

Annual Report 2017–18

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Chair's foreword

It is my privilege to be appointed as the Chair of the National Environment Protection Council. I would like to acknowledge and thank my predecessor, the Hon Josh Frydenberg MP, who headed the Council for the 2017–18 reporting year.

In 2017–18 the Council continued to make sure that Australians are protected from air, water and soil pollution, wherever they live in Australia. The key means for achieving this are through the National Environment Protection Measures, established by the Council. These measures provide nationally consistent environment standards, goals and protocols which cover air, site contamination, controlled waste, pollutants and used packaging.

By world standards Australia has very clean air, but there is still work to do. Victoria is leading work to review the reporting standards for ozone, nitrogen dioxide and sulfur dioxide, with the aim of strengthening these standards by the end of 2019.

During 2017–18, public consultation discussion papers were finalised for the review of the National Pollutant Inventory Measure. This is a key information source for the community, industry and governments on substance emissions in Australia. The review will help to enhance the operations of the measure and improve pollution tracking across the country.

I thank all Council members and those who have supported the Council in its work. In 2018–19 the Council will continue to improve the National Environment Protection Measures to protect the Australian environment and the wellbeing of the community.



Sussan Ley
Chair
National Environment Protection Council



Members of the National Environment Protection Council

From 1 July 2017 to 30 June 2018

Jurisdiction	Member	Duration of membership
Commonwealth	The Hon Josh Frydenberg MP Minister for the Environment and Energy	Full year
New South Wales	The Hon Gabrielle Upton MP Minister for the Environment	Full year
Victoria	The Hon Lily D'Ambrosio MP Minister for Energy, Environment and Climate Change	Full year
Queensland	The Hon Leeanne Enoch MP Minister for Environment and the Great Barrier Reef	12 December 2017–30 June 2018
	The Hon Steven Miles MP Minister for Environment and Heritage Protection; Minister for National Parks and the Great Barrier Reef	16 February 2015–11 December 2017
Western Australia	The Hon Stephen Dawson MLC Minister for Environment	Full year
South Australia	The Hon David Speirs MP Minister for Environment and Water	22 March 2018–30 June 2018
	The Hon Ian Hunter MLC Minister for Sustainability, Environment and Conservation	21 January 2013–21 March 2018
Tasmania	The Hon Elise Archer MP Minister for Environment	2 October 2017–30 June 2018
	The Hon Matthew Groom MP Minster for Environment, Parks, and Heritage	20 May 2014–1 October 2017
Australian Capital Territory	Mr Mick Gentleman MLA Minister for the Environment and Heritage	Full year
Northern Territory	The Hon Eva Lawler MLA Minister for Environment and Natural Resources	26 June 2018–30 June 2018
	The Hon Lauren Moss MLA Minister for Environment and Natural Resources	1 July 2017–25 June 2018

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Overview

ABOUT THE NATIONAL ENVIRONMENT PROTECTION COUNCIL

In 1992, the Commonwealth and the states and territories entered into an Intergovernmental Agreement on the Environment, providing for the establishment of a body to determine national environment protection measures. This resulted in the creation of the *National Environment Protection Council Act 1994* (Cth) (the NEPC Act), which formally established the National Environment Protection Council as a body in 1995. Each state and territory has enacted mirror legislation. The Council consists of environment ministers from all jurisdictions, including the Commonwealth.

The objects of the NEPC Act are to ensure that, through the establishment and operation of the Council:

- people enjoy the benefit of equivalent protection from air, water or soil pollution and from noise, wherever they live in Australia
- decisions of the business community are not distorted, and markets are not fragmented, by variations between participating jurisdictions in relation to the adoption or implementation of major environment protection measures.

The Council has two primary functions under the NEPC Act:

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

National Environment Protection Measures are a set of legislative instruments designed to assist in protecting or managing particular aspects of the environment, in a uniform and consistent way across all jurisdictions.

