These include protection of aquatic ecosystems, farm supply, irrigation, stock-water, drinking use, human consumption of aquatic food, industrial use, recreational use, and cultural and spiritual use. Public amenity and safety are also environmental values prescribed under the *Environmental Protection Act 1994* (EP Act) that may be adversely affected by contaminated groundwater. Breach of prescribed water quality objectives constitutes environmental harm, that depending upon its scale, location and circumstance may attract significant penalty.

The amended NEPM in some cases, most likely through a lack of clarity, has created some inconsistency with the Queensland environmental legislation when dealing with contaminated groundwater. This creates issues and inefficiency for the regulatory agency and practitioners. Examples are:

- Groundwater investigation levels for drinking water in NEPM schedule B1 acknowledge health effects but omit aesthetic criteria adopted for drinking water under the National Health and Medical Research Council 2011 drinking water guidelines. Aesthetic quality of drinking water resources, for example taste and odour effects from hydrocarbon fuel contamination, is however protected under the Water EPP. Some practitioners omit aesthetic considerations from their assessments and create inconsistency with the Water EPP.
- Groundwater investigation levels listed for marine and freshwaters in NEPM schedule B1 exclude interim trigger levels for many toxicants under ANZECC (2000) section 8.3.7. These trigger levels and the risk based decision trees supporting them are adopted under the Water EPP. Having blank entries in schedule B1 for these contaminants leads some practitioners to omit these contaminants of potential concern from their assessments and create inconsistency with the Water EPP.
- Difficulty with the NEPM concept of "realistic future use" of groundwater occurs as some practitioners do not focus on inherent capacity of the aquifer to support future use, such as whether the aquifer is not excessively saline or radioactive. Rather, some practitioners interpret realistic future use as existence of an established bore on nearby lands or hazard a guess as whether an adversely impacted off-site occupier is likely to install a bore. Potential viable uses of Queensland ground waters are protected under the Water EPP, irrespective of an intention by a current occupier to use the water for a prescribed protected use.
- Although the ANZECC (2000) national water quality guidelines and National Health and Medical Research Guidelines (2008) for recreation are mentioned in schedule B6, some practitioners focus on groundwater investigation levels in NEPM schedule B1, which do not account for stock watering or recreation, such as filling swimming pools with groundwater as occurs in many Queensland rural areas.

- A relatively common type of incident that occurs in marine and estuarine areas is leakage of diesel from underground fuel storage tanks and dispensing infrastructure to groundwater in marina, port and riverside locations. The diesel groundwater contamination typically discharges into marine and estuarine environments via seepage. The ANZECC (2000) national water quality guidelines provide toxicity ranges for diesel in terms of total petroleum hydrocarbons for fish, crustaceans, molluscs, annelids and algae and recommend derivation of trigger values 100 times less than these toxicities. The NEPM provides no specific groundwater investigation levels in respect of such fuel spills affecting waterways. Also, the recommended equivalent analytical test in the NEPM, total recoverable hydrocarbons, has limits of reporting for waters for equivalent carbon fractions of between 25 and 100 µg/L, concentrations that exceed the recommended trigger levels.

It is considered that clarification of these issues in any future revision of the NEPM would assist jurisdictions and practitioners.

An emerging issue in Queensland is contamination of groundwater and sediments with perfluorinated compounds such as PFOS and PFOA, primarily from firefighting training activities. These compounds are considered persistent organic pollutants and are not specifically addressed by the NEPM. The contamination of groundwater can be widespread, and affect receptors not typically addressed in the NEPM such as use of water for agriculture, swimming pool filling, and stock watering. Inclusion of advice for these contaminants and likely impacts in future updates of the NEPM would be highly desirable.

Western Australia

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for Western Australia by Hon. Albert Jacob MLA, Minister for Environment; Heritage for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

- The Department of Environment Regulation (DER) is responsible for regulating the assessment of site contamination in Western Australia under the *Contaminated Sites Act 2003* (CS Act) and the Contaminated Sites Regulations 2006.
- The Department published updated technical guidance in 2014 which references the updates to the NEPM in 2013 and provides additional clarification and guidance on implementation of the NEPM in Western Australia.
- The NEPM and other relevant technical guidelines are taken into account by DER in regulating contaminated sites, by contaminated sites auditors when conducting site audits, and by environmental consultants when assessing the risk to human health and the environment from known and suspected contaminated sites.
- During the year ended 30 June 2015, 151 known or suspected contaminated sites were reported to DER compared with 152 in the previous year. In the same period, DER received 54 audit reports related to contaminated sites. These reports were submitted to comply with conditions imposed under a written law, generally a Ministerial or planning condition, or as part of the investigation or remediation of a known or suspected contaminated site.
- Compliance with the NEPM and departmental guidelines is assessed in the site classification/ reclassification process under the CS Act. The Department classified 397 sites (including reclassifications) during the year, bringing the total number of classified sites to 3039. As of 30 June 2015, 737 of these sites were listed on the public contaminated sites database and require remediation or restrictions on the use of the land and/or groundwater.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

Environmental consultants and auditors operating in Western Australia are now consistently referring to the NEPM as their primary source of technical guidance on site assessment. DER has published additional guidance to assist practitioners when site conditions are outside the conditions or range contemplated in the NEPM (for example application of the NEPM ecological investigation levels at sites affected by acid sulfate soils and acid and metalliferous mine drainage). An overall increase in the quality of reports submitted by environmental consultants has been observed by DER since the variation of the NEPM in 2013.

To ensure that the NEPM continues to provide authoritative guidance where site contamination has occurred, it is important that the guidance is periodically reviewed in the context of advances in scientific knowledge and updated technical information. The maintenance of relevant material in the NEPM Tool Box will assist in promoting a nationally consistent approach to emerging issues.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for South Australia by Hon. Ian Hunter MLC for the reporting year ended 30 June 2015.

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Environment Protection Authority (EPA) is responsible for administering the implementation of the Assessment of Site Contamination NEPM (the NEPM) in South Australia.

In South Australia, site contamination is managed through a legislative framework established under the *Environment Protection Act 1993* (the Act). The principles of the NEPM have been and are continued to be introduced into guidelines, licence conditions and advice issued by the EPA.

Selected technical guidelines are guidelines prescribed under the Act and must be taken into account in the regulation, auditing and assessment of site contamination by relevant persons including site contamination auditors and consultants.

During the 2014–15 reporting period, the EPA recorded 108 notifications of site contamination that affects or threatens underground water on the Public Register, required to be kept by the EPA under the Act. In the same period, the EPA recorded 22 audit reports.

As of 30 June 2015, there were 26 site contamination auditors accredited by the EPA.

The EPA provides written and verbal guidance and information in respect to site contamination and the NEPM, to accredited auditors, site contamination consultants, planning authorities, peak industry groups and the community.

Guidance which describes the NEPM is available to the public from the EPA website.

An index of information on site contamination notifications and audit reports is also available to the public on the EPA website.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

The ongoing implementation of the NEPM will continue to greatly improve the reliability and quality of assessments being undertaken, which is already being observed by the EPA in assessment reports submitted to the EPA. This will be instrumental in achieving the NEPM purpose and desired environmental outcomes in South Australia.

The EPA has progressed the development of revised guidelines to support the NEPM, following its amendment in 2013. The EPA is also progressing the development of an Environment Protection Policy (EPP) under section 29 of the *Environment Protection Act 1993* to give effect to the amended NEPM.

The EPA has also developed a proposed approach requiring certain site contamination reports being provided to the EPA or to planning authorities to be prepared or reviewed by a certified site contamination assessment practitioner by 1 July 2016. It is expected this will provide greater confidence for people, who need to rely on the outcomes of site contamination reports, that site contamination consultants who carry out assessment and remediation works and prepare site contamination reports have the necessary level of knowledge, expertise and skills.

Of the 26 site contamination auditors currently accredited by the EPA, 23 have been granted accreditation through the mutual recognition process. The national harmonisation of auditor accreditation requirements, consistent with Schedule B9 of the NEPM, would ensure a consistent technical standard across all jurisdictions and provide benefits to future applicants through improved application processes.

The NEPM addresses a complex and multi-disciplinary area that is particularly subject to new developments in scientific knowledge and technology, for example soil vapour. The NEPM includes an inbuilt review process and the active and ongoing review of the NEPM is considered essential to ensure that it continues to:

- incorporate new scientific knowledge and updated technical information
- maintain credibility as the premier and authoritative source of technical guidance on health and environmental outcomes related to site contamination in Australia, and
- provide increased certainty that human health and the environment are adequately protected.

National support for the jurisdictional regulatory bodies responsible for implementing the NEPM needs to be maintained, to ensure that any issues arising prior to the required 10 year review of the NEPM, can be appropriately identified and addressed.

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for Tasmania by the Hon. Matthew Groom MP, Minister for Environment, Parks and Heritage for the reporting year ended 30 June 2015.

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The amended National Environment Protection (Assessment of Site Contamination) Measure (NEPM) automatically became a state policy in Tasmania under the *State Policies and Projects Act 1993* following its registration on the Federal Register of Legislative Instruments in the last NEPM reporting period. The NEPM is implemented in the following ways:

- Where a notice issued under the *Environmental Management and Pollution Control Act 1994* requires that an environmental site assessment is undertaken in accordance with the NEPM, the amended NEPM must be used.
- Through the requirement in legislation that any reports received under the Environmental Management and Pollution Control (Underground Petroleum Storage Systems) Regulations 2010 comply with the NEPM. UPSS Guidance for Decommissioning of storage systems was revised to bring it in line with the assessment approach provided by the amended NEPM; compliance with the guidance is mandatory under the regulations. UPSS Guideline 1 provides a list of required report content. UPSS Guideline 2 relates to sampling and risk assessment and provides minimum sampling numbers.
- Non statutory reports received by the EPA Division for purposes such as to satisfy Planning Authority requirements prior to redevelopment must also comply with the NEPM.
- The requirement to comply with the NEPM is further enhanced through the Director, Environment Protection Authority's decision to only accept contaminated site reports for review where they have been provided by a consultant who is certified under Site Contamination Practitioners Australia. Such consultants have passed a selection process where demonstration of their technical capabilities has been proven.
- Measures to ensure stakeholders are well informed in relation to the content of the NEPM are ongoing.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

The NEPM has provided highly useful guidance to professional practitioners in the field of site contamination assessment. The variation of the NEPM has increased its effectiveness as it takes account of recent developments in the field, particularly in relation to assessment of asbestos contamination and hydrocarbon vapour intrusion, and clarifies certain aspects of the NEPM that have not been consistently applied by environmental practitioners. Future variations could usefully focus on expanding the advice available in relation to volatile organic chlorinated compounds.

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for the Australian Capital Territory by Mr Simon Corbell MLA, Minister for the Environment for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

As a result of recent structural changes within the ACT Government Access Canberra (which includes the role of the Environment Protection Authority), within the Chief Minister, Treasury and Economic Development Directorate, is now responsible for the implementation and administration of the amended National Environment Protection (Assessment of Site Contamination) Measure (the NEPM). The Environment and Planning Directorate (EPD) continues to be responsible for the development of legislation and policy to ensure the NEPM is appropriately implemented in the ACT.

The provisions of the NEPM are implemented under the *Environment Protection Act 1997* (the Act). The Contaminated Sites Environment Protection Policy (EPP), made under the Act, is the primary policy document for the assessment and management of contaminated land in the ACT. The EPP references the NEPM as the key resource for assessing contaminated land in the ACT.

EPD has undertaken the necessary legislative and administrative steps required to fully implement the NEPM in the ACT. All site contamination assessments undertaken in the ACT must now be undertaken in accordance with the amended NEPM.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The use of the NEPM as the primary reference tool for contaminated land assessment has ensured a consistent and effective approach to site assessment across the ACT.

Whilst some elements of the amended NEPM continues to spark discussion between regulators and practitioners in relation to technical issues, practitioners in the ACT have generally embraced the more contemporary guidance.

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for the Northern Territory by the Minister for the Environment for the reporting year ended 30 June 2015.

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

- In the reporting period of 1 July 2014 to 30 June 2015 the Northern Territory Environment Protection Authority (NT EPA) has continued to implement the Assessment of Site Contamination National Environment Protection Measure (ASC NEPM) through the ongoing development of a framework for contaminated sites assessment and remediation which includes a guideline, flow chart and policy development. The NT EPA is also considering the development of a guideline for the assessment of former mango orchards, banana plantations and market gardens.
- The NT EPA has utilised the environmental audit program notice provisions of the *Waste Management and Pollution Control Act 1998* to require a number of parties to conduct audits in accordance with the ASC NEPM where it has been required. Voluntary investigations and remediation of contaminated sites are also conducted in accordance with the ASC NEPM.
- These strategies have been identified as key drivers to further develop the understanding of the ASC NEPM and contaminated land assessment, remediation and auditing requirements within the NT. The development of these strategies will assist both internal and external parties to have a clear and united understanding of guidelines, processes and procedures that are required in the assessment of contaminated sites.
- Asbestos, perfluorocarboxates (PFOS and PFOA), herbicides and pesticides (including Mirex) have been identified as emerging contaminants of concern in the NT.
- Asbestos is being addressed through the implementation of an interagency asbestos committee, ongoing development of an asbestos register, and ongoing development of NT EPA's position in relation to response and assessment of contaminated sites. There has also been collaboration between the NT EPA and Commonwealth agencies regarding asbestos containing buildings and soils and management and assessment of these sites.
- PFOS/PFOA contamination has been identified on Commonwealth and former Commonwealth managed sites in relation to historical fires and firefighting training. There has been collaboration in regards to assessment, remediation, treatment and disposal of material off-site with the NT EPA and the Commonwealth departments.
- Herbicides and pesticides (including Mirex—defined as a Persistent Organic Pollutant) have identified as potential contaminants associated with mango orchards, banana plantations and market gardens within the NT.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

- The ASC NEPM has allowed for the 'level playing field' for site contamination assessment and remediation to be established in the NT. It ensures that all parties are aware of their requirements and responsibilities within the site assessment and remediation process, and assists in developing clean-up end points in relation to potential risk to environmental receptors and human health.
- Further implementation of the ASC NEPM within the NT is required to ensure that all parties are clearly aware of all requirements outlined within the ASC NEPM. It has been identified that many external parties still do not understand the requirements of the NEPM in particular to rural land development. This will be achieved through the continuing development of the strategies mentioned in Part 1 and further community consultation of the strategies.

Appendix 4: Jurisdictional Reports on the Implementation and Effectiveness of the Diesel Vehicle Emissions NEPM

Commonwealth

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for the Commonwealth by the Hon. Greg Hunt MP, Minister for the Environment, for the reporting year ended 30 June 2015

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The National Environment Protection (Diesel Vehicle Emissions) Measure (Diesel NEPM) is supported by the following Commonwealth legislative, regulatory and administrative framework:

- Australian Design Rules (ADRs) under the *Motor Vehicle Standards Act 1989*
- *Fuel Quality Standards Act 2000* (the Act) and fuel quality standards
- fuel tax credit arrangements.

The Commonwealth monitors fuel quality at all stages of the fuel supply chain to ensure it complies with the Act. The objects of the Act are to:

- a) regulate the quality of fuel supplied in Australia in order to:
 - i. reduce the level of pollutants and emissions arising from the use of fuel that may cause environmental and health problems; and
 - ii. facilitate the adoption of better engine technology and emission control technology; and
 - iii. allow the more effective operation of engines; and
- b) ensure that, where appropriate, information about fuel is provided when the fuel is supplied.

In 2014–15, authorised fuel inspectors visited 432 sites and tested 1 425 samples for compliance with the Act. The Department monitored three injunctions including one enforceable undertaking, as a result of compliance action undertaken in previous years.

A statutory review of the *Fuel Quality Standards Act 2000* commenced in June 2015, and is due to report by late 2015. The review seeks to determine the efficiency, effectiveness and appropriateness of the Act in achieving its objects, and advise on options for improvement. Further information on the review is available from www.environment.gov.au/protection/fuel-quality/legislation/review-2015/

The Commonwealth's vehicle fleet is relatively new and well maintained with servicing on vehicles conducted according to manufacturer's specifications and at specified frequencies.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

The Commonwealth considers the Diesel NEPM to be a component of the broader framework to manage emissions. While the Commonwealth has no airshed responsibilities in regard to NEPM goals, considerable progress has been made toward achieving these goals through national initiatives including the ADRs and fuel quality standards.

The Commonwealth is making strong progress towards reducing emissions from in-service diesel vehicles through:

- ongoing administration of the *Fuel Quality Standards Act 2000* and the *Motor Vehicle Standards Act 1989*;
- proper maintenance and management of its diesel fleet; and
- provision of the fuel tax credit to encourage proper engine maintenance and use of cleaner diesel engine vehicles.