Since 1 July 2014 the Council has received operational, administrative and corporate support from the NEPC Business Services Team within the Australian Government Department of the Environment and Energy (the Department). This followed decisions to abolish the Standing Council on the Environment and Water in 2013 and the NEPC Service Corporation in 2014.

THE NATIONAL ENVIRONMENT PROTECTION COUNCIL COMMITTEE

The National Environment Protection Council (NEPC) Committee was established under the NEPC Act. The Committee consists of a NEPC Executive Officer, and a nominee of each member of the Council. The Committee is responsible for:

- assisting and advising the Council in the performance of its functions
- supporting the Council in implementing the NEPC Act
- overseeing the management of the Council's budget.

THE NATIONAL ENVIRONMENT PROTECTION COUNCIL EXECUTIVE OFFICER

The NEPC Act requires the appointment of a NEPC Executive Officer by the Council, for a period not exceeding five years. The Executive Officer is required to provide assistance and support to the Council and the Committee.

For the majority of the 2017–18 reporting year, the NEPC Executive Officer was Mr Cameron Colebatch.

INTER-JURISDICTIONAL RELATIONSHIPS

The Meeting of Environment Ministers is an ad hoc forum, consisting of environment ministers from each jurisdiction including the Commonwealth. The Meeting of Environment Ministers is the primary multi-jurisdictional forum in which national environmental issues are considered. As membership of the Council also consists of all Australian environment ministers, the Meetings of Environment Ministers are held in conjunction with meetings of the Council.

GOVERNANCE STRUCTURE OF THE COUNCIL AND THE MEETING OF ENVIRONMENT MINISTERS

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

- Meetings of Environment Ministers are to occur on an ad hoc basis and run concurrently with meetings of the National Environment Protection Council 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 Clean Air Agreement
 - ongoing priorities relating to responsibilities under the NEPC Act, such as National Environment Protection Measures.
- Ongoing communication between the Senior Officials/NEPC Committee groups and the Heads of Environmental Protection Agencies network. Where relevant, the Heads of Environment Protection Agencies 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 are represented by invitation to Meetings of Environment Ministers when relevant subject matter is to be discussed.

ABOUT NATIONAL ENVIRONMENT PROTECTION MEASURES

The 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, provide an agreed nationally consistent framework of goals, standards, guidelines and protocols for protecting and managing particular aspects of the environment, including 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.

National Environment Protection Measures 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.

There are seven National Environment Protection Measures:

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 six pollutants—carbon monoxide, lead particulates, nitrogen dioxide, sulfur dioxide and ozone. A variation to the standards for particulates in this NEPM took effect in January 2016.

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 provides 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 and Energy's policies and procedures and are reported against in the 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 and Energy 2017–18 annual report.

PROCUREMENT AND CONSULTANCIES

All such activities are undertaken in accordance with relevant Commonwealth requirements, including legislation, policies and procedures. The NEPC business services section strives 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 2008, 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 managed 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 Waste Management and Pollution Control Act 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 2017 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 jurisdiction identified any new sites in the reporting period.

Reporting of monitoring of air toxics

Queensland continued monitoring air toxics in the 2017-18 reporting period including polycyclic aromatic hydrocarbons (including benzo[a]pyrene) at Fisherman's Landing, an industrial area north of Gladstone and Auckland Point in central Gladstone from October to February 2018. Ambient monitoring of benzene, toluene, xylenes and formaldehyde using DOAS instrumentation continued at Springwood in South East Queensland and central Gladstone.

In Western Australia, the Department of Water and Environmental Regulation (DWER) continued field trials for its Remote Air Pollution Infrared Detector (RAPID) in the Perth metropolitan region to determine its suitability for air quality investigations.

All monitoring results were below the NEPM monitoring investigation levels.

No other jurisdictions undertook monitoring during the reporting period.

In April 2018, Environment Ministers endorsed a workplan under the National Clean Air Agreement. This workplan includes a review of the need for the Air Toxics NEPM, which will be undertaken by all jurisdictions.

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

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 during the reporting period.

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:

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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 there are currently no non-self governing Commonwealth territories or Commonwealth regions with a population above the 25,000 NEPM protocol threshold.
New South Wales	<ul style="list-style-type: none"> The NEPM is implemented under the Protection of the <i>Environment Operations Act 1997</i>, the Protection of the Environment Operations (General) Regulation 2009 and the Protection of the Environment Operations (Clean Air) Regulation 2010.
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>.
Queensland	<ul style="list-style-type: none"> The NEPM is implemented under the Environmental Protection Act 1994, the Environmental Protection Regulation 2008, and the Environmental Protection (Air) Policy 2008.
Western Australia	<ul style="list-style-type: none"> The NEPM is implemented under the National Environment Protection Council (Western Australia) Act 1996, and the <i>Environmental Protection Act 1986</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 Environment Protection Policy.
Tasmania	<ul style="list-style-type: none"> The NEPM is implemented under the <i>Environmental Management Pollution Control Act 1994</i>, the Environment Protection Policy (Air Quality) 2004, the Environmental Management and Pollution Control (Distributed Atmospheric Emissions) Regulations 2007 and the Tasmanian Air Quality Strategy 2006. 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 Environment Protection Regulation 1997 under the <i>Environment Protection Act 1997</i>.
Northern Territory	<ul style="list-style-type: none"> The key legislative instruments are the Waste Management and Pollution Control Act 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 2017 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	No monitoring undertaken because the NEPM is implemented administratively. No issues reported.
New South Wales	Data capture targets were not achieved for PM _{2.5} at Albion Park South and Albury.
Victoria	Data capture targets were not achieved for ozone at Dandenong, Melton, Mooroolbark or Point Cook (these stations do not operate across the full year), or for PM ₁₀ at Dandenong.
Queensland	Monitoring began at a new site in South Ward in Townsville in December 2017. This site replaces the site at Pimlico which closed on 20 February 2016. Carbon monoxide monitoring re-commenced at Wooloongabba in June 2017, following the closure of the original site that same month.
Western Australia	Data capture targets were not achieved at the station at Quinns Rocks (Outer North Coast) due to decommissioning of the site in early 2017.
South Australia	A mobile station to monitor particulates was installed at Port Augusta in March 2017. Compliance with NEPM standards and goals for some pollutants at some sites could not be demonstrated due to data capture targets not being achieved. This was due to factors including technical issues with instrumentation, equipment breakdowns, vandalism and commissioning of replacement monitors.
Tasmania	No issues reported.
Australian Capital Territory	No issues reported.
Northern Territory	A new monitoring station began operation at Stokes Hill in Darwin during the second quarter of 2017.

PART 3 JURISDICTIONAL REPORT ON ACTIVITIES UNDER THE NEPM

During 2017, jurisdictions continued reporting of the new NEPM particle standards, which were agreed to by NEPC in December 2015, and progressed work on updating the standards for the other NEPM pollutants.

In September 2017, the Commonwealth legislated national product emission standards for non-road spark ignition engines and equipment such as outdoor power equipment and marine outboard engines. Enforcement of these standards will be phased in through to 2019 to allow industry transition. Work on emission standards for wood heaters continued.

Most jurisdictions continued to focus on programs that improve fuel quality and reduce emissions from motor vehicles and wood heaters, with several jurisdictions reporting improvements in particulate levels as a result. A number of jurisdictions continued to investigate the sources, dispersal and management of emissions from mining, non-road activities (such as rail and shipping), industry and planned burns to reduce their impact on local communities. Alternative monitoring technologies were also trialled in some jurisdictions, with some noting the need to replace ageing equipment.

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 air quality.

Improvements in the data capture levels, and new or replacement stations becoming operational this reporting year, allowed for more consistent and comparable results across and between jurisdictions.