Other programs

The Commonwealth utilises a variety of actions to reduce emissions from diesel vehicles, including:

- offsetting fuel emissions through Greenfleet
- selecting vehicles with Green Vehicle Guide ratings above a certain minimum level
- replacement of six cylinder and above vehicles with four cylinder vehicles
- replacement of fleet diesel vehicles with hybrid vehicles
- Environmental Driver Training Programs which cover issues such as harsh braking, engine over-revving, idling and economical driving
- installation of diesel particulate filters
- tracking and analysis of fuel usage to minimise wastage
- implementation of a tyre pressure standard to ensure line haul vehicles' tyre pressure is maintained to the manufacturer's specifications
- driver training in the safe and efficient operation of vehicles
- installation of new technology, such as aerodynamic scoops for rigid trucks and prime mover vehicles
- trialling of low-rolling resistant tyres and cleaner more energy efficient diesel.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for New South Wales by the Hon. Rob Stokes MP, Minister for the Environment and Minister for Heritage (from 24 April 2014 to 2 April 2015) and the Hon. Mark Speakman, Minister for the Environment and Minister for Heritage (from 2 April to 30 June 2015) for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The *Protection of the Environment Operations Act 1997 (NSW)* and the Protection of the Environment Operations (Clean Air) Regulation 2010 (NSW) provide the regulatory framework for action to address emissions from the in-service diesel fleet.

In October 2011, the Commonwealth Department of the Environment, formerly the Department of Sustainability, Environment, Water, Population and Communities, advised New South Wales Roads and Maritime Services (RMS) that as the National Environment Protection (Diesel Vehicle Emissions) Measure (NEPM) Funding Agreement had expired, NEPM projects were to be placed on hold and no further funds were to be expended while the Commonwealth Department of the Environment considered options for dealing with the unspent funds.

By 30 June 2015, Roads and Maritime Services had not received any further information regarding the Funding Agreement and as a result all NEPM projects remain on hold.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

In New South Wales, the Environment Protection Authority and the Roads and Maritime Services continue to implement a range of New South Wales Government funded programs to reduce diesel emissions. In 2014–15, New South Wales continued the Smoky Vehicle Program and the Clean Machine (non-road diesel) program, which retrofitted particle filters to older non-road diesel plant and equipment, and expanded the Clean Fleet Program.

New South Wales diesel fleet profile

Diesel vehicles as a percentage of total New South Wales vehicle fleet

Roads and Maritime Services registration data show that the proportion of diesel vehicles in the fleet constituted 18.56 per cent of the total New South Wales fleet at 30 June 2015 (see Table 1 below). This is compared to 17.3 per cent in 2014, 15.9 per cent in 2013 and 14.6 per cent in 2012.

Roads and Maritime Services registration data indicate that, between June 2014 and June 2015, the number of diesel vehicles registered in New South Wales increased by 88,550 or 10.1 per cent. Off-road passenger vehicles increased by 10.5 per cent over the previous year and constitute the largest sector of the diesel fleet at 37.51 per cent. Light commercial vehicles account for 35.62 per cent of the diesel fleet. Together, these categories account for 73.13 per cent of the total diesel fleet in New South Wales. Table 2 shows changes in diesel vehicles by category between June 2014 and June 2015.

Table 1: Diesel vehicles by category as a proportion of the total fleet and diesel fleet

Diesel vehicles (%)									
New South Wales June 2015	Passenger vehicles	Off-road passenger vehicles	Light commercial vehicles	Heavy trucks	Prime movers	Small buses	Buses	Other	Total
Diesels in total New South Wales fleet	2.08	6.96	6.61	1.74	0.37	0.18	0.24	0.37	18.56
Vehicles by category in diesel fleet	11.22	37.51	35.62	9.39	2.0	0.97	1.28	1.99	100

Source: Roads and Maritime Services registration data (June 2015).

Note: Calculations exclude both light and heavy registered trailers.

Table 2: Change in diesel vehicles by category

Vehicle type	No. of diesel vehicles		Change	Percentage change (%)	Proportion of total decrease (%)	Proportion of total increase (%)
	Jun 14	Jun 15				
Passenger Vehicles	95742	108330	12,588	13.15%		14.22%
Off-Road Passenger Vehicles	327710	362093	34,383	10.49%		38.83%
People movers	7792	8429	637	8.18%		0.72%
Small Buses	9127	9402	275	3.01%		0.31%
Light Trucks	306327	343854	37,527	12.25%		42.38%
Light Plant	1962	1852	-110	-5.61%	-0.12%	
Buses	12141	12388	247	2.03%		0.28%
Heavy Trucks	88516	90635	2,119	2.39%		2.39%
Prime Movers	18724	19320	596	3.18%		0.67%
Heavy Plant	4177	4002	-175	-4.19%	-0.20%	
Other	4511	4,974	463	10.26%		0.52%
Total	876729	965279	88,550	10.10%		

Source: Roads and Maritime Services registration data (June 2015).

Diesel vehicles emissions estimates

Diesel vehicles made up 18.56 per cent of the total New South Wales fleet as at 30 June 2015, however, they contribute disproportionately to the amount of air pollution produced by on-road mobile sources.

On-road mobile sources contribute approximately 62 per cent NO_x and 13 per cent of particle emissions of PM_{10} from all anthropogenic sources in the Sydney⁴ region.

Based on projections from the 2008 Air Emissions Inventory for the New South Wales Greater Metropolitan Region, diesel vehicles currently contribute approximately 49 per cent of NO_x and 32 per cent of particle emissions (as PM_{10}) from all on-road mobile sources in the Sydney region.

The New South Wales total diesel vehicle kilometres travelled are increasing due to both the underlying total fleet vehicle kilometres travelled growth, and a trending increase in proportion of diesel vehicles in the fleet.

With the exception of NO_x emissions for the light vehicle fleet, the total per kilometre PM_{10} and NO_x exhaust emissions from diesel vehicles are predicted to fall significantly from 2011 to 2021, following the introduction of more stringent vehicle emissions regulations combined with fleet turnover.

- For both light and heavy duty diesels, the predicted reductions in PM_{10} emission rates are larger than the rate of increase in vehicle kilometres travelled (VKT), resulting in decreasing total PM_{10} emissions from the diesel fleet.
- For heavy duty diesel vehicles, NO_x emissions are predicted to decrease from 2011 to 2021 in spite of projected increases in vehicle kilometres travelled.
- For light diesel vehicles, a very strong increase in the proportion of diesel vehicles is projected, resulting in large increases in both absolute NO_x emissions, and the percentage contribution to total vehicle fleet emissions.

Smoky vehicles program

In New South Wales, it is an offence for a vehicle to emit excessive air impurities for a continuous period of more than 10 seconds. In 2014–15 authorised officers issued 78 penalty notices (an average of 6 per month) to the registered owners of diesel vehicles emitting excessive air impurities.

4 'Sydney region' is as defined in the Air Emissions Inventory for the New South Wales Greater Metropolitan Region in New South Wales, which can be found on the Environment Protection Authority's website www.epa.nsw.gov.au/air/airinventory.htm.

Prosecutions may also occur, usually where a person issued with a penalty infringement notice elects to have the matter heard before a court, or where a smoky vehicle has previously been observed by an authorised officer on a number of occasions. In 2014–15 there were 26 prosecutions, all involving diesel vehicles.

The public may also report smoky vehicles via the Environment Protection Authority's Environment Line, website, or the newly developed mobile phone application. An average of 126 smoky vehicle reports are received each month from the public (1,508 public reports over the year), indicating a high level of awareness in the community of the unacceptability of excessive visible emissions.

In 2014–15, the Environment Protection Authority issued 423 advisory letters to diesel vehicle owners based on public reports.

In 2014–15, the Environment Protection Authority issued 12 Defective Vehicle Notices to the owners of diesel vehicles that were observed by members of the community as excessively smoky. A Defective Vehicle Notice requires the vehicle owner to carry out any necessary repairs so that the vehicle no longer emits excessive smoke and to provide evidence to the Environment Protection Authority that those repairs were carried out. Failure to provide evidence that the vehicle is no longer emitting excessive smoke may result in the vehicle registration being suspended. Four of these were returned with evidence of subsequent repair. The Environment Protection Authority suspended 8 vehicle registrations, 5 of these were returned with evidence of repair.

Annual statistics for smoky diesel vehicles

Table 3 shows a breakdown of the percentage of diesel vehicle owners that received fines, advisory or warning letters as a proportion of all vehicles fined.

Table 3: Smoky vehicles: actions taken

	July 05–June 06	July 06–June 07	July 07–June 08	July 08–June 09	July 09–June 10	July 10–June 11	July 11–June 12	July 12–June 13	July 13–June 14	July 14–June 15
Total number of vehicles that received fines	694	664	616	373	303	301	186	114	289	78
Diesel vehicles that received fines	580	527	495	351	278	286	173	109	283	76
Percentage of all vehicles fined that were diesel vehicles	83.6%	79.3%	80%	94.1%	91.7%	95%	95%	96%	98%	97%
Total number of vehicles that received advisory and warning letters	1,405	1,123	755	530	740	750	556	552	891	812
Diesel vehicles that received advisory and warning letters	174	161	103	123	133	135	96	74	462	423
Percentage of all vehicles that received advisory and warning letters that were diesel vehicles	12.4%	14.3%	14%	23.2%	17%	18%	17%	11%	52%	52%

There has been a reduction in the number of diesel vehicles that received fines, as the Environment Protection Authority has received significantly fewer reports from Roads and Maritime Services of vehicles emitting excessive in smoke in the M5 East Tunnel at Earlwood.

Diesel vehicle emission testing and repair programs

Roads and Maritime Services is not currently operating a Diesel Vehicle Emissions Testing and Repair program.

The development of a test and repair program has been put on hold at the direction of the Commonwealth Department of the Environment, pending resolution of the funding agreement and the finalisation of Recommendation 5 of the 2007 review of the NEPM.

The existing Roads and Maritime Services Heavy Diesel Vehicle Testing Facility is currently used to support the M5 East Tunnel Diesel Retrofit and Repair Initiative (discussed below).

Audited maintenance programs for diesel vehicles

Roads and Maritime Services is currently operating an audited maintenance program known as 'Clean Fleet'. This was launched in 2006 and currently has approximately 7,000 vehicles participating in the program.

Promotion to increase participation in the program was put on hold, pending resolution of funding with the Commonwealth Department of the Environment. During 2014–15, three new fleets joined this program.

Diesel vehicle retrofit and repair program

Roads and Maritime Services is currently implementing the M5 East Tunnel Diesel Retrofit and Repair Initiative. This initiative started on 1 March 2013 and it is planned that it will continue through to December 2015. The aim of the initiative is to reduce the level of PM_{10} present in the M5 East tunnel, by removing PM_{10} exhaust emissions at their source.

This is achieved by identifying smoky vehicles that are frequent users of the M5 East Tunnel through the use of camera technology. Operators of these vehicles are offered a 50 per cent subsidy (up to a capped amount) to repair emissions related engine faults and to install particle traps in the exhaust systems of these vehicles.

During 2014–15, 72 vehicles were identified inside the M5 tunnel emitting excessive air impurities for a continuous period of more than 10 seconds. This resulted in 46 penalty notices and 69 invitation letters to join the repair and retrofit initiative being sent to the operators of the identified vehicles. Since the inception of this program 17 signed participation agreements have been received.

Clean Machine Program (non-road diesel engines)

The Environment Protection Authority Clean Machine Program (which commenced in 2011) concluded in June 2015. The program was executed through partnerships with local councils and private businesses to develop procurement of cleaner diesel equipment, best worksite practice for diesel emissions management and to retrofit heavily polluting equipment with subsidised exhaust after-treatment devices. Program partners were eligible for up to 90 per cent of co-funding for the retrofitting of older and more polluting diesel equipment.

By the end of June 2015, more than 40 organisations had participated in the program and 145 diesel machines were retrofitted. Retrofits have been estimated to reduce about 37 tonnes of diesel particles over the next 10 years, leading to an estimated public health benefit of \$8.1 million. Cleaner procurement and best worksite practices will also result in significant diesel emissions reductions and public health benefits.

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for Victoria by the Hon. Ryan Smith, Minister for Environment and Climate Change (until 29 November 2014) and the Hon. Lisa Neville MP, Minister for Environment, Climate Change and Water, for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The administration and implementation of the NEPM in Victoria changed during 2013/2014 with the update of the Environment Protection (Vehicle Emissions) Regulations 2013 which replaced the 2003 Regulations. The Regulations no longer deal with heavy vehicles over 4.5 tonnes due to the introduction of the Heavy Vehicle National Law that was agreed by COAG in 2009. The facility at VIPAC Engineers & Scientists Ltd (Vipac) continues to be used however the volume of vehicles being reported has significantly dropped with the exclusion of vehicles over 4.5 tonnes.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

While there are some limitations on the ability to quantify the overall effectiveness of the NEPM-based initiatives implemented to date, it has provided significant value in a number of areas.

The numbers of vehicles reported in EPA's smoky-vehicle program continue to provide some insight into the high level of community awareness and concern into diesel vehicle exhaust emissions. The continued decline in the number of vehicles reported since the program began in 2005/06 could indicate that there are fewer smoky vehicles being spotted on Victorian roads. Prior to the reporting of heavy vehicles to the National Heavy Vehicle Regulator, there was a significant decline in the proportion of diesel-engine vehicles greater than 1.5 GVM tonnes being reported. This could indicate that there are fewer smoky diesel vehicles in this category.

Smoky vehicles program

EPA Victoria has operated a public smoky vehicle reporting program for a number of years. This program allows members of the public to identify smoky vehicles (diesel, petrol or LPG) using the "10-second" smoke rule, and report them to EPA. EPA also operates a separate official smoky vehicle enforcement program where EPA or Victoria Police officers can report vehicles identified as emitting greater than 10 seconds of continuous smoke. As a result of these reports, the owners of the offending vehicles are informed in writing of the report and are requested to have the problem fixed. They are also informed about the penalties that may apply if they are identified by officers from EPA, VicRoads or the Police. In 2014/2015, the program resulted in 1,046 smoky vehicle letters being issued for public reports and 13 cautionary letters being issued for official reports.

Infringement notices may be issued to repeat offenders with no instances recorded in 2014/15.

The following table indicates the number of smoky vehicles being reported in the public reporting program and the number of cautionary letters issued under the official program over the past nine years. Generally, there appears to be a downward trend in the number of vehicles being reported over recent years in both programs. The significant drop in reports between 2013–15 may also be affected by systems improvements being made to the program that will become evident over the next couple of financial years.

Table 1: Number of smoky vehicles being reported in the public reporting program and the number of cautionary letters issued under the official smoky vehicle program over the last 10 years.

Year	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/2015
Number of public reports	10,315	7,068	6443	5884	6177	5766	4895	3910	1296	1046
Number cautionary letters	1,538	849	946	708	445	630	495	554	107	13

Note: These numbers include all vehicles in the official program, not just diesel-engine vehicles.

Diesel vehicle emission testing and repair programs

Victoria uses Vipac's test facility to support EPA's regulatory infrastructure. Vipac has installed a custom made Cirrus/CP Engineering AC-drive transient chassis dynamometer (which can be used in either 2WD or 4WD configuration to test emissions from trucks and buses), emissions analysis equipment and exhaust handling hardware which exceeds the analytical requirements of the DT80 diesel emission test.

Under EPA's official smoky vehicle program, diesel engine smoky vehicles registered in a defined Melbourne metropolitan area have been directed to the Vipac facility for vehicle testing. With the introduction of the new Regulations in Dec 2013, EPA ceased issuing DT80 emission test notices to vehicle over 4.5 tonnes. The initial vehicle test is paid for by EPA (from Diesel NEPM funds). Any subsequent test, if the vehicle fails the initial test, is borne by the vehicle owner (\$550 plus GST).

During 2014–15, three vehicles were tested at the Vipac facility as part of its official smoky vehicle reporting program.

Audited maintenance programs for diesel vehicles

Victoria does not have an audited maintenance program for diesel vehicles.

Diesel vehicle retrofit programs

Victoria does not have a diesel vehicle retrofit program.

Other programs

Not applicable.

Queensland

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for Queensland by the Honourable Jacklyn (Jackie) Trad, Deputy Premier, Minister for Transport, Minister for Infrastructure, Local Government and Planning and Minister for Trade, for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The *National Environmental Protection Council (Queensland) Act 1994* provides the framework for implementing the National Environmental Protection (Diesel Vehicle Emissions) Measure (the Diesel NEPM) in Queensland. The Department of Transport and Main Roads (TMR) is responsible for implementing and reporting on the Diesel NEPM. Queensland has a number of programs in place to ensure air quality is maintained and diesel vehicle emissions are managed appropriately, as specified in the Diesel NEPM.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

Transport is a major contributor to air pollution in South East Queensland. The Department of Environment and Heritage Protection is responsible for monitoring air quality in Queensland, with a network of testing stations around the state containing instruments capable of recording and storing meteorological and air pollutant data.