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 remains a significant challenge for larger metropolitan areas in 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:

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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 under guidelines issued under the <i>Contaminated Land Management Act 1997</i>.
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). (Replaced by the State Environment Protection Policy (Waters) in October 2018.) the Environment Protection (Industrial Waste Resource) Regulations 2009. 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>, the <i>Environment Protection Act 1994</i> and the Planning Regulation 2017 are the key legislative instruments.
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, the Northern Territory Contaminated Land Guideline, legislative directive environmental audits and voluntary audits.

Implementation issues arising

The NEPM was amended in May 2013 and much jurisdictional activity in 2017-2018 remained focused on integrating these amendments into legislative frameworks.

The emerging contaminants, perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) [collectively PFAS] remained a focus across all jurisdictions. The PFAS National Environmental Management Plan, a uniform and consistent approach to assessment and remediation of this contamination developed by all jurisdictions, was released by Environment Ministers in February 2018 to assist major landowners and operators who are responding to contamination risks in multiple jurisdictions. Amending the NEPM to include these contaminants would be desirable, adding to a number of issues consistently raised by jurisdictions that could be considered during the next review.

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"> Identified the limited number of Ecological Investigation Levels (EILs) for contaminants and the need for a consistent framework for the derivation and adoption of new EILs.
Victoria	<ul style="list-style-type: none"> Continued to question the adequacy of the Health Investigation Levels (HILs) for lead in soil for the protection of human health. Noted the need for guidance on emerging contaminants of concern.
Queensland	<ul style="list-style-type: none"> Again noted that the lack of adequate guidance for particular common types of contamination including fluorinated organic chemicals that are now commonly encountered on contaminated sites is limiting the effective implementation of the NEPM.
Western Australia	<ul style="list-style-type: none"> Noted the limited number of EILs provided in the NEPM is a major limitation to consistency in implementation. Raised the need for periodic review of the guidance in the context of advances in scientific information and updated technical information.
South Australia	<ul style="list-style-type: none"> Raised the need to plan for the required 10-year review of the NEPM to ensure that it incorporates new scientific knowledge and updated technical information and maintain credibility as a protector of the environment and human health.
Tasmania	<ul style="list-style-type: none"> Supports to continued development of the NEPM including guidance on managing emerging contaminants of concern and ongoing review/updating of criteria.
Australian Capital Territory	<ul style="list-style-type: none"> Requested changes to NEPM development to allow for the inclusion of criteria for emerging contaminants outside of the formal review process.
Northern Territory	<ul style="list-style-type: none"> As well as PFAS, asbestos, herbicides and pesticides (including Mirex) are emerging contaminants of concern in the NT.

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.

Jurisdictions continued to undertake a range of activities dealing with contamination of groundwater and sediments with persistent organic pollutants, such as perfluorinated compounds such as PFOS and PFOA, primarily from firefighting training activities.

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.

Amendments have been 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.

Jurisdictions identified the need for the NEPM to be more responsive to new and/or updated standards, and emerging chemicals.

PART 5 REPORTING ON IMPLEMENTATION BY JURISDICTIONS

The annexes to this report are in Appendix 3:

Annex 1:	Commonwealth	p. 112
Annex 2:	New South Wales	p. 113
Annex 3:	Victoria	p. 114
Annex 4:	Queensland	p. 115
Annex 5:	Western Australia	p. 117
Annex 6:	South Australia	p. 118
Annex 7:	Tasmania	p. 120
Annex 8:	Australian Capital Territory	p. 121
Annex 9:	Northern Territory	p. 122

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>, and the <i>Fuel Quality Standards Act 2000</i>.
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 The NEPM is implemented by Environment Protection Authority and Department of Roads and Maritime Services programs.
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>. These Regulations no longer deal with heavy vehicles over 4.5 tonnes. Compliance with national heavy vehicle regulation is overseen by VicRoads.
Queensland	<ul style="list-style-type: none"> The NEPM is implemented by the <i>National Environment Protection Council (Queensland) Act 1994</i>. The Department of Transport and Main Roads is responsible for implementing and reporting on the Diesel NEPM.
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, administered by the Department of Transport.
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, administered by the Department of Planning, Transport and Infrastructure.
Tasmania	<ul style="list-style-type: none"> The NEPM is a state policy under the <i>State Policies and Projects Act 1993</i>. The Department of State Growth uses the 'ten second rule' to target smoky motor vehicles.
Australian Capital Territory	<ul style="list-style-type: none"> The key legislative instrument is the Road Transport (Vehicle Registration) Regulation 2000, implemented by Access Canberra.
Northern Territory	<ul style="list-style-type: none"> Vehicle performance standards are enforced under the <i>Motor Vehicles Act</i> implemented by the Department of Transport.

Implementation issues arising

Table 2 summarises the implementation issues that arose throughout the 2017-2018 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. All Diesel NEPM-funded programs have now ceased.
Victoria	<ul style="list-style-type: none"> No issues reported. The VIPAC Emissions Test Facility remained closed during the reporting period due to high maintenance costs and low throughput of vehicles.
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"> No issues reported. The Regency Park Emissions Test Facility remained closed during the reporting period due to high maintenance costs and low throughput of vehicles.
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

A 2015 review of the *Fuel Quality Standards Act 2000* found the regulation of fuel quality in Australia has led to a significant reduction in emissions. Amendments to fuel standards to better align with international best practice and to further reduce vehicle emissions are under consideration.

In April 2018, Environment Ministers endorsed a workplan under the National Clean Air Agreement. This workplan includes a review of the need for the Diesel NEPM, which will be undertaken by all jurisdictions.

Jurisdictions continue to run a number of programs to monitor and reduce emissions from their diesel fleets, including smoky vehicle reporting programs, upgrades to government vehicle and bus fleets and emissions testing and repair 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 and air quality more generally.

A number of jurisdictions continued to note increases in the numbers of registered on- and off-road diesel vehicles resulting in them becoming an increasingly higher proportion of their in-service fleets. Fleet turnover, combined with the introduction of more stringent vehicle emissions regulations, mean 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:

Annex 1:	Commonwealth	p. 126
Annex 2:	New South Wales	p. 127
Annex 3:	Victoria	p. 132
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Annex 5:	Western Australia	p. 134
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Annex 7:	Tasmania	p. 142
Annex 8:	Australian Capital Territory	p. 144
Annex 9:	Northern Territory	p. 146

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 Protection of the Environment Operations (Waste) Regulation 2014.
Victoria	<ul style="list-style-type: none"> The key legislative instruments are the Waste Management Policy (Movement of Controlled Waste between States and Territories) 2001 made under the <i>Environment Protection Act 1970</i>.
Queensland	<ul style="list-style-type: none"> The key legislative instrument is the <i>Environmental Protection Act 1994</i>. Requirements for the licensing of controlled waste transporters are included in the Environmental Protection Regulation 2008.
Western Australia	<ul style="list-style-type: none"> The primary legislative instruments are the <i>Environmental Protection Act 1986</i> and the Environmental Protection (Controlled Waste) Regulations 2004.
South Australia	<ul style="list-style-type: none"> The NEPM is implemented by the Environment Protection (Movement of Controlled Waste) Policy 2014 and the Environment Protection (Controlled Waste) Policy 2012 both made 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 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 Environment Protection Regulations 2005.
Northern Territory	<ul style="list-style-type: none"> The key legislative instruments are the <i>Waste Management and Pollution Control Act</i> and the <i>Transport of Dangerous Goods by Road and Rail (National Uniform Legislation) Act</i>.

Implementation issues arising

No implementation issues were reported by jurisdictions.

PART 3 JURISDICTIONAL REPORT ON ACTIVITIES UNDER THE NEPM

The Commonwealth continued work towards a single, nationally consistent electronic tracking system for inter- and intrastate movements of hazardous and controlled wastes.