The air pollutants of most interest in relation to diesel vehicles are oxides of nitrogen (NO_x) and fine particles known as Particulate Matter (PM). NO_x is a precursor to the formation of photochemical smog and fine particles have been identified as a health risk.

Air quality in Queensland is generally good. There have been very few exceedances of the national standards of monitored pollutants in the reporting period. There have been short periods of elevated particle levels in all areas of Queensland where monitoring takes place, however these are considered largely due to dust storms and bushfires rather than transport emissions.

The Queensland Government supports the Commonwealth with the ongoing introduction of new Australian Design Rules (ADRs) to improve vehicle emission standards. In Queensland, the most significant reduction in diesel vehicle emissions has been achieved through the introduction of improved fuel quality and emission standards for new vehicles.

Diesel vehicle emissions are expected to continue to decrease moderately as the number of newer, less polluting diesel vehicles increases within the fleet, replacing higher polluting older vehicles. Gradual tightening of emission standards to harmonise with European Union standards is considered one of the most cost effective means to reduce diesel emissions and improve air quality.

The Commonwealth Department of Infrastructure and Transport is continuing work on the new vehicle standard ADR for heavy vehicle emissions, ADR80/03, which will introduce the equivalent to Euro VI emission standards for heavy vehicles. The introduction of ADR80/03 is proposed for 2016 and will require all new heavy vehicles to comply with more stringent emission standards and will assist in further reducing the diesel emissions related to road transport in Queensland. Other programs currently in place to complement the ADRs and reduce diesel vehicle emissions are described below.

Smoky vehicles program

The Smoky Vehicle Hotline provides the community with an avenue for reporting vehicles exceeding the ten-second smoke rule, via the internet or telephone. Following a data match of the information provided, a letter is sent to the owner advising them of the report and suggesting ways to identify and remedy the problem. If the vehicle is reported three times within a four month period, the owner is issued with a Present Vehicle Order (PVO) which requires their vehicle to be checked for defects by a Transport Inspector.

For the period of 1 July 2014 to 30 June 2015, a total of 1279 vehicles were reported to TMR's Smoky Vehicle Hotline. There were 437 diesel powered vehicles reported; 308 of the total vehicles were reported by phone and 971 vehicles were reported through the online reporting form. This is a slight decrease on the amount of diesel vehicles reported the previous year and aligns with the reported trend of the previous five years. There has been a gradual but steady reduction in diesel vehicles reported.

TMR issued 167 initial warning letters and 10 secondary warning letters requesting that drivers have their vehicles checked. There were no PVOs issued.

Diesel vehicle emission testing and repair programs

TMR operates a compulsory annual inspection regime for heavy vehicles. The standard of mufflers on the vehicle is checked at this inspection, and any vehicle with a faulty muffler is issued with a defect notice to have it repaired or replaced. Heavy vehicles are inspected every twelve months, prior to renewal of registration, and public passenger vehicles, such as buses, are inspected every six months.

TMR inspected approximately 54,952 heavy vehicles, while private accredited inspection stations inspected approximately 49,667 heavy vehicles in the 2014–15 financial year. These totals include rigid heavy vehicles, prime movers and buses. The annual inspection ensures defective engine performance, which contributes to increased diesel exhaust emissions, can be identified and repaired.

In Queensland, the Brisbane City Council (BCC) owns and operates the only facility for testing diesel powered vehicles for emissions under the DT80 emission testing regime. During the 2014–15 financial year BCC tested a total of 70 vehicles. Sixty-five (65) of the vehicles were diesel powered and therefore reportable under Diesel NEPM reporting requirements. The remaining vehicles were testing alternative fuels, fuel blends and gas.

Six of the 65 diesel powered vehicles tested by BCC, were manufactured prior to January 1996 and prior to the requirements of the vehicle standards ADR/70 for vehicle emissions. Fifty-nine (59) vehicles were manufactured after December 1995 and complied with ADR/70 emission standards or later. All of the 65 diesel powered vehicles tested passed, reflecting a rate of compliance that has not been achieved since testing commenced.

Of the 65 heavy vehicles tested, 39 were previously untested vehicles. The 26 previously tested vehicles presented for either retesting after a two year period to verify continued compliance in order to claim the fuel tax credits under criterion 3 of the fuel tax credit scheme, or because of participation in a comparative fuel study.

Additionally, 23 of the previously untested vehicles came from BCC's own fleet. The other 16 vehicles were made available from external operators, indicating there has been a very limited uptake of DT80 emission testing in this reporting period. The costs of testing are approximately \$700 dollars per vehicle and may be a factor contributing to the limited uptake.

Audited maintenance programs for diesel vehicles

The Queensland Government encourages the heavy vehicle industry to participate in the National Heavy Vehicle Accreditation Scheme (NHVAS) which is administered by the National Heavy Vehicle Regulator. The scheme encourages heavy vehicle operators to take more responsibility for servicing their vehicles and ensuring vehicles are compliant with maintenance accreditation requirements. Compliance with an accredited maintenance management scheme provides a concession to the requirement for an annual inspection in Queensland and the requirement to provide a Certificate of Inspection prior to registering vehicles.

There are 35,933 heavy vehicles currently participating in the NHVAS maintenance scheme and 841 registered operators. This is another moderate increase on last year's NHVAS accreditations. The majority of vehicles participating in the NHVAS use diesel.

Diesel vehicle retrofit programs

There were no diesel retrofit programs on offer in Queensland during the reporting period.

Other programs

Queensland had no other programs specific to reducing or managing diesel emissions during the reporting period.

Western Australia

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for Western Australia by Hon. Albert Jacob MLA, Minister for Environment; Heritage for the reporting year ended 30 June 2015.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia, the National Environment Protection (Diesel Vehicle Emissions) Measure (Diesel NEPM) is implemented by the Department of Environment Regulation (DER) under the *National Environment Protection Council (WA) Act 1996* and the *Western Australian Environmental Protection (WA) Act 1986*.

Vehicle emissions in Western Australia are regulated under the *Road Traffic (Vehicles) Act 2012* and Road Traffic (Vehicles) Regulations 2014. The ten-second rule for smoky vehicles aims to target visually polluting diesel and petrol vehicles and is administered by the Department of Transport (DoT).

The Western Australian Government's Perth Air Quality Management Plan (AQMP) aims to ensure that clean air is achieved and maintained throughout the Perth metropolitan region. The AQMP identifies that the management of emissions from in-service petrol and diesel vehicles is critical to achieving clean air, and contains a range of initiatives that target on-road vehicles. The implementation of vehicle emissions reduction initiatives in the AQMP are largely complementary to the outcomes of the Diesel NEPM.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The 2014 deployment of the CleanRun Remote Sensing Program (the CleanRun Program) demonstrated that individual vehicle emissions are improving in the Perth metropolitan area. This improvement is largely attributed to stringent Australian Design Rule (ADR) emission standards for new vehicles. Data analysis of the 15,000 identified vehicles during the deployment of the CleanRun Program demonstrates that although the average age of the tested passenger and light commercial vehicles in Perth has remained stable at eight years old, the majority of passenger vehicles in the 2014 Perth fleet are between two and eight years old. This places the largest group of vehicles within the more recent ADR range. The ADR range of the Perth vehicle fleet tested by the CleanRun Program in 2007, 2010 and 2014 is displayed in Figure 1. The diesel passenger and light commercial vehicle fleet tested by the CleanRun Program in 2014 are included in Figure 1 in black.

Average diesel emissions for individual passenger and light commercial vehicles have improved across the four tested emissions categories: carbon monoxide (CO by 33 per cent), hydrocarbons (HC by 40 per cent), nitrous oxide (NO by 14.5 per cent) and smoke factor (PM by 21.4 per cent).

- Implementation of vehicle emissions reduction initiatives of the AQMP and the CleanRun Program are the foundation of vehicle emissions reduction strategies undertaken by DER. DER will continue to work with DoT, other government agencies and industry associations to investigate and implement motor vehicle related policies and management actions where appropriate to reduce the impact of diesel vehicle emission in Western Australia.

Smoky vehicles program

- In 2014/15 the Smoky Vehicle Reporting Program (SVRP) received an average of 22.3 reports per month which is almost half of the 2013/14 average of 42.5 reports per month. The total number of reports received and information packs sent out for the twelve months from July 2014 to June 2015 was 268.
- Table 1 summarises the responses from 118 owners of the 268 reported vehicles from July 2014 to June 2015. The results show that 48 per cent of respondents have had their vehicle repaired since receiving a report of their smoky vehicle. This is a two per cent increase on the previous reporting period. The proportion of respondents reporting that their vehicle does not smoke has dropped from 43 per cent in 2013/14 to 38 per cent in 2014/15. Sixty per cent of respondents report their vehicle fuel as diesel. In 2014/15 six vehicles were reported on more than one occasion. Of the six vehicles, three reported that the vehicle had been repaired, one had disposed of the vehicle and one denied that the vehicle smoked. The final vehicle owner failed to reply. None of the vehicles reported multiple times had been reported by the same person.

Figure 1. Australian Design Rule (ADR) of tested fleet population

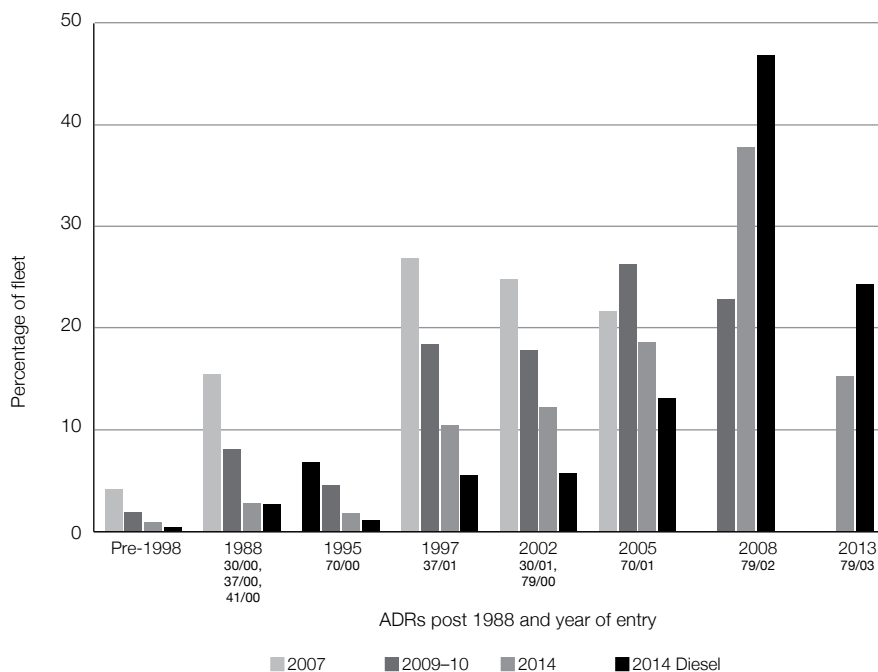


Table 1. Responses from owners of reported vehicles

Vehicle repaired	57 (48%)
Vehicle does not smoke	45 (38%)
Can't afford to repair	1 (<1%)
Disposed of vehicle	3 (2%)
Wrong vehicle	6 (5%)
Other	8 (7%)
Petrol	35 (30%)
Diesel	71 (60%)
LPG	2 (<2%)
Fuel type not reported	13 (11%)

Diesel vehicle emission testing and repair programs

- The CleanRun Program includes the utilisation of a portable roadside gas analyser that provides an efficient, cost effective method of characterising vehicle emissions and raising community awareness of vehicle emissions.
- In 2014 the CleanRun Program was deployed for ten days across five sites in the Perth metropolitan area and emissions data for over 15,000 vehicles was collected.
- Results from the CleanRun Program deployment (all vehicles) are listed below:
- The range of emissions remains very large with a small number of vehicles at the high emissions end of the range responsible for the largest proportion of emissions. The worst five percent of vehicles are responsible for 37 per cent of smoke emissions, 33 per cent of nitrous oxide emissions, 57 per cent of hydrocarbon emissions and 60 per cent of carbon monoxide emissions.

- There are increasing numbers of diesel passenger vehicles—23 per cent in 2014 compared with 16 per cent during the 2010 testing period.
- Average emissions per vehicle (all fuel types) are decreasing. Improvements range from a 19 per cent reduction in smoke emissions to a 35 per cent reduction in hydrocarbon emissions.
- Average vehicle size is increasing. Average vehicle weight increased from 1470 kg in 2007 to 1706 kg in 2014.
- In addition to the roadside testing program, the community were invited to bring their vehicles for testing at a community day in March 2015. Drivers were encouraged to use the CleanRun Program and receive feedback from DER officers and Royal Automobile Club mechanics on site.

Audited maintenance programs for diesel vehicles

The National Heavy Vehicle Accreditation Scheme (NHVAS) encourages heavy vehicle operators to take responsibility for servicing their vehicles and ensuring vehicles are compliant with scheme accreditation requirements.

In Western Australia, operators of certain types of heavy vehicles must become accredited to gain a permit or notice from Main Roads Western Australia. The majority of these vehicles use diesel as their primary fuel source. Western Australian Heavy Vehicle Accreditation is mandatory for individuals and organisations which require a permit or notice to perform any transport task as part of a commercial business or for profit within Western Australia, including interstate operators.

There are currently two accreditation modules—Fatigue and Vehicle Maintenance, which operators are required to incorporate into their daily work practices. Maintenance management encourages heavy vehicle operators to take responsibility for servicing their vehicles regularly and ensuring their vehicles are safe at all times. The standards for this module are similar to that required under the nationally endorsed NHVAS.

Accredited operators must ensure their vehicles are maintained and meet all relevant safety standards. A record of the maintenance and servicing work done to each vehicle must be kept to prove the vehicles are safe at all times.

Compliance and enforcement activities are key factors in ensuring effective and safe management of heavy vehicles on the road network. Transport inspectors in Western Australia are authorised by law to intercept and inspect vehicles for roadworthiness, load security and vehicle licencing conditions. Compliance also performs the important role of educating and working with the transport industry and other agencies and stakeholders to improve standards.

Diesel vehicle retrofit programs

Nil

Other programs

Communication

The CleanRun Program was developed to make the overall vehicle emission reduction actions immediately identifiable and to facilitate the promotion of key Diesel NEPM messages in Western Australia. Web pages, fact sheets and brochures are developed and produced to provide information on the CleanRun Program. All of these documents are available on DER's website www.der.wa.gov.au. Attention continues to focus on promoting Diesel NEPM messages through established programs.

CleanRun EcoDrive

A major initiative of the Diesel NEPM communication strategy is CleanRun EcoDrive. The program aims to reduce diesel emissions through encouraging driver behaviour change.

CleanRun EcoDrive provides a resource package for fleet operators to reduce fuel use and related emissions by working with drivers to make small changes to their driving habits. Eco driving incorporates a number of safer, smarter driving techniques that maximise fuel economy by operating the engine as efficiently as possible.

The package includes the resources to develop an EcoDrive training program in-house, including driver training materials developed by experts in the transport industry. It is estimated that fleet operating organisations who implement the CleanRun EcoDrive program can reduce fuel use and related emissions by up to 20 per cent. All resources are available to download free-of-charge from DER's website www.der.wa.gov.au. DER worked with industry partners to develop the resources.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for South Australia by the Hon. Ian Hunter MLC, Minister for Sustainability, Environment and Conservation, for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In South Australia, the National Environment Protection (Diesel Vehicles Emissions) Measure (Diesel NEPM) became an Environment Protection Policy under the repealed Section 28A of the *Environment Protection Act 1993*. Section 4 of the transitional provisions in the *Environment Protection (Miscellaneous) Amendment Act 2005*, Schedule 1, enables the continued operation of the Diesel NEPM as an Environment Protection Policy.

The South Australian Government made provision to regulate emissions from diesel vehicles under the Road Traffic (Vehicle Standards) Rules 1999: Rule 147A—Exhaust Emissions—diesel-powered vehicles. Rule 147A set emission limits for NO_x and Particulate Matter for diesel vehicles that are in service.

The 10-second smoke rule regulated as Rule 147 in Road Traffic (Vehicle Standards) Rules 1999 has also been applied as an in-service standard towards the achievement of Diesel NEPM outcomes.

National Heavy Vehicle Law was enacted in South Australia in 2013 including adoption of the national regulations. Rule 96 of the Heavy Vehicle (Vehicle Standards) Regulation continues the existing diesel emission standard for South Australian heavy vehicles (in addition to requiring heavy vehicles in each participating jurisdiction to comply with the standard).

Compliance with Rule 147A & Rule 96 was previously tested at the Regency Park Vehicle Inspection Emissions Test Facility, however the facility has now been closed due to high maintenance costs and low throughput of vehicles. Arrangements are still being sought to undertake this testing within the private sector. When a testing service is identified and operational, vehicles that fail the emissions test will be defected, and then required to submit for re-testing for compliance with the Standard.

SA Police patrols are the primary means for the detection of vehicles exceeding the 10-second smoke rule. During the reporting period, no diesel vehicles were reported by SA Police to the Department for Planning, Transport and Infrastructure (DPTI) for the assessment of corrective actions.

South Australia has continued its commitment to use biodiesel in a significant portion of its government owned public transport bus fleet. Currently, all buses operate on either a 5% or 20% biodiesel blend or compressed natural gas. The opportunity to expand biodiesel use, particularly in new Euro VI compliant buses will be investigated.

While the Environment Protection Authority has responsibility for leading South Australia's response to this NEPM, DPTI is investigating and developing relevant strategies for the management of emissions from diesel vehicles.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The Regency Park Emissions Test Facility was closed during 2013–14 financial year due to high maintenance costs and reliability issues. Private sector providers are being sought to provide alternative emissions testing services including diesel emissions.

Smoky vehicles program

Not applicable.

Diesel vehicle emission testing and repair programs

Not applicable.

Audited maintenance programs for diesel vehicles

Not applicable.

Diesel vehicle retrofit programs

Not applicable.

Other programs

Two diesel electric hybrid buses are being trialled by the Adelaide Metro bus fleet to assess the benefits compared to Compressed Natural Gas (CNG) and diesel vehicles. The vehicles are expected to have lower diesel fuel usage and emissions, and in addition, are operated on a biodiesel blend.

DPTI is currently implementing measures under South Australia's Low Emissions Vehicle Strategy 2012–16, which are aimed at reducing greenhouse gas emissions and air toxic emissions by increasing the proportion of low emission vehicles on our roads. The Strategy includes actions to directly combat motor vehicle emissions and respond to emerging vehicle technologies, as well as support activities to maximise the benefits to the State. This includes addressing emissions from fleets, which purchase around 50% of vehicles sold in South Australia.

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for Tasmania by Hon. Matthew Groom MP, Minister for Environment, Parks and Heritage for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Under Section 12A of the *Tasmanian State Policies and Projects Act 1993*, National Environmental Protection Measures made under Section 14(1) of the *National Environment Protection Council (Tasmania) Act 1995* are taken to be State Policies which have been passed by both Houses of Parliament.

In 2006 and 2007, a contract between the then Department of Tourism, Arts and the Environment and the Commonwealth Department of the Environment and Water Resources facilitated the funding of a series of diesel engine skill gap training workshops in the south, north and northwest of the State. Funding provided for the purchase of diesel emissions testing equipment and the delivery of free three-hour training courses for 321 qualified mechanics.

Since the end of this program the Tas Tafe has continued to utilise this equipment in training courses for automotive apprentices. The equipment is used in both training and commercial activities to test the operation and repairs of emission controls/devices on vehicles and to check the emission outputs of LNG and CNG conversions. However, the equipment has not been used for commercial purposes in the current period.

A limitation of the equipment is that it is not certified to perform the DT80 emission test. The DT80 test is the Australian Transport Council's in-service emission standard for diesel vehicles

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

As of 30 June 2015 there were 12,768 diesel powered heavy vehicles (that is vehicles over 4.5 tonnes) and 97,032 diesel powered light vehicles registered in the State. This represents a decrease of 4.4% and an increase of 8.7% respectively since 1 July 2014. Of the total of 575,310 vehicles registered in Tasmania on 30 June 2015, 19.1% were diesel powered.

Smoky vehicles program

The Department of State Growth maintains a strong focus on road safety rather than on vehicle emissions. They do not possess vehicle emission measurement facilities, and do not actively target vehicle emissions.

They do however utilise the "ten second rule" for smoky exhausts and issue Traffic Infringement Notices requiring identified vehicles to undergo servicing to reduce smoke emissions. Traffic Infringement Notices for smoky exhausts are issued by Departmental Vehicle Inspection Officers and can also be issued by the police.

Records are not compiled showing the number of Traffic Infringement Notices issued for smoky vehicles.

Diesel vehicle emission testing and repair programs

The Department of State Growth do not possess vehicle emission measurement facilities, and do not compile records of vehicle testing or repairs.

Audited maintenance programs for diesel vehicles

There is no audited maintenance program for diesel vehicles in Tasmania.

Diesel vehicle retrofit programs

Statistics are not compiled on diesel vehicle retrofitting

Other programs

There were no other programs implemented during the reporting year to manage emissions from in-service diesel vehicles.

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for Australian Capital Territory by Mr Simon Corbell MLA, Minister for the Environment, for the reporting year ended 30 June 2015

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Australian Capital Territory's (ACT) Road Transport (Vehicle Registration) Regulation 2000 requires emission control systems supplied by vehicle manufacturers to remain fitted and functional. This is consistent with the goals in the National Environment Protection (Diesel Vehicle Emissions) Measure (the NEPM).

Aggregate air quality data indicates that air pollution caused by diesel emissions is not a significant contributor to the urban airshed in the ACT. Therefore, no actions are taken in the ACT as a result of measures against the NEPM.

Notwithstanding the above, the ACT has introduced a number of measures consistent with achieving the goals of the NEPM, including:

- adoption of the Australian Design Rules, as requirements under sch. 1 of the Road Transport (Vehicle Registration) Regulation 2000;
- requiring emission control equipment fitted to a vehicle to remain fitted and be maintained in a condition to ensure it operates essentially in accordance with the systems original design under sch 1 of the Road Transport (Vehicle Registration) Regulation 2000;
- implementation of random on-road and car park inspections;
- implementation of arrangements enabling members of the community to report vehicles that they consider unroadworthy, including those that emit excessive smoke, and enabling appropriate action against those vehicles;
- ACT Government subscription to Greenfleet for the planting of trees to offset its vehicles fleet emissions; and
- supporting ACT representation on the fuel standards consultative committee.

While statistics on the number of inspections and how many defects and warnings are collected, at this stage the reasons for these enforcement actions are not collated. In general, ACT inspectors would not normally issue an infringement notice to a vehicle emitting excessive smoke. The ACT has found it more beneficial to require a vehicle to be repaired than to impose a monetary penalty. Issuing a monetary penalty is likely to delay repairs or make it more difficult for owners to repair their vehicles.

In addition to the above, as part of the ACT Government Fleet Efficiency Program, the ACT has purchased 70 compressed natural gas (CNG) powered buses, which are currently in service. Two buses that were converted to operate on CNG have been returned to diesel operation as the trial of these two vehicles was unsuccessful. There are 10 Euro 6 buses in the ACTION Fleet.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

As indicated above, the ACT airshed quality does not approach the NEPM trigger points and therefore no action is taken within the ACT as a result of the NEPM. As such, the NEPM has limited, if any, effectiveness within the ACT.

Therefore, the programs identified under the NEPM are not applicable within the ACT as any actions taken in relation to diesel vehicles are not taken as a result of the NEPM, but the overriding road transport laws that apply standards to individual vehicles based on type, age and roadworthiness.

Smoky vehicles program

Not applicable.

Diesel vehicle emission testing and repair programs

Not applicable.

Audited maintenance programs for diesel vehicles

Not applicable.

Diesel vehicle retrofit programs

Not applicable.

Other programs

Not applicable.

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for Northern Territory by the Minister for the Environment for the reporting year ended 30 June 2015.

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Aggregate data on diesel emissions for the Northern Territory is not available. However, air quality studies and the National Pollutant Inventory indicate that motor vehicle traffic is not a major contributor to air emissions in the larger urban areas.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

A number of initiatives are implemented to control diesel vehicle emissions in the Northern Territory. Vehicle standards are enforced through the general provisions of the *Motor Vehicles Act (NT)* and the Australian Vehicle Standard Rules which require all vehicles to comply with Australian Design Rules when in service.

In the Territory, there are approximately 58 000 diesel vehicles registered, representing around 37 per cent of the total vehicle fleet, which is much higher than the national level of diesel vehicles which is approximately 20 per cent of the vehicle fleet. Australian Bureau of Statistics data indicates that diesel vehicles registered in the Northern Territory represent approximately 1.5 per cent of all diesel vehicles in Australia.

Of the four major regions in the Territory, 69 per cent of all diesel vehicles registered in the Territory are registered in the Darwin region, while 14 per cent are registered in Alice Springs, 9 per cent in Katherine and 2 per cent in Tennant Creek.

In the Darwin region approximately 35 per cent of all registered vehicles are diesels; this is slightly lower than in Alice Springs, with diesels representing 37 per cent of the total vehicle fleet. In Katherine and Tennant Creek the diesel portion of the total fleet is 51 per cent and 53 per cent respectively, indicating a higher reliance on diesel vehicles in remote areas.

Of the heavy vehicle diesels registered in the Territory, 64 per cent are registered in the Darwin region, 18 per cent in Alice Springs and 10 per cent in Katherine. The distribution of light diesel vehicle registrations in the Territory differs slightly, with 69 per cent of all light diesel vehicles registered in the Darwin region, 14 per cent in Alice Springs and 8 per cent in Katherine.

Smoky vehicles program

A smoky vehicle program is undertaken as part of the Territory's vehicle registration and roadworthiness testing procedures. Records of diesel vehicles issued with defect orders show that only a minor fraction of vehicles checked as part of the vehicle registration process receive a defect notice due to engine smoke.

Diesel vehicle emission testing and repair programs

Pollutants associated with diesel emissions in the Territory are well below emission standards. Therefore, the current air quality conditions are not considered a trigger for change in relation to managing diesel emissions in the Territory. The Northern Territory will continue to monitor the need for action on diesel emissions and will take appropriate action as required.

Audited maintenance programs for diesel vehicles

Vehicle roadworthy inspections are undertaken periodically for light and heavy vehicles and these inspections include checking that all required emission control equipment is fitted as well as the detection of smoky vehicles. Periodic roadworthy inspections are required at registration renewal and the frequency of inspections is determined by the vehicle type, age and category. Since 1 July 2013, light vehicle inspections are required at five years, 10 years and then annually. All heavy vehicles require an annual roadworthy inspection.

Diesel vehicle retrofit programs

The majority of the Northern Territory road train fleet is less than five years old and employs the latest technology in engine management systems to minimise fuel consumption. On a payload per emission basis, road trains operating line haul operations in remote Australia are considered to be some of the most environmentally efficient road freight vehicles in the world.

Other programs

The Territory's open access policy provides for 'as of right' access for road trains and 100 per cent network access for vehicles operating at higher mass limits. In addition the Territory's innovative vehicle policy promotes the development of high productivity innovative vehicle combinations which can deliver further efficiency benefits.

Appendix 5: Jurisdictional Reports on the Implementation and Effectiveness of the Movement of Controlled Waste between States and Territories NEPM

Commonwealth

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for the Commonwealth by the Hon. Greg Hunt MP, Minister for the Environment, for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Commonwealth implements the NEPM administratively and ensures that its obligations under the *National Environment Protection Act 1994* are met.

The Commonwealth is working with the states and territories through the Implementation Working Group (IWG) to continue to implement the NEPM in a consistent manner. Members of the IWG communicate regularly through email and meetings.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

Opportunities exist to improve the efficiency and effectiveness of the NEPM, including to achieve a more nationally-consistent approach to tracking movements of controlled waste.

During the 2014–15 year, the Commonwealth continued to work on a program of hazardous waste reform. A study into the feasibility of a consistent national approach to tracking the inter- and intra-state movement of controlled wastes was conducted, which recommended work commence on building the first part of such a system in 2015–16. A major project on hazardous waste infrastructure and data was completed that identified significant issues with current hazardous waste tracking arrangements as data sources, including absent tonnages. A further project identified opportunities to harmonise the transport and environmental regulations pertaining to the movement of hazardous waste. Recommendations from these and other hazardous waste reform projects will be acted on, in consultation with the States, Territories and industry, in 2015–16.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for New South Wales by the Hon. Rob Stokes MP, Minister for the Environment and Minister for Heritage (from 24 April 2014 to 2 April 2015) and the Hon. Mark Speakman MP, Minister for Environment and Minister for Heritage (from 2 April to 30 June 2015) for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The NEPM has been in place for more than 10 years and is operating smoothly, without any significant issues. Minor changes to the NEPM recommended following the 10 year review were implemented in NSW in October 2014 under the Protection of the Environment Operations (Waste) Regulation 2014.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The NEPM continues to provide an effective tool in minimising the potential for adverse impacts associated with the movement of controlled waste on the environment and human health. A total of 85,167 tonnes of controlled waste in 6506 movements was reported this period as having been transported into NSW (Tables 2 and 4). This is a 0.8% decrease on the 85,812 tonnes and a 4.5% decrease on the 6,813 movements in 2013–14.

The amount of controlled waste received in NSW in 204–15 is essentially unchanged from the previous year. A decrease of 2,183 (5%) tonnes in controlled waste received from Victoria and smaller decreases from Queensland and the Northern Territory were offset by increases from other jurisdictions.

There were modest changes in the mix of controlled waste received in NSW compared to the previous year but these changes were less than the fluctuations between previous years. There were reductions in the amount of inorganic chemicals (1566 tonnes reduction), alkalis (850 tonnes) and oils (662 tonnes) received in NSW which were offset by increases in putrescible/organic waste (1917 tonnes), miscellaneous wastes, mostly tyres and laboratory chemical wastes (689 tonnes) and soil/sludge (679 tonnes).

Substantial changes to the waste regulatory framework were introduced under the Protection of the Environment Operations (Waste) Regulation 2014. The main impact on controlled waste is the introduction of mandatory reporting for intrastate movements of waste tyres and asbestos waste. Other changes, such as restrictions on the distance waste can be transported, mostly do not apply to controlled waste due to the limited number of treatment options available and regulatory controls already being in place.

Discrepancies continue to be low, with 99.3% of transport certificates having no discrepancies.

Table 1: Number of consignment authorisations issued by New South Wales

Reporting Year	Consignment authorisations issued
2013–14	1,113
2014–15	1,319

Table 2: Quantity of controlled waste into New South Wales for the period 1 July 2014 to 30 June 2015—Tonnes per waste category by State/Territory

Code	Description	Vic	Qld	WA	SA	Tas	ACT	NT	Ex-Terr	Total (tonnes)
A	Plating & heat treatment	0.00	0.00	0.00	0.00	0.00	0.04	0.00		0.04
B	Acids	11368.37	23.80	0.00	0.32	0.00	0.48	0.00		11392.96
C	Alkalis	497.62	7.52	0.00	5.57	0.00	5.51	0.00		516.21
D	Inorganic chemicals	16996.86	13678.51	4609.36	6302.74	4740.99	592.94	364.10		47285.49
E	Reactive chemicals	5.80	0.00	0.00	0.00	0.00	0.14	0.00		5.94
F	Paints, resins, inks organic sludges	1230.54	368.86	0.00	77.70	0.00	2.02	0.50		1679.62
G	Organic solvents	62.64	251.88	6.32	27.83	0.00	8.00	0.00		356.67
H	Pesticides	1.61	1.26	0.00	16.21	0.00	0.00	0.00		19.08
J	Oils	3133.42	288.53	179.03	196.89	0.00	747.15	2.00		4547.01
K	Putrescible/organic waste	4375.48	0.42	0.00	0.00	0.00	7756.88	0.00		12132.78
L	Industrial washwater	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
M	Organic chemicals	394.93	288.97	22.00	84.82	0.00	46.17	0.00		836.88
N	Soil/sludge	1626.79	1261.57	20.00	0.13	0.00	440.71	0.00		3349.20
R	Clinical & pharmaceutical	7.78	169.69	0.00	0.00	0.00	341.06	0.00		518.53
T	Misc.	7.63	0.08	7.33	0.00	0.00	2511.07	0.00		2526.11
State Totals (tonnes)		39709.46	16341.08	4844.04	6712.20	4740.99	12452.16	366.60		85166.53

Table 3: Discrepancies in movements of controlled waste into New South Wales for the period 1 July 2014 to 30 June 2015—Percentage of total movements

Discrepancy Type	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr *
Consignment non-arrival								
Transport without authorisation						0.05		
Non-matching documentation	1.03	0.94		0.31		0.14		
Waste data								

Table 4: Number of movements of controlled waste into New South Wales for the period, 1 July 2014 to 30 June 2015

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
	2338	1175	262	319	257	2135	20	

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for Victoria by the Hon. Ryan Smith, Minister for Environment and Climate Change (until 29 November 2014) and the Hon. Lisa Neville MP, Minister for Environment, Climate Change and Water, for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

There continues to be close consultation between the state and territory agencies, established under the NEPM agreement. However, there continues to be a decline in compliance by the waste industry.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

In the 2014–15 reporting period, Victoria issued 379 authorisations. This is a decrease of 51 approvals from the previous year. Most authorisations were for the recycling and energy recovery of controlled waste.