A number of jurisdictions focused on the transportation of industrial waste between states to both limit the possibility of the improper movement of waste and ensure its disposal at permitted facilities.

There continues to be close consultation between state and territory agencies, established under the NEPM agreement.

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 in tonnes of controlled waste within Australia, imports by states and territories for the period 1 July 2017 – 30 June 2018

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ex-Terr*	Total
A	Plating & heat treatment	0.03	70.0	0.0	0.00	0.00	0.00	0.00	0.00	n/a	70.18
B	Acids	20615.21	355.0	11.77	56.10	54.90	6.00	0.00	0.00	n/a	20695.01
C	Alkalis	379.92	412.0	181.8	0.00	420.72	0.20	0.00	0.00	n/a	1406.66
D	Inorganic chemicals	25910.47	13421.0	3521.06	169.00	243444.99	8516.22	0.00	0.00	n/a	294807.31
E	Reactive chemicals	19.18	30.0	0.0	0.00	0.00	0.02	0.00	0.00	n/a	216.98
F	Paints, resins, inks, organic sludges	1793.57	6367.0	341.3	0.00	665.11	23.00	0.00	0.00	n/a	9129.68
G	Organic solvents	451.20	1566.0	13.5	0.00	59.66	2830.00	0.00	0.00	n/a	4980.66
H	Pesticides	41.00	625.0	1332.7	0.00	40.94	0.00	0.00	0.00	n/a	2039.64
J	Oils	6395.59	4412.0	35790.3	0.00	1840.62	65.00	273.06	417.84	n/a	49021.33
K	Putrescible/organic waste	8082.65	2604.0	11229.9	565.50	67.50	92.00	7.00	0.00	n/a	22879.53
L	Industrial washwater	0.00	2009.0	1.5	324.00	0.00	0.00	0.00	0.00	n/a	2334.5
M	Organic chemicals	587.63	541.0	7042.7	0.00	63.38	0.15	0.00	0.00	n/a	8198.46
N	Soil/sludge	5439.12	2819.0	49143.3	278.8	1525.60	37.50	28.21	0.00	n/a	59261.03
R	Clinical & pharmaceutical	310.69	1195.0	278.94	0.00	167.13	0.60	289.86	0.00	n/a	2242.22
T	Misc.	762.23	2961.0	893.7	0.00	6.07	2.50	0.00	0.00	n/a	4534.15
	Total (tonnes)	70788.49	39386.0	109782.47	1393.40	248356.62	11573.19	598.13	417.84	n/a	481817.34

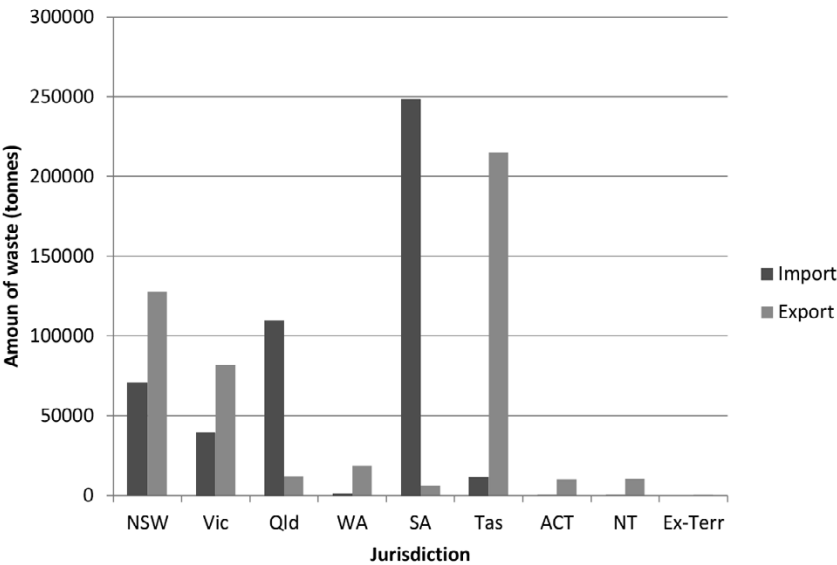
Note: Information regarding External Territories (Ex-Terr) has been provided only since the reporting year 2009–10.

Table 3: Summary of total movements in tonnes of controlled waste within Australia, exports by states and territories for the period 1 July 2017–30 June 2018

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ex-Terr*	Total
A	Plating & heat treatment	0	0	0	0.15	70	0	0.03	0	0	70.18
B	Acids	300.98	1953.57	13.02	51.11	648.95	15	0.56	105.82	6	20695.01
C	Alkalis	594.8	348.4	14.33	7.66	11.3	31.6	4.45	393.92	0.2	1406.66
D	Inorganic chemicals	13644.06	40840.52	6853.66	16349.1	2489.98	213962.98	26.26	639.53	1.22	294807.31
E	Reactive chemicals	19	15.16	4.84	167.85	0	10	0.11	0	0.02	216.98
F	Paints, resins, inks, organic sludges	4257.3	1818.38	1558.38	260	917.87	44	28.73	243.02	2	9129.68
G	Organic solvents	913.36	2930.01	470.51	303.47	192.71	120	20.6	0	30	4980.66
H	Pesticides	1492.54	0.66	129.96	377	35.9	3.02	0.56	0	0	2039.64
J	Oils	33411.48	3462.85	952.74	509.33	867.03	264.74	2863.8	6587.96	101.4	49021.33
K	Putrescible/organic waste	8159.8	8142.32	20.46	219.48	36.5	0	5564.47	633	103.5	22879.53
L	Industrial washwater	1545.5	0	21	0	70	11	0	687	0	2334.5
M	Organic chemicals	7265	238.73	394.72	39	107.91	110.36	42.59	0	0.15	8198.46
N	Soil/sludge	50961.01	4314.21	1276.23	176.68	385.44	346	906.15	857.81	37.5	59261.03
R	Clinical & pharmaceutical	1454.76	4.46	0	130	176	24.02	306.27	146.11	0.6	2242.22
T	Misc.	3568.02	374.65	222.55	2	134.82	42	187.61	0	2.5	4534.15
	Total (tonnes)	127587.61	82043.92	11932.4	18592.83	6144.41	214984.72	9952.19	10294.17	285.09	481817.34

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

Figure 1: Tonnage of controlled waste moved within Australia 2017-18*



*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 285.09 tonnes of waste exported from Australia’s External Territories to be visually represented).