The total amount of controlled waste that was brought into Victoria during the reporting year was 24290 tonnes. This was a slight decrease of 908 tonnes from the amount reported in 2013–14.

Due to the continuing implementation of EPA's new integrated information management system, the data for discrepancies in movements of controlled waste into Victoria in 2014–15 (refer to table 3 below) remains unavailable at the time of reporting.

Inorganic chemicals remain the largest percentage of the total tonnage transported to Victoria. The inorganic chemicals waste stream, consisting of metallic constituents, again accounted for almost 25% of the total volume in 2014–15.

In 2014–15, EPA Victoria again focused on the transportation of industrial waste from Victoria to both limit the possibility of the movement of waste from Victoria and ensure that Victorian waste is taken to permitted facilities in Victoria. This is a multi-faceted strategy that targets generators, consignors and transporters of industrial waste. Victoria will continue to work with our counterparts in NSW and Queensland to deliver it.

Table 1: Number of consignment authorisations issued by Victoria

Reporting Year	Consignment authorisations issued
2013–14	430
2014–15	379

Table 2: Quantity of controlled waste into Victoria for the period 1 July 2014 to 30 June 2015—Tonnes per waste category by State/Territory

Code	Description	NSW	Qld	WA	SA	Tas	ACT	NT	Ex-Terr	Total (tonnes)
A	Plating & heat treatment									0.00
B	Acids	83	–	–	0					83.38
C	Alkalis	20	–	–	106					125.37
D	Inorganic chemicals	6,369	18	7	13	63		3.52		6473.04
E	Reactive chemicals	18	–	–	–					17.84
F	Paints, resins, inks organic sludges	1,082	456	414	94					2046.36
G	Organic solvents	1,537	191	164	110	836				2838.31
H	Pesticides	59	296	1,681	9					2044.82
J	Oils	2,811	959	111	121	267				4268.46
K	Putrescible/organic waste	3,839	–	–	219					4057.82
L	Industrial washwater	78	34	58	–					170.55
M	Organic chemicals	98	2	–	1	22				123.16
N	Soil/sludge	258	135	5	58	118				574.66
R	Clinical & pharmaceutical	226	730	9	388	1				1354.19
T	Misc.	27	40	23	21	1				112.44
State Totals (tonnes)		16505.05	2861.78	2471.26	1139.77	1309.00	0.00	3.52		24290.39

Table 3: Discrepancies in movements of controlled waste into {name of jurisdiction} for the period 1 July 2014 to 30 June 2015—Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr *
Consignment non-arrival	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Transport without authorisation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Non-matching documentation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Waste data	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 4: Number of movements of controlled waste into Victoria for the period 1 July 2014 to 30 June 2015

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
2120	n/a	311	212	642	194	0	12	0

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for Queensland by Hon. Dr Steven Miles MP, Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Queensland Department of Environment and Heritage Protection (EHP) is responsible for the administration of the National Environmental Protection (Movement of Controlled Waste between States and Territories) Measure (NEPM) in Queensland. The NEPM is implemented under the *Environmental Protection Act 1994* (EP Act) through Chapter 5, Part 9 of the Environmental Protection Regulation 2008 (EP Reg)⁶. As per the NEPM, the regulation includes provisions in relation to obligations for the tracking of controlled waste into and out of Queensland, as well as requirements for the prior approval of consignments of controlled waste being transported into Queensland. Legislative requirements for the licensing of controlled waste transporters are included in the EP Act and detailed in Schedule 2 of the EP Reg. The NEPM administration is integrated with intrastate tracking, controlled waste licensing and compliance activities in Queensland.

EHP has continued to administer the NEPM to help ensure controlled waste is managed appropriately. The prior approval process through consignment authorisation and consultation with other jurisdictions and waste handlers has helped to ensure controlled waste is consigned to appropriate facilities.

The total number of applications for consignment authorisation (Table 1) for the 2014–15 year was 277, which is a 40% increase from the 2013–14 year (195). There were a large number of applications received towards the end of the 2014–15 year with 50 approvals granted in June 2015.

There was an increase in the amount of controlled waste transported into Queensland from other Australian States and Territories. The total amount of waste transported into Queensland (Table 2) for the 2014–15 period was 33,570 tonnes which is a 5.8% increase from the 2013–14 year (31,769 tonnes). Likewise the number of transportations (Table 4) for the 2014–15 year was 2,323 which is a 2.5% increase on the 2,267 in 2013–14.

During the 2014–15 year, six companies were identified as having transported controlled waste into Queensland without authorisation. Five of these companies transported controlled waste from the Northern Rivers Region of New South Wales, with one company transporting waste from the Sydney region. Consequently, four warning notices were issued and two educational letters were issued by EHP relating to transportation of controlled waste into Queensland without authorisation.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by Queensland

Reporting Year	Consignment authorisations issued
2013–14	195
2014–15	277

5 Prior to 14 February 2015 the Minister for Environment and Heritage Protection was Andrew Powell.

6 Prior to 29 August 2014, the waste tracking provisions were contained within Part 4 of the Environmental Protection (Waste Management) Regulation 2000.

Table 2: Quantity of controlled waste into Queensland for the period 1 July 2014 to 30 June 2015

Code	Description	NSW	Vic	WA	SA	Tas	ACT	NT	Ex-Terr	Total (tonnes)
A	Plating & heat treatment	0	0	0	0	2	0	1	0	3
B	Acids	4	0	0	0	0	0	17	0	21
C	Alkalies	206	66	0	141	0	0	0	0	413
D	Inorganic chemicals	287	0	0.20	3	63	0	6	0	359
E	Reactive chemicals	395	0	0	0	0	0	0	0	395
F	Paints, resins, inks organic sludges	567	0	0	0	0	0	11	0	578
G	Organic solvents	78	0	0	0	23	0	0.01	0	101
H	Pesticides	92	1	0	31	124	0	0	0	249
J	Oils	7,346	0	0	995	0	0	1,993	0	10,334
K	Putrescible/organic waste	5,665	0	0	342	0	0	1	0	6,008
L	Industrial washwater	—	—	—	—	—	—	—	—	—
M	Organic chemicals	6,112	2	0	9	0	0	0	0	6,123
N	Soil/sludge*	8,301	476	0	0	62	0	0	0	8,839
R	Clinical & pharmaceutical	130	0	0	0	0	0	0	0	130
T	Misc.	17	0	0	0	0	0	1	0	18
State Totals (tonnes)		29,200	546	.020	1,521	273	0	2,030	0	33,570

* In Queensland contaminated soils from contaminated land are not a trackable waste; rather they are managed under the contaminated land provisions under the EP Act.

Table 3: Discrepancies in movements of controlled waste into Queensland for the period 1 July 2014 to 30 June 2015—Percentage of total movements

Discrepancy Type	NSW	Vic	WA	SA	Tas	ACT	NT	Ext Terr
Consignment non-arrival [†]	1.4%	0.7%	0.7%	0%	0.3%	0%	0%	0%
Transport without authorisation [‡]	0.7%	0%	0%	0%	0%	0%	0%	0%
Non-matching documentation [‡]	0%	0%	0%	0%	0%	0%	0%	0%
Waste data [‡]	0%	0%	0%	0%	0%	0%	0%	0%

[†] The figures stated are for the non-arrival of expired consignments as a percent of the total number of consignments approved in 2014–15. There are also consignments which were approved in 2014–15 which remain open for the 2015–16 year.

[‡] The figures are for transportations into Queensland without authorisation as a percent of the total number of waste movements into Queensland (not as a percent of the total number of waste movements for each individual jurisdiction).

[‡]EHP did not identify any instances where there were discrepancies in the: (a) the information received on the relevant waste transport certificate and the waste transport certificate tear-off; or (b) discrepancies in the waste transportation approved through the consignment authorisation process and the information contained on the relevant waste transport certificate.

Table 4: Number of movements of controlled waste into Queensland for the period 1 July 2014 to 30 June 2015

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr
2,119	22	N/A	1	65	23	0	93	-

Western Australia

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for Western Australia by Hon. Albert Jacob MLA, Minister for Environment; Heritage for the reporting year ended 30 June 2015.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Western Australian Department of Environment Regulation is responsible for administering the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure (NEPM) under the *National Environment Protection Council (WA) Act 1996* and the *Environmental Protection Act 1986*.

The provisions of the Environmental Protection (Controlled Waste) Regulations 2004 provide for the licensing of carriers, drivers, vehicles and/or tanks, and the use of controlled waste tracking forms to ensure controlled waste is transported to an appropriate waste facility.

The Department issued six consignment authorisations for the movement of controlled waste into Western Australia during 2014–15. Subsequent commercial decisions resulted in no controlled waste being transported under two of the consignment authorisations.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by Western Australia

Reporting Year	Consignment authorisations issued
2013–14	5
2014–15	6

Table 2: Quantity of controlled waste into Western Australia for the period 1 July 2012 to 30 June 2015—Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	SA	Tas	ACT	NT	Ex-Terr	Total (tonnes)
A	Plating & heat treatment									0.00
B	Acids									0.00
C	Alkalies									0.00
D	Inorganic chemicals							315.00		315.00
E	Reactive chemicals									0.00
F	Paints, resins, inks organic sludges									0.00
G	Organic solvents									0.00
H	Pesticides									0.00
J	Oils									0.00
K	Putrescible/organic waste									0.00
L	Industrial washwater									0.00
M	Organic chemicals									0.00
N	Soil/sludge							289.20		289.20
R	Clinical & pharmaceutical		2.80							2.80
T	Misc.									0.00
State Totals (tonnes)		0.00	2.80	0.00	0.00	0.00	0.00	604.20		607.00

Table 3: Discrepancies in movements of controlled waste into Western Australia for the period 1 July 2014 to 30 June 2015—Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	SA	Tas	ACT	NT	Ext Terr *
Consignment non-arrival		0					0	
Transport without authorisation		0					0	
Non-matching documentation		0					0	
Waste data		0					0	

Table 4: Number of movements of controlled waste into Western Australia for the period 1 July 2014 to 30 June 2015

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
	1		n/a				19	

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for South Australia by the Hon. Ian Hunter MLC, Minister for Sustainability, Environment and Conservation, for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In South Australia, the Movement of Controlled Waste NEPM operates through the Environment Protection (Movement of Controlled Waste) Policy 2014.

The purpose of the Policy is to enable SA to participate in the national tracking of controlled waste transported from a participating State for delivery to a destination facility in SA or that is transported within SA for delivery to a destination facility in a participating State, in a manner and for purposes consistent with the NEPM. The Policy also includes the imposition of penalties for the contravention of the Policy and other provisions necessary for the application of the Policy in this jurisdiction.

In March 2015, the South Australian online tracking of waste ('WasteTracker') became operational. The online system was adapted from the NSW online tracking of waste and assists waste producers, transporters and operators of waste facilities to apply for consignment authorisations and complete waste transport certificates. The system also enables the EPA to identify exceptions such as incomplete waste transport certificates or waste received at a non-approved facility in real time.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The implementation of the NEPM and Environment Protection (Movement of Controlled Waste) Policy 2014 provides the waste and resource recovery sector with clear requirements for the transport of waste into and out of SA. In addition, the NEPM and Policy enable the EPA to ensure that controlled wastes entering SA are transported and treated in a manner that minimises the potential for adverse impacts on the environment or human health.

Table 1: Number of consignment authorisations issued by South Australia

Reporting Year	Consignment authorisations issued
2013–14	202
2014–15	232

Table 2: Quantity of controlled waste into South Australia for the period 1 July 2014 to 30 June 2015—Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	Tas	ACT	NT	Ex-Terr	Total (tonnes)
A	Plating & heat treatment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	Acids	13.53	256.02	0.00	11.79	0.00	0.00	18.89	0.00	300.23
C	Alkalis	0.00	16.36	27.00	5.07	0.00	0.00	186.04	0.00	234.47
D	Inorganic chemicals	12099.15	15586.41	0.00	374.53	105558.30	234.00	301.48	0.00	134153.87
E	Reactive chemicals	0.00	55.79	0.00	0.00	0.00	0.00	1.30	0.00	57.09
F	Paints, resins, inks organic sludges	56.16	1626.31	134.99	129.35	0.00	0.00	24.86	0.00	1971.67
G	Organic solvents	20.51	26.28	25.11	104.67	0.00	0.00	0.00	0.00	176.57
H	Pesticides	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
J	Oils	45.05	366.79	1355.95	301.89	7.18	0.00	409.24	0.00	2486.10
K	Putrescible/organic waste	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
L	Industrial washwater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M	Organic chemicals	28.50	5.84	0.00	0.00	0.00	0.00	0.00	0.00	34.34
N	Soil/sludge	0.00	399.63	167.00	247.28	0.00	0.00	1.80	0.00	815.71
R	Clinical & pharmaceutical	0.00	0.00	0.00	0.22	15.90	0.00	104.57	0.00	120.69
T	Misc.	13.19	0.00	0.00	2.74	0.00	0.00	64.36	0.00	80.29
State Totals (tonnes)		12276.59	18339.43	1710.05	1177.54	105581.38	234.00	1112.54		140431.53

Table 3: Discrepancies in movements of controlled waste into South Australia for the period 1 July 2014 to 30 June 2015—Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	WA	Tas	ACT	NT	Ext Terr *
Consignment non-arrival	29	19	42	48	46	0	50	0
Transport without authorisation	0	4	0	0	0	0	2	0
Non-matching documentation	82	40	80	88	8	43	70	0
Waste data	6	10	8	12	0	0	13	0

Table 4: Number of movements of controlled waste into South Australia for the period 1 July 2014 to 30 June 2015

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
459	757	169	162	n/a	37	7	319	0

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for Tasmania by the Hon. Matthew Groom MP, Minister for Environment, Parks and Heritage for the reporting year ended 30 June 2015.

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Tasmania, the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure (NEPM) is a state policy under the *State Policies and Projects Act 1993*. The key legislative instrument for implementation of the NEPM is the *Environmental Management and Pollution Control Act 1994*. The Department of Primary Industries, Parks, Water and Environment are the responsible agency for the purposes of implementation of the NEPM.

The NEPM is fully implemented in Tasmania.

Tasmania regularly consults with the other jurisdictions on NEPM matters such as issuing consignment authorisations and the appropriateness of treatment/disposal facilities. Tasmania continues to participate in all implementation aspects of the NEPM including exchange of relevant information through active membership in the Implementation Working Group which has met face-to-face during the reporting period. Issues raised by industry, waste transport companies and other agencies continue to be satisfactorily resolved through this forum.

As controlled waste received from external territories is reported separately, this has particular significance for Tasmania as most of the controlled waste consignment authorisations issued by Tasmania are for controlled wastes returned to Australia from Antarctica.

Approval was given during the reporting period, for a Tasmanian trial to be conducted for the cement kiln processing of Spent Cracking Catalyst from Victoria as an alternate feed stock. The trial was conducted in accordance with the approval given, and an additional trial has since been approved.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

The driving force in achieving the NEPM goal has been ongoing consultation between waste producers, transporters and the Department of Primary Industries, Parks, Water and Environment on controlled waste matters, particularly in relation to reducing the amount of controlled waste generated at source. A reduction in risks of adverse impacts associated with transport of controlled waste on the environment and human health has been achieved through improved waste management.

There has been additional and ongoing consultation between jurisdictions in relation to the appropriateness of issuing consignment authorisations.

Table 1: Number of consignment authorisations issued by Tasmania

Reporting Year	Consignment authorisations issued
2013–14	24
2014–15	26

Table 2: Quantity of controlled waste into Tasmania for the period 1 July 2014 to 30 June 2015—Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	ACT	NT	Ex-Terr	Total (tonnes)
A	Plating & heat treatment									0.00
B	Acids								6.00	6.00
C	Alkalies								0.20	0.20
D	Inorganic chemicals		3700.00						1.22	3701.22
E	Reactive chemicals								0.02	0.02
F	Paints, resins, inks organic sludges		10.00						2.00	12.00
G	Organic solvents								30.00	30.00
H	Pesticides									0.00
J	Oils								65.00	65.00
K	Putrescible/organic waste								92.15	92.15
L	Industrial washwater									0.00
M	Organic chemicals									0.00
N	Soil/sludge								37.50	37.50
R	Clinical & pharmaceutical								0.06	0.06
T	Misc.								3.50	3.50
	State Totals (tonnes)	0.00	3710.00	0.00	0.00	0.00	0.00	0.00	237.65	3947.65

Table 3: Discrepancies in movements of controlled waste into Tasmania for the period 1 July 2014 to 30 June 2015—Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	WA	SA	ACT	NT	Ext Terr *
Consignment non-arrival								
Transport without authorisation								
Non-matching documentation								
Waste data								

Table 4: Number of movements of controlled waste into Tasmania for the period—1 July 2014 to 30 June 2015

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
	3							23

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for Australian Capital Territory by Mr Simon Corbell MLA, Minister for the Environment for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The NEPM has been fully implemented and operational in the Australian Capital Territory since March 2000 with no major issues having been identified with its operation. The Environment Protection Authority continued to work with industry during the review period to ensure efficient implementation of the NEPM.

NEPM information sheets (which include an explanation of producer, transporter and waste facility responsibilities and instructions on how to complete a waste transport certificate) produced by the Environment Protection Authority continue to be of great benefit to stakeholders in ensuring compliance with their statutory requirements.

All parties bound by the NEPM have complied with the NEPM's protocols and information reporting requirements. Regular contact has been maintained with other jurisdictions to ensure cooperative administration of the NEPM.

Movements have continued into the ACT from most jurisdictions for the treatment of polychlorinated biphenyl free contaminated oil by Transformer Maintenance Services Australia Pty Ltd and from the surrounding NSW regions for the treatment of clinical waste by SteriHealth Canberra.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by the Australian Capital Territory

Reporting Year	Consignment authorisations issued
2013–14	57
2014–15	55

Table 2: Quantity of controlled waste into the Australian Capital Territory for the period 1 July 2013 to 30 June 2014—Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	NT	Ex-Terr	Total (tonnes)
A	Plating & heat treatment									0.00
B	Acids									0.00
C	Alkalies									0.00
D	Inorganic chemicals									0.00
E	Reactive chemicals									0.00
F	Paints, resins, inks organic sludges									0.00
G	Organic solvents									0.00
H	Pesticides									0.00
J	Oils	84.80	265.90	44.50						395.20
K	Putrescible/organic waste	385.00								385.00
L	Industrial washwater									0.00
M	Organic chemicals									0.00
N	Soil/sludge	49.61								49.61
R	Clinical & pharmaceutical	261.02								261.02
T	Misc.	7.50								7.50
State Totals (tonnes)		787.93	265.90	44.50	0.00	0.00	0.00	0.00		1098.33

Table 3: Discrepancies in movements of controlled waste into Australian Capital Territory for the period 1 July 2014 to 30 June 2015—Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	WA	SA	Tas	NT	Ext Terr *
Consignment non-arrival	0	0	0					0
Transport without authorisation	0	0	0					0
Non-matching documentation	0	0	0					0
Waste data	0	0	0					0

Table 4: Number of movements of controlled waste into Australian Capital Territory for the period 1 July 2014 to 30 June 2015

NSW	Vic	Qld	WA	SA	Tas	NT	Ext Terr*
846	13	2	0	0	0	0	0

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for Northern Territory by the Minister for the Environment for the reporting year ended 30 June 2015

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The *Waste Management and Pollution Control Act 1998* provides the legislative basis to regulate and administer the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure (NEPM). The Northern Territory Environment Protection Authority (NT EPA) currently administers the NT’s obligations through licensing of scheduled activities that involve the movement of controlled wastes across State/Territory boundaries and the issuing and receipt of Waste Transport Certificates. This level of involvement is commensurate with the terms of the Agreement between States and Territories on matters relating to the implementation of the NEPM. The level of environmental safeguard is further bolstered within the NT by the NT WorkSafe administration of the *Transport of Dangerous Goods by Road and Rail (National Uniform Legislation) Act 2010*.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Movement of controlled waste tends to be from the NT to other states. The NEPM does provide a consistent system for use in the NT when required and the NT has implemented a paper based system for Consignment Authorisations and Waste Tracking Certificates. The NT is exploring options for an electronic database to facilitate better cohesion with tracking requirements under the NEPM.

Table 1: Number of consignment authorisations issued by Northern Territory

Reporting Year	Consignment authorisations issued
2013–14	2
2014–15	1

Table 2: Quantity of controlled waste into Northern Territory for the period 1 July 2014 to 30 June 2015—Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	Ex-Terr	Total (tonnes)
A	Plating & heat treatment									0.00
B	Acids									0.00
C	Alkalies									0.00
D	Inorganic chemicals									0.00
E	Reactive chemicals									0.00
F	Paints, resins, inks organic sludges									0.00
G	Organic solvents									0.00
H	Pesticides									0.00
J	Oils				547.87					41.54
K	Putrescible/organic waste									0.00
L	Industrial washwater									0.00
M	Organic chemicals									0.00
N	Soil/sludge									0.00
R	Clinical & pharmaceutical									0.00
T	Misc.									0.00
State Totals (tonnes)		0.00	0.00	0.00	547.87	0.00	0.00	0.00		41.54

Table 3: Discrepancies in movements of controlled waste into Northern Territory for the period 1 July 2014 to 30 June 2015—Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	WA	SA	Tas	ACT	Ext Terr *
Consignment non-arrival				0				
Transport without authorisation				0				
Non-matching documentation				0				
Waste data				0				

Table 4: Number of movements of controlled waste into Northern Territory for the period 1 July 2014 to 30 June 2015

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
			15				n/a	

Appendix 6:
Jurisdictional Reports on
the Implementation and
Effectiveness of the
National Pollutant Inventory
NEPM

Commonwealth

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for the Commonwealth by the Hon. Greg Hunt MP, Minister for the Environment, for the reporting year ended 30 June 2015

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

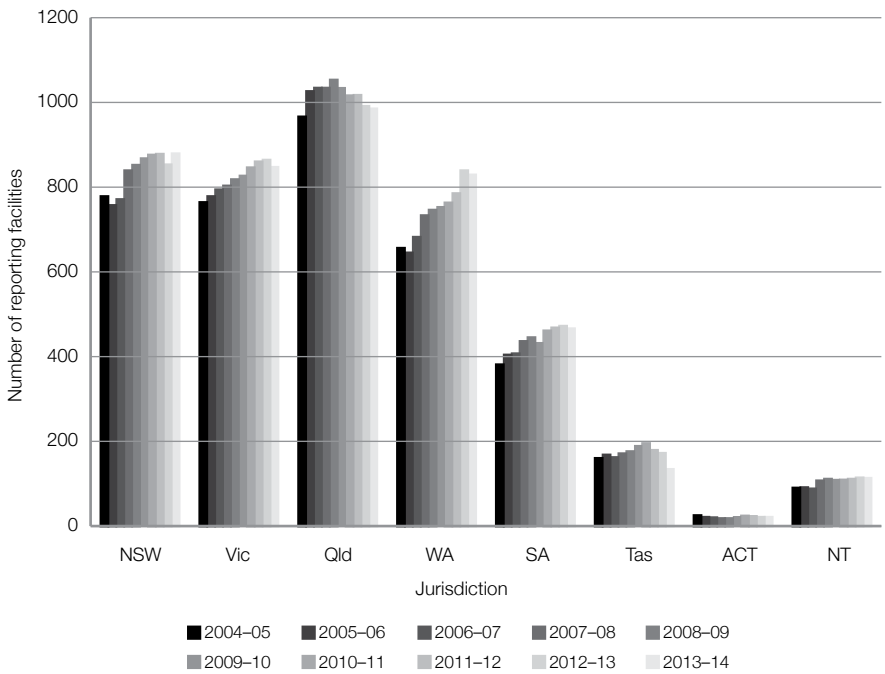
The Commonwealth implements the NEPM administratively and ensures that its obligations under the *National Environment Protection Act 1994* and *National Environment Protection Measures (Implementation) Act 1998* are met.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The number of facilities reporting to the National Pollutant Inventory (NPI) fell from 4,333 in 2012–13 to 4,274 in 2013–14.

Figure 5 below shows that the number of facilities reporting to the NPI in all jurisdictions over the past ten years.

Figure 5: Number of reporting facilities in each jurisdiction by year since 2004–05



The Commonwealth continued to work cooperatively with all jurisdictions to administer the NPI NEPM and improve the online reporting system to ensure that industry reporting is streamlined and the data collected is accurate. The Commonwealth also improved the accessibility of the NPI website to the community, industry, researchers and government, and led work with jurisdictions to update key industry guidance manuals.

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
PUBLIC		
<ul style="list-style-type: none"> 242,112 user sessions on the NPI website 	<ul style="list-style-type: none"> The number of user sessions increased from 205,451 in the previous year There was an increase in the number of complaints related to defects in the behaviour of the NPI database NPI data ranked 9th in public requests for new datasets to be published as open data on data.gov.au (The request for NPI data was grouped with requests for Australian Greenhouse Emissions data and Home Solar Installations data) 	<ul style="list-style-type: none"> 105 calls were received directly to the Commonwealth through the free call phone line 200 email responses were sent to questions received via the NPI website and NPI email address The Commonwealth adopted the Creative Commons Attribution 4.0 International license as the terms for distribution and reuse of published NPI data Maintenance was performed on the mapping functionality of the NPI database
INDUSTRY		
<ul style="list-style-type: none"> 4,274 reports for 2013–14 4,333 reports for 2012–13 4,328 reports for 2011–12 142 new reporters 1 new sector reporting No confidentiality claims submitted 	<ul style="list-style-type: none"> The NPI continued to build positive relationships with key industry stakeholders, researchers and the community 	<p>The Commonwealth published:</p> <ul style="list-style-type: none"> a major update to the NPI Guide, which included substantial contributions from state NPI teams minor updates to industry manuals for Malt Manufacturing and Mining and Processing of non-metallic minerals
GOVERNMENT		
<ul style="list-style-type: none"> 13 facilities from 4 Commonwealth departments reported to the NPI in 2013–14. 	<ul style="list-style-type: none"> The Australian Bureau of Statistics published the first quality assessments of the Essential Statistical Assets for Australia. The NPI dataset was assessed as part of the Pollution and Accumulation of Waste statistics (ESA—102). 	<ul style="list-style-type: none"> The Commonwealth chaired and provided secretariat support for the NPI Implementation Working Group, which oversees key NPI administration activities.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for New South Wales by the Hon. Rob Stokes MP, Minister for the Environment and Minister for Heritage (from 24 April 2014 to 2 April 2015) and the Hon. Mark Speakman, Minister for the Environment and Minister for Heritage (from 2 April to 30 June 2015) for the reporting year ended 30 June 2014.

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The New South Wales Environment Protection Authority implements the National Environment Protection (National Pollutant Inventory) Measure (NEPM) through the provisions in Chapter 4 of the Protection of the Environment Operations (General) Regulation 2009, including:

- definition of reporting premises and substance thresholds
- reporting and record keeping requirements
- compliance and penalty requirements
- emission estimation techniques
- exemptions.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

National Pollutant Inventory reporting

The Environment Protection Authority conducts an annual face-to-face training program, which includes a series of half-day training courses to assist facility reporters with:

- understanding key elements of National Pollutant Inventory reporting
- using the inventory online reporting system
- applying calculation and validation tools rather than emission estimation technique manuals to reduce time and improve accuracy.

The National Pollutant Inventory online reporting system has led to improvements in the quality and accuracy of facility data by including estimation and validation tools and minimising the need for manual data entry. There are opportunities for further improvements, including:

- additional calculation tools to estimate the transfer of NPI substances in waste streams from key industry sectors
- emission factors for non-standard fuels
- improved fugitive emission estimation methods
- an interactive on-line training program.

Public activities

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
PUBLIC		
<ul style="list-style-type: none">• The number of community member visits to the National Pollutant Inventory website was recorded by the Commonwealth.	<ul style="list-style-type: none">• Academics and researchers continue to use the National Pollutant Inventory data for modelling and other studies.• The media utilises National Pollutant Inventory data where environmental issues of concern are identified. <p>Some issues have been identified:</p> <ul style="list-style-type: none">• Community users of NPI data frequently fail to access 'transfer' data as the 'search by form' screen does not incorporate 'transfer' destination searches.• Enquiries from public and media continue to demonstrate a growing awareness of the dataset, however there continues to be a need to provide contextual information about the data.	<ul style="list-style-type: none">• Presentation to stakeholders during consultation.

Victoria

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Victoria by the Hon. Ryan Smith, Minister for Environment and Climate Change (until 29 November 2014) and the Hon. Lisa Neville MP, Minister for Environment, Climate Change and Water, for the reporting year ended 30 June 2015

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

No implementation issues arose during the 2014–15 year.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

The NPI NPEM continues to be effectively implemented in Victoria.

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
PUBLIC		
	<ul style="list-style-type: none"> Following the Hazelwood mine fire in February–March 2014, two community requests were received regarding emissions from the Hazelwood power station, and coal mine. 	
INDUSTRY		
<ul style="list-style-type: none"> 839 published reports for 2013–14 864 published reports for 2012–13 18 new reporters 0 confidentiality claims submitted 	<ul style="list-style-type: none"> Several industry reporters complained about their difficulties in using the NPI online reporting system and specifically the MS Excel calculation tools. 	<ul style="list-style-type: none"> 94% of published industry reports for 2013–14 were submitted online, while 93% were submitted for 2012–13.
GOVERNMENT		
<ul style="list-style-type: none"> 172 desktop audits of published reports 9 site audits 0 regulatory actions 	<ul style="list-style-type: none"> No specific feedback was received from the government. EPA has used the NPI data for air quality modelling; cross-checking licence compliance; prioritising compliance work; and for the review of the Scheduled Premises Regulations. 	<ul style="list-style-type: none"> Approximately 21% of published reports underwent a desktop assessment.

Queensland

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Queensland by Hon. Steven Miles MP, Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Opportunities exist to improve the effectiveness and implementation of the National Pollutant Inventory (NPI). Queensland supports investigating these opportunities through the detailed review of the current National Environmental Protection (NPI) Measure.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
PUBLIC		
	<ul style="list-style-type: none"> There was a significant increase in web based media articles featuring the NPI when compared with the previous year. Eight articles were circulated in 2013–14 and 27 in the 2014–15 period. 	<ul style="list-style-type: none"> NPI emissions and transfer reports were published through the Queensland Open Data portal www.data.qld.gov.au.
INDUSTRY		
<ul style="list-style-type: none"> 27 new reporters 0 new sectors reporting 38 confidentiality claims submitted 	<ul style="list-style-type: none"> The NPI Online reporting system continues to be the preferred method for industry to submit their pollutant emissions and transfer data. Industry interest in receiving NPI training continued during the period. 	<ul style="list-style-type: none"> Three NPI industry training sessions were held in Brisbane with a total of 54 representatives attending. Five onsite audits were conducted during the period to assess the thoroughness and accuracy of facility reporting. All facility reports were subject to desktop evaluation.
GOVERNMENT		
<ul style="list-style-type: none"> 5 desktop audits 5 on-site audits 0 regulatory actions 	<ul style="list-style-type: none"> The Queensland Department of Science Information Technology and Innovation utilised the industry pollutant emissions data to contribute the development of detailed aggregated emissions reports. The Queensland Department of Environment and Heritage Protection (EHP) utilise the industry pollutant emissions data for compliance prioritisation. 	<ul style="list-style-type: none"> Development of an interactive ‘dashboard’ for use by EHP to quickly and simply summarise emissions and risk data in relation to regulated activities.

7 Prior to 14 February 2015 the Minister for Environment and Heritage Protection was Andrew Powell.

Western Australia

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Western Australia by Hon. Albert Jacob MLA, Minister for Environment; Heritage for the reporting year ended 30 June 2015.

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia, the Department of Environment Regulation (DER) is responsible for implementing the National Environment Protection (National Pollutant Inventory) Measure under the *National Environment Protection Council (WA) Act 1996*, the *Environmental Protection Act 1986* and the Environmental Protection (NEPM-NPI) Regulations 1998. The implementation of the NEPM continues to be successful in Western Australia.

DER has identified opportunities for enhanced administration of the NPI NEPM through the collection and reporting of aggregated emissions data. The Perth Air Emissions Study 2011–12 was commenced during the reporting period to update the aggregated emissions data for the greater Perth metropolitan region.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
PUBLIC		
	<ul style="list-style-type: none"> Environment groups and the media utilise NPI NEPM data where environmental issues of concern are identified. Some direct enquiries were received from the public regarding NPI database information. 	<ul style="list-style-type: none"> The NPI NEPM pages of DER's website were updated during the reporting period to improve accessibility.
INDUSTRY		
<ul style="list-style-type: none"> 829 reports for 2013–14 839 reports for 2012–13 40 new reporters No new sectors reporting No confidentiality claims submitted 	<ul style="list-style-type: none"> Widespread compliance with the online reporting system with 95% uptake in WA for 2013–14 (1% increase). Some smaller facilities require above-average reporting guidance due to the lack of dedicated personnel. Major industrial facilities maintain awareness of community interest in their emissions, and ensure reports reflect site emissions. Support provided by DER staff acknowledged by reporters in feedback. 	<ul style="list-style-type: none"> Training sessions provided to industry reporters included information sessions, a webinar and online reporting training. Reporters from other jurisdictions were invited and attended the webinar. Continued follow-up of potential reporters in several industry sectors. Reporters regularly reminded of reporting deadlines and supplied with additional reporting information to that available on website.

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
GOVERNMENT		
<ul style="list-style-type: none"> • 829 desktop audits • Four on-site audits • No regulatory actions 	<ul style="list-style-type: none"> • DER uses the NPI NEPM to inform policy development, program implementation and to support regulatory activity. • DER uses NPI NEPM data for the development of an emissions inventory for the greater Perth metropolitan region. • NPI NEPM data is used to identify and rank WA's major emitters with comparisons made with national data. 	<ul style="list-style-type: none"> • Details of major emitters are provided to DER licensing personnel for information, data cross-checking and follow-up as required. • DER uses toxic equivalency potentials to support the assessment of risk.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for South Australia by the Hon. Ian Hunter MLC, Minister for Sustainability, Environment and Conservation, for the reporting year ended 30 June 2015.

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

A detailed air emissions inventory remains a strategic priority for both the National Pollutant Inventory (NPI) program and the South Australian Environment Protection Authority (EPA). In accordance with the NPI Memorandum of Understanding, the acquiring and publishing of facility emission data remain the priority to ensure the maximum national benefit is derived from the NPI Measure.

Aggregate emissions data are required for reliable comparison with industry emissions, however inadequate funding levels do not currently permit appropriate resourcing for the updating of aggregate emissions data (last done in 2003).

Other pressures on NPI resources include timely updates to Emission Estimation Technique Manuals. A decrease in NPI staff has led to inadequate communication of the program, issues with the database user interface such as maps not working and limited updates to manuals.

A statutory review of the NPI NEPM must be undertaken in order to deliver the necessary improvements to the program. The current MoU states that a statutory review should be undertaken every 5 years however, the last review was conducted in 2005.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

The five NPI industry audits undertaken have led to improvement in the accuracy and better understanding of NPI reporting. The SA NPI team has been actively involved in the NPI implementation working group to continually improve industry reporting material.

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
PUBLIC		
	<ul style="list-style-type: none"> There is a lack of awareness of the NPI program amongst the general public. The media use NPI data. 	<ul style="list-style-type: none"> The SA 2013–14 NPI data set was provided to the SA Government open data portal at www.data.sa.gov.au to create greater awareness and access to NPI data.
INDUSTRY		
<ul style="list-style-type: none"> 483 reports for 2013–14 489 reports for 2012–13 Eight new reporters One new sector reporting No confidentiality claims submitted 	<ul style="list-style-type: none"> Online reporting training has been well received by industry. 	<ul style="list-style-type: none"> A newsletter was published on the SA EPA website to inform reporters about updates to industry guidance material and provide general information about NPI reporting. Industry enquiries have been followed up. Training on NPI requirements, online reporting and drop in sessions were held in Adelaide. A dedicated session to train wineries was held.

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
GOVERNMENT		
<ul style="list-style-type: none"> • 483 desktop audits • Five on-site audits 	<ul style="list-style-type: none"> • The EPA utilises NPI data to implement the Resource Efficiency Component of its load based or 'polluter pays' licensing system • NPI data are vital for developing air quality modelling to provide comprehensive, spatially distributed diffuse and industrial point pollutant emission data across all South Australian air sheds. 	<ul style="list-style-type: none"> • Participation in the NPI Implementation Working Group is important to discuss policy and strategy issues and technical implementation details.

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Tasmania by the Hon. Matthew Groom MP, Minister for Environment, Parks and Heritage for the reporting year ended 30 June 2015.

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The National Pollutant Inventory NEPM continues to be successfully implemented in Tasmania.

Tasmania is supportive of the recent internal Commonwealth review the NPI and continues to work with the Commonwealth to assist in implementing a number of outcomes of the review.

The reduction in funding to the NPI by the Commonwealth is of concern as it will severely reduce the capacity for on-going expansion and enhancement of the NPI.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
PUBLIC		
	<ul style="list-style-type: none"> Few direct enquiries from the public regarding NPI data. NPI data is used when specific issues are being considered and mostly by interest groups. 	<ul style="list-style-type: none"> Low awareness of the NPI data at the community level in Tasmania.
INDUSTRY		
<ul style="list-style-type: none"> 133 reports for 2013–14 172 reports for 2012–13 One new reporter No new sectors reporting No confidentiality claims submitted 	<ul style="list-style-type: none"> Ongoing guidance required for small facilities. 99% of reports received via the online reporting system. 	<ul style="list-style-type: none"> Ongoing training and site visits to assist reporters.
GOVERNMENT		
<ul style="list-style-type: none"> 133 desktop audits 2 on-site audits No regulatory actions 	<ul style="list-style-type: none"> EPA Division staff access NPI data to assist with relevant projects. 	<ul style="list-style-type: none"> Participation in the NPI Implementation Working Group Reminders sent to financial year reporters to ensure reports were received by the due date.

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for the Australian Capital Territory by Mr Simon Corbell MLA, Minister for the Environment for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

- The ACT Government implemented the NEPM under the provisions of the ACT's *Environment Protection Act 1997*.
- There was a continued need for training of reporters using the online reporting system due to staff turnover.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
PUBLIC		
	<ul style="list-style-type: none"> • No specific feedback was received from the community. 	
INDUSTRY		
<ul style="list-style-type: none"> • 21 reports for 2013–14 • 21 reports for 2012–13 • No new reporters • No new sectors reporting • No confidentiality claims submitted 	<ul style="list-style-type: none"> • Some facilities continued to require one-on-one training for understanding of the NEPM and the online reporting system. 	<ul style="list-style-type: none"> • All ACT reporters used the online reporting system. • One-on-one training sessions continued to work successfully. • Industry enquiries were responded to in a timely manner.
GOVERNMENT		
<ul style="list-style-type: none"> • 21 desktop audits • No on-site audits • No regulatory actions 	<ul style="list-style-type: none"> • No specific feedback was received from the government. 	<ul style="list-style-type: none"> • Every NPI report underwent a desktop validation. • The ACT Government liaised with other jurisdictions to achieve a nationally consistent implementation.

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Northern Territory by the Minister for the Environment for the reporting year ended 30 June 2015.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The National Pollutant (NPI) program is implemented in the Northern Territory (NT) through an Environment Protection Objective (EPO) established under the *Waste Management and Pollution Control Act 1998*.

Reporting transfers of NPI substances is more consistent as industry gains an understanding of the reporting requirements.

The NT does not perform aggregate emissions data (AED) modelling as required by the NPI NEPM. AED includes diffuse sources of emissions such as fuel stations, motor vehicles and other non-road engines.

Collaborative work has continued on standardising the desktop auditing of reports across all jurisdictions.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
PUBLIC		
N/A	N/A	N/A
INDUSTRY		
<ul style="list-style-type: none"> • 111 reports for 2014–15 • 1 new reporter • 0 new sectors reporting • 0 confidentiality claims submitted 	<ul style="list-style-type: none"> • Industry feedback indicated that interaction with the on-line reporting system was generally positive with the exception of 2 reporters which required a high level of assistance in lodging reports • 100% of NT reporters used the on-line reporting system 	N/A
GOVERNMENT		
<ul style="list-style-type: none"> • 0 desktop audits • 0 on-site audits • 2 regulatory actions taken (written warnings for late reporting) 	<ul style="list-style-type: none"> • The NT EPA used emissions data from the NPI to assist in environmental licensing issues. 	N/A

Appendix 7: Jurisdictional Reports on the Implementation and Effectiveness of the Used Packaging Materials NEPM

Commonwealth

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for the Commonwealth by the Hon. Greg Hunt MP, Minister for the Environment, for the reporting year ended 30 June 2015

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Used Packaging Materials NEPM is implemented and enforced by participating jurisdictions through necessary laws and other administrative arrangements. It requires participating jurisdictions to establish a statutory basis for ensuring that signatories to the Australian Packaging Covenant (the Covenant) are not competitively disadvantaged in the market place by fulfilling their commitments under the Covenant.

The Covenant is an agreement entered into by governments and industry participants in the packaging supply chain, based on the principles of product stewardship and shared responsibility for reducing the environmental impacts of consumer packaging.

The majority of packaging brand owners in Australia fall within one or more state and territory jurisdiction. If they are not exempt from the NEPM and Covenant, brand owners must become Covenant signatories, or become subject to NEPM requirements.

The NEPM requires participating state and territory jurisdictions to report annually on brand owners that are subject to NEPM requirements, carry out surveys of packaged products to ascertain the effectiveness of the NEPM, and report local government collection and participation data for kerbside or other municipal material recovery systems.

The Commonwealth NEPM applies to packaging brand owner companies with over 50 per cent Commonwealth ownership, and to the Commonwealth's jurisdictional territories. Australia Post is the only Commonwealth brand owner under the definition of the NEPM, and Christmas and Cocos Keeling Islands are the only Commonwealth territories where the NEPM could be applied.

The Australian Government and Australia Post are signatories to the Covenant, and therefore are not subject to the requirements of the NEPM. The Australian Government encourages all Commonwealth agencies, including Australia Post, to undertake Covenant activities.

The Australian Government, as a member of the Covenant Management Committee and Covenant Council, participates in governance of the Covenant. In 2014–15 the Australian Government provided 50 per cent of the total government funds required for Covenant Secretariat operating costs.

The NEPM requires the Commonwealth to provide information annually to the NEPC on the overall national performance of the Covenant. In accordance with Section 19 of the NEPM, the Covenant Council is to provide information to the Commonwealth in relation to:

- membership of the Covenant expressed as both the number of signatories and the proportion of consumer packaging used in Australia represented by those signatories
- the number of action plans lodged with the Covenant Council
- recovery and utilisation rates reported by Covenant signatories in accordance with their action plans under the Covenant, with reference to the key performance indicators and targets specified in the Covenant, and
- a statement of interpretation of the information.

The Covenant's five-year Strategic Plan expired on June 2015.

In February 2015, environment ministers agreed to extend the Covenant for a further 12 months and for officials to engage with the packaging industry and return to ministers with an approach to be taken from 1 July 2016.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

At the end of June 2015, there were 967 Covenant signatories in total nationally, of which 924 (96 per cent) were compliant. Non-compliant signatories are removed from the register of Covenant signatories and referred to the relevant state and territory government for follow up under the NEPM in each jurisdiction.

Compliant brand owner signatories fulfil the following Covenant requirements:

- submit an action plan within three months of becoming a signatory that includes the information set out in Schedule 1 to the Covenant
- implement the submitted action plan and the Covenant's Sustainable Packaging Guidelines
- by 31 March each year (following the year in which a company becomes a signatory) submit an annual report that includes the information set out in Schedule 1 to the Covenant
- agree to an independent audit of annual report and action plan implementation if required
- pay the required contribution to the Covenant Fund
- maintain and make available records of the implementation of action plans, which can validate the data submitted in annual reports, and
- assist the Covenant Council in responding to complaints about action plans or the design and use of signatory packaging.

Key highlights of activities managed under the Covenant include:

- Continued improvement across all key performance reporting indicators, and notable improvements by signatories in their performance.
- Facilitation of a range support programs including action plan workshops for new signatories, supply chain forums and Packaging Assessment Forums to approximately 1 400 participants since 2010.
- Increased investment by industry to Covenant projects with payments in excess of \$4.1 million being made to fund recycling and litter projects nationally, within states and local governments.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for New South Wales by the Hon. Rob Stokes MP, Minister for the Environment and Minister for Heritage (from 24 April 2014 to 2 April 2015) and Hon. Mark Speakman SC MP, Minister for the Environment, Minister for Heritage (from 2 April to 30 June 2015) for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Under the Waste Less, Recycle More initiative, the NSW Government is committed to reducing packaging waste in the State through a range of funding priorities, including waste and recycling infrastructure, recycling innovation, business recycling, and littering. To the end of 2014–15 Waste Less, Recycle More has awarded \$66.9 million to infrastructure, \$12.5 million to businesses, and \$5.7 million to litter, including 103 litter projects. It has also resulted in 7,241 businesses having free waste assessments through the Bin Trim program, and engagement with the Australian Packaging Covenant through a co-funded program, which resulted in the awarding of \$2.95 million for waste projects. The NSW Government has also committed \$8.5 million as part of the Recycling Innovation Fund for innovative projects concentrating on priority problem wastes, which includes waste types used for packaging such as plastics.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

New South Wales has worked closely with the Australian Packaging Covenant regarding the applicability of the NEPM to potential signatories. New South Wales has also communicated with industry that have sought clarification of the regulatory requirements. 123 companies were referred to the NSW Environment Protection Authority between July 2014 and June 2015 due to their status as non-signatories to the Australian Packaging Covenant or due to their non-compliance as signatories.

Reporting Year	Number of covenant signatories
2013–14	380
2014–15	375

Recovery Data

Nil (no brand owner was subject to record-keeping obligations under the New South Wales Regulation).

Supporting Data

Clause 18 of the NEPM requires jurisdictions to carry out surveys of packaged products to ascertain the effectiveness of the NEPM in preventing free riding. New South Wales carried out the survey in December 2014 and the results were provided to the Australian Packaging Covenant (APC).

Complaints, Investigations and Prosecutions

No complaints in relation to specific businesses were received. No investigations or prosecutions were undertaken.

Statement of Interpretation of the Information

New South Wales has focused on the reduction of packaging waste through the Waste Less, Recycle More initiative. It has continued to engage with the Australian Packaging Covenant to meet the NEPM's outcomes.

Local Government Data Local government data is available on the NSW Environment Protection Authority's website www.epa.nsw.gov.au/wastetools/surveys.htm

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Victoria by the Hon. Ryan Smith, Minister for Environment and Climate Change (until 29 November 2014) and the Hon. Lisa Neville MP, Minister for Environment, Climate Change and Water, for the reporting year ended 30 June 2015

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Implementation of the NEPM in Victoria is through the Environment Protection Waste Management Policy (Used Packaging Materials) (WMP). The need for further work on the methodology for auditing brand owners under clause 16(4) of the NEPM has been identified.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The primary purpose of the Used Packaging Materials NEPM is to establish a statutory basis for ensuring that signatories to the Australian Packaging Covenant are not competitively disadvantaged in the marketplace by fulfilling their commitments under the Covenant.

The Secretariat of the Covenant is responsible for initially approaching companies that are identified as brand owners (and potential brand owners) to encourage them to become signatories to the Covenant. The Secretariat then refers non-signatory brand owners and non-compliant signatory brand owners to jurisdictions. This is done in line with compliance procedures set out in Schedule 3 of the Covenant. Jurisdictions then write to, and speak with, representatives of the companies referred to them.

By 30 June 2015, there were 364 Victorian signatories (up from 324 on 30 June 2014), including 317 brand owners registered in Victoria (up from 282).

Reporting Year	Number of covenant signatories
2012–13	322
2013–14	324
2014–15	364

Recovery Data

Clause 18 of the Used Packaging Materials NEPM requires jurisdictions to carry out surveys of packaged products ('brand owner surveys') at least once every year to ascertain the effectiveness of the measure in preventing free riding.

The last brand owner survey was conducted in December 2014 with results provided to the Covenant Secretariat in December 2014. The timing of the next brand owner survey is not yet confirmed.

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Queensland by the Hon. Dr Steven Miles, Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef⁸ for the reporting year ended 30 June 2014

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

There were no significant implementation issues arising in 2014–15.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

The primary purpose of the National Environment Protection (Used Packaging Materials) Measure (NEPM) is to establish a statutory framework to ensure that signatories to the Australian Packaging Covenant are not competitively disadvantaged in the marketplace as a result of fulfilling their signatory commitments.

In Queensland the NEPM is given effect through the Waste Reduction and Recycling Regulation 2011. Covenant activities in Queensland are administered by the Department of Environment and Heritage Protection (EHP).

As at 30 June 2015, there were 66 compliant Queensland signatories.

Reporting Year	Number of covenant signatories
2013–14	74
2014–15	66

Jurisdictional activities

- Chair of the Australian Packaging Covenant Council.
- Actively contributing to and supporting the administration processes of the Australian Packaging Covenant.
- Continued support for and provision of funding towards national and state-based projects.
- Continued support for and provision of funding towards compilation of the National Litter Index
- Brand owner survey—Clothing and soft goods.

Project Funding

In the 2014–15 funding round, 5 new project proposals were approved, totalling \$4.59 million. These were:

- Central Queensland Glass Beneficiation Plant Project—Kriaris Recyclables Processing
- Pilot Study for Public Place Recycling and Litter Management—Townsville City Council.
- Public Place Recycling Rollout City of Gold Coast
- Littering and Illegal Dumping Community and Industry Partnership Project—Lockyer Valley Regional Council
- Mackay Regional Material Recovery Facility Upgrade and Glass Crushing Project—Mackay Regional Council

Recovery Data

Nil (no brand-owner was subject to record-keeping obligations under the Queensland Regulation)

⁸ Prior to 14 February 2015 the Minister for Environment and Heritage Protection was Andrew Powell.

Supporting Data

Clause 18 of the NEPM requires jurisdictions to undertake annual brand owner surveys. In 2014 a survey of clothing and soft goods brands was completed. Products ranging from shoes, bed linen, knitting products, home wares and women's, men's and children's clothing were surveyed. 20 brand owners were identified. The results of this survey were provided to the Covenant Secretariat.

Complaints, Investigations and Prosecutions

No complaints were received during the reporting period.

Statement of Interpretation of the Information

Nil

Local Government Data All local governments are required to provide information relating to paper and packaging collection by 30 September of each year. It is not possible to collect and analyse the detailed data and meet the publishing timeframe of this report. The information will be published on EHP's website by December 2014 at www.ehp.qld.gov.au.

Western Australia

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Western Australia by Hon Albert Jacob MLA, Minister for Environment; Heritage for the reporting year ended 30 June 2015.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia, the National Environment Protection (Used Packaging Materials) Measure is implemented by the Department of Environment Regulation (DER) under the *National Environment Protection Council (WA) Act 1996*, the *Environmental Protection Act 1986* and the Environmental Protection (NEPM-UPM) Regulations 2007.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

DER continued to provide advice to brand owners and encourage participation in the Australian Packaging Covenant during the 2014–15 reporting period.

During the reporting period, DER contacted four brand owners in relation to the NEPM. These brand owners were referred by the Covenant Secretariat for being non-compliant with the Covenant, or for failing to respond to requests to join the Covenant. Of these:

- two became compliant signatories; and
- two indicated their intent to become compliant signatories.

During the reporting period, the number of Western Australian signatories decreased from 53 to 50.

Recovery Data

No Western Australian based companies have been required to provide records for auditing.

Supporting Data

The brand owner survey was undertaken during the 2014–15 reporting period.

Complaints, Investigations and Prosecutions

No complaints were received, or investigations or prosecutions undertaken, during the 2014–15 reporting period.

Statement of Interpretation of the Information

Not applicable

Local Government Data Local government data will be available at www.der.wa.gov.au from June 2016.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for South Australia by the Hon. Ian Hunter MLC, Minister for Sustainability, Environment and Conservation, for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Legislative, Regulatory and Administrative Framework

The Environment Protection (Used Packaging Materials) Policy 2012 (the Policy) was gazetted in December 2012. The Policy is the legal instrument to enforce the obligations of the NEPM. The Policy provides the regulatory underpinning for the Australian Packaging Covenant (the Covenant). The alignment of the NEPM/Policy and the Covenant is the key to providing national consistency in regulatory support for packaging.

In 2014–15, South Australia continued to strengthen its relationship with Industry and other jurisdictions to ensure national consistency around the enforcement of the National Environment Protection (Used Packaging Materials) Measure 2011 (NEPM) and the Environment Protection (Used packaging Materials Policy 2012 (Policy) at a state level.

Implementation Issues Arising

No significant issues arose with the implementation of the Policy in South Australia.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

South Australia has continued to promote and support the implementation of the Covenant, and has been represented on national and jurisdictional bodies. South Australia also promoted the Covenant through participation in industry and public seminars to advise brand owners of their obligations under the state Policy, should they choose not to join the Covenant.

During this reporting period (2014–15) 19 companies were referred to the Environment Protection Authority (EPA) by the Covenant Secretariat to determine if there is a requirement to enforce the obligations of the South Australian Policy. South Australia continues to contact companies that are referred to the EPA for action to advise them of their requirement to comply with the Policy in this state.

Reporting Year	Number of covenant signatories
2013–14	51
2014–15	54

Recovery Data

Two brand owners were required to report during this reporting period. The EPA continues to work with these brand owners to assist them in ensuring compliance with the Policy through the development and implementation of an action plan.

Supporting Data

Clause 18 of the NEPM requires jurisdictions to carry out surveys of packaged products to ascertain the effectiveness of the measure in preventing free riding. A Brand Owners Survey, to identify those companies, was undertaken in November 2014. The survey was undertaken at various retail outlets in Adelaide in accordance with the Brand Owners Survey Methodology that was agreed to by all jurisdictions in 2011. The list of companies identified as non-signatories in South Australia to the Covenant were forwarded to the Covenant secretariat.

Complaints, Investigations and Prosecutions

No complaints were received during this reporting period.

Statement of Interpretation of the Information

South Australia continued to implement the NEPM through the South Australian (Used Packaging Materials) Policy 2012. South Australia continues to promote and support the implementation of the Covenant through a range of initiatives such as collaboration with industry and other jurisdictions on consistent application of the Covenant and NEPM/Policy requirements.

Local Government Data

Data is available on the Environment Protection Authority's website

Awaiting receipt of all Local Government Data. Data to be provided by end October 2015.

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Tasmania by the Hon. Matthew Groom MP, Minister for Environment, Parks and Heritage for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Legislative, regulatory and administrative framework

The National Environment Protection (Used Packaging Materials) Measure (NEPM) is a state policy under the *State Policies and Projects Act 1993*.

Implementation Issues Arising

Nil.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

Negotiations with companies that fall within the NEPM threshold to become signatories to the Covenant have not been completed during the reporting period. The NEPM has provided a strong incentive for them to join the Covenant. Tasmania has fifteen company signatories and seventeen covenant signatories overall.

Reporting Year	Number of covenant signatories
2013–14	17
2014–15	17

Recovery Data

No recovery data to report under Clause 16 of the NEPM.

Supporting Data

No surveys completed during the reporting period.

Complaints, Investigations and Prosecutions

No complaints regarding brand owners or Covenant signatories were received in the reporting period, and no investigations or prosecutions were necessary.

Statement of Interpretation of the Information

Not applicable.

Local government data

Year (reporting period):	None reported for 2014-15, the below financial data is based on 2013-14 local government surveys.
Total number of councils reporting:	19
Percentage of total councils:	73.08% of total
Percentage of total councils reporting, broken down into the regional waste management groups:	<p>Northern Tasmanian Waste Management Group—100% (2 of 8 councils did not provide a kerbside recycling service)</p> <p>Cradle Coast Waste Management Group—42.86%</p> <p>Southern Waste Strategy Authority—83.33%</p> <p>Independent councils—0% (1 of 2 councils did not provide a kerbside recycling service)</p>

Container types and collection frequencies for all containers (e.g. crate, split bin or bag) provided for kerbside collection by number of councils

Container type	Material type collected in container	Frequency of service	Total no. of councils
Crate	Comingled	Weekly	1
MGB 140L	Comingled	Fortnightly	2
MGB 240L	Comingled	Fortnightly	13
Offer both MGB 140L & 240L options	Comingled	Fortnightly (for both options)	3

Other types of recycling services (e.g. drop-off) by number of councils

All councils provide alternative drop-off facilities either at landfills or at waste transfer stations. Several councils offer recycling bins at council parks and grounds.

Total number of premises/households

Residential	176,572
Non-residential	16,623

Number of households/premises serviced by recycling collections

	Kerbside	Drop-off (optional)
Residential	153,408	131,139
Non-residential	3,558	3,547

Average premises fee charged by council for recycling services

Residential	\$93.57
Non-residential	\$117.17

Annual per premise cost to council to provide a recycling service

Residential	\$80.21
Non-residential	\$108.64

Proportion of households/premises with access to a recycling service

81.93%

Average participation rate

82.06%

Table 1: Amounts of materials collected at the kerbside sent for secondary use / energy recovery and contamination (waste) disposed of to landfill 1 July 2014 to 30 June 2015

Material types collected at kerbside	Kerbside recycling collected (in tonnes)	Kerbside recycling sold or sent for secondary use including energy recovery by material type (in tonnes)	Kerbside recycling residual waste (contaminants) disposed of to landfill (only report total tonnes)
TOTAL PACKAGING PAPER i.e. cardboard and liquid paper board		24,250	
TOTAL NON PACKAGING PAPER i.e. paper mixed, paper white office, newspaper and magazines		13,484	
TOTAL GLASS		15,601	
TOTAL PLASTICS		2,197	
TOTAL ALUMINIUM (cans)		620	
TOTAL STEEL (cans, tins etc.)		1040	
TOTAL	62,118	57192	4926

The above data represent the total amount of recyclables processed in Tasmania, including kerbside recycling.

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for the Australian Capital Territory by Mr Simon Corbell MLA, Minister for the Environment for the reporting year ended 30 June 2015.

PART 1 — IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The ACT Government carries out both the functions of state and local government. In general the Environment and Planning Directorate (EPD) has responsibility for state government functions while the Territory and Municipal Services Directorate is responsible for the local government functions.

The Used Packaging Materials Industry Waste Reduction Plan (IWRP) was passed through the ACT Parliament in November 2006 as an instrument developed under the *ACT Waste Minimisation Act 2001* to implement the NEPM requirements in the ACT. The IWRP Instrument was updated in 2013 to ensure consistency with the new Australian Packaging Covenant (APC) and the NEPM.

The ACT is a signatory to the APC and is implementing a range of measures outlined in the ACT Action Plan for the Australian Packaging Covenant 2011–16. The Action Plan can be accessed at www.environment.act.gov.au/waste. ACT representatives attend APC meetings and engage with other jurisdictions to work towards reducing packaging waste.

The ACT Waste Management Strategy 2011–25 (the Waste Strategy) sets a clear direction for the management of waste in the ACT with the goal of achieving full resource recovery and a carbon neutral waste sector.

- The ACT Government continues to implement the Waste Strategy via a suite of measures including the Actsmart programs.
- Actsmart programs target ACT businesses, households, schools and the community sector.
- The Actsmart Business Recycling program was established in 2009 to provide advice to the business and office sector to assist in implementing waste reduction and recycling measures aimed at reducing waste to landfill and CO₂ emissions. It has assisted 686 sites as of May 2015 with 286 of these being fully accredited under the scheme. In 2013–14 the accredited sites diverted some 16,000—of general waste in 2013–14 and 1,750 m³ of organic material from landfill to recycling. (Note the 2014–15 data is presently being collated). The 695 sites across the Territory participating in these programs include major shopping centres, fast food outlets, Canberra Stadium, Manuka Oval, Canberra Museum and Gallery, AIS, Calvary Health Care, Calvary John James Hospital, National Arboretum and National Zoo & Aquarium. Including Environment and Planning Directorate, 283 sites were accredited, meeting the recycling standard set by the programs. Over 40,000 staff have access to recycling through these programs. Since the program started in 2009, accredited sites have reduced waste to landfill by 48,458 cubic metres. This represents a reduction in emissions of 7009 tCO₂-e, equivalent to taking 1894 cars off the road for a year. In 2014–15, the 283 accredited sites have recycled approximately 11,980 cubic metres of mixed recyclables, representing 966 tCO₂-e avoided, equivalent to taking 261 cars off the road for a year, and 1676 cubic metres of organic material equivalent to 919 tCO₂-e avoided, equivalent to taking 248 cars off the road for a year.
- The Actsmart Business Recycling program was extended to Queanbeyan businesses and offices in 2014–15 via a cross border agreement with Queanbeyan City Council.
- The Actsmart Public Event Recycling program provides advice to Public Event holders to assist in implementing recycling at their public event. As at June 2015, 43 events had participated in the program, including Floriade, National Multicultural Festival, ActewAGL Royal Canberra Show, National Folk Festival, sporting events, fetes and fairs. Diversion of waste into recycling streams included 30,976 kilograms of mixed recycling equivalent to 39 tCO₂-e avoided, equivalent to taking 10 cars off the road for a year, and 11,494 kg of organic waste equivalent to 18 tCO₂-e avoided, equivalent to taking 4 cars off the road for a year. Over 1,000,000 visitors had the opportunity to recycle at these events.
- In 2014–15 the ACT Government initiated a review of the *Waste Minimisation Act 2001* as part of its consideration of a more robust regulatory framework to support the Territory achieving its waste policy objectives.
- Actsmart schools deliver recycling advice, accreditation and related curriculum support to 100% of the schools in the ACT.

- In 2014–15 the Territory assessed the business case for new waste infrastructure. In the 2015–16 Budget the Government committed \$2.8 million over two years to progress the procurement of new waste services and associated infrastructure.

The ACT Government is working constructively within the Council of Australian Governments to develop more effective mechanisms to regulate packaging waste.

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

Reporting Year	Number of covenant signatories
2013–14	5
2014–15	5

Recovery Data

There were five Australian Packaging Covenant (APC) signatories registered in the ACT as of June 2015, all of which were industry groups or Government. APC records also indicate that at this time there were ten additional entities, classed as brand owners, considered to be operating their head office in the ACT. However, all of these organisations were listed as exempt from the Covenant due to small turnover, being a subsidiary, or due to insufficient brand audit information.

In 2014–15 the ACT Government’s highly successful Actsmart Business Recycling program continued to support the reduction and recycling of waste by Canberra businesses. Accredited businesses have all achieved a reduction of waste to landfill. Some, such as Canberra Stadium have reduced waste to landfill by over 90% with most of the recovered material waste being packaging waste.

Many participants in the Actsmart programs have not only reduced waste to landfill but have reduced their waste management costs.

Supporting Data

No retailer survey of packaged products was conducted in the ACT in 2014–15.

A 2014 audit of domestic kerbside recycling indicated a recycling recovery rate of 66% for households in the ACT and a recycling contamination rate of 7.8%.

Recent data from TAMS shows a materials recovery facility contamination rate of around 11%.

Complaints, Investigations and Prosecutions

No complaints, investigations, prosecutions or enforcement action were recorded in 2014–15.

Local Government Data Local government data for the ACT is available on the Territory and Municipal Services Directorate website www.tams.act.gov.au/recycling-and-waste/resources

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Northern Territory by the Minister for the Environment for the reporting year ended 30 June 2015.

PART 1—IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Northern Territory (NT) Government is not a signatory to the Australian Packaging Covenant as the current Covenant remains unlikely to deliver cost effective outcomes relevant to the unique demographic position of the NT.

There are no known major brand owners based in the NT who are likely to have responsibilities under the National Environment Protection (Used Packaging Materials) Measure. In the event that NT based brand owners with obligations under the NEPM were found to be non-compliant, there is provision under the *Waste Management and Pollution Control Act 1998* to apply an Environmental Protection Objective to ensure the NEPM can be applied legislatively in the NT.

The *Environment Protection (Beverage Containers and Plastic Bags) Act (NT)* prohibits retailers from providing customers with light weight polyethylene shopping bags with handles and establishes the legislative framework for a Container Deposit Scheme (CDS).

PART 2—ASSESSMENT OF NEPM EFFECTIVENESS

There have been no brand-owners identified in the NT who would have obligations under the NEPM. No reporting has been required under clause 16 of the NEPM. No supporting data surveys were conducted in 2014–15 under clause 18 of the NEPM. No complaints have been received, investigations undertaken nor prosecution mounted pursuant to this measure.

The NEPM is considered a less effective mechanism in the NT as the major contributors to the waste stream are brand-owners not based in the NT. Brand-owners who are Covenant signatories are able to meet their national targets more cost effectively in other more populous jurisdictions where well established recycling infrastructure and high volumes of recyclable material are available.

Only two Councils in the NT provide kerbside recycling services. Due to the small, dispersed population and distance to markets, kerbside recycling is only financially viable in the major population centres of Darwin and Palmerston. Recycling activities in other areas face significant barriers and costs and may be both environmentally and economically unviable. Voluntary local drop-off recycling schemes are in place in a number of remote communities but collecting reliable data from these communities is problematic.

Reporting Year	Number of covenant signatories
2013–14	n/a
2014–15	n/a

Recovery Data

A total of 160 048 569 beverage containers approved under the Container Deposit Scheme were sold into the Northern Territory during 2014–15. A return rate of 51.52% was achieved over this period. During the 2014–15 reporting period 82,452,827 containers were reused, recycled or appropriately disposed of.

Supporting Data

There have been no brand-owners identified in the NT which would have obligations under clause 18 of the NEPM in 2014–15.

Complaints, Investigations and Prosecutions

During 2014–15, 14 officers were appointed under the *Environment Protection (Beverage Containers and Plastic Bags) Act (NT)* to monitor compliance and undertake enforcement action.

Statement of Interpretation of the Information

The Northern Territory Government imposes an investigative approach to complaints about litter and used packaging under the *Waste Management and Pollution Control Act 1998* and the *Environment Protection (Beverage Containers and Plastic Bags) Act (NT)*. Prosecution will be mounted pursuant to those Acts where required.

Local Government Data Not available.



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