Figure 2: Tonnage of controlled waste moved within Australia 1999–2018

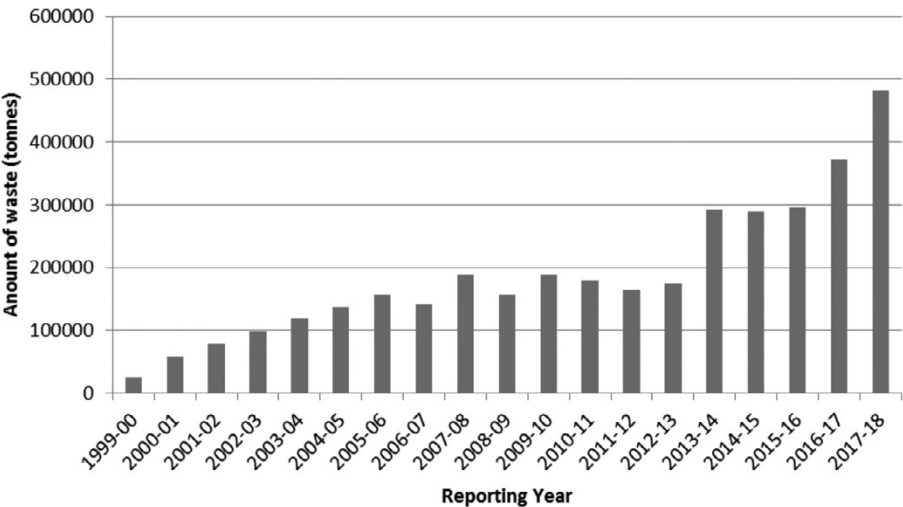
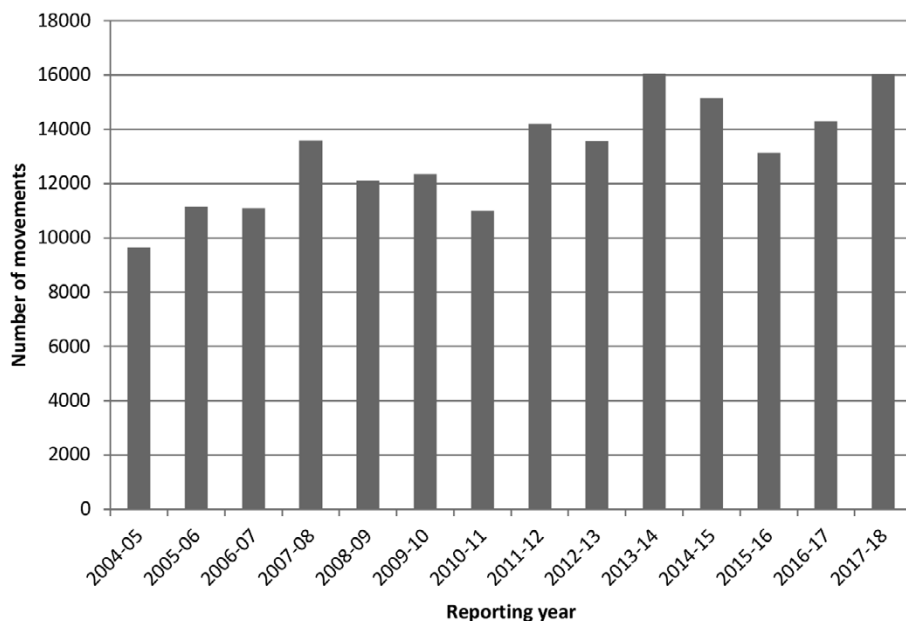


Figure 3: Number of movements of controlled waste within Australia 2004–18*



*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:

Annex 1:	Commonwealth	p. 150
Annex 2:	New South Wales	p. 152
Annex 3:	Victoria	p. 154
Annex 4:	Queensland	p. 157
Annex 5:	Western Australia	p. 160
Annex 6:	South Australia	p. 163
Annex 7:	Tasmania	p. 166
Annex 8:	Australian Capital Territory	p. 169
Annex 9:	Northern Territory	p. 172

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 substances 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 Waste Management Policy (National Pollutant Inventory) 2012 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 2017-18 can be found in Table 2. For implementation activities refer to jurisdictional reports as listed in Part 4.

Table 2: Summary of implementation issues arising

Jurisdiction	Summary of implementation issues arising
Commonwealth	<ul style="list-style-type: none"> There were continued reports of software defects within the NPI database. Leading the current review of the NPI.
New South Wales	<ul style="list-style-type: none"> Enquiries from public and media continue to demonstrate a growing awareness of the dataset, however there continues to be a strong need to provide contextual information about the data.
Victoria	<ul style="list-style-type: none"> Continued concerns with NPI data quality and NEPM enforceability, which will be raised during the review.
Queensland	<ul style="list-style-type: none"> Will raise opportunities to improve the effectiveness and implementation of the NPI during the review.
Western Australia	<ul style="list-style-type: none"> Identified opportunities for enhanced administration of the NPI through the collection and reporting of aggregated emissions data which will be raised during the review.
South Australia	<ul style="list-style-type: none"> A detailed air emissions inventory remains a strategic priority for both the NPI and the SA EPA.
Tasmania	<ul style="list-style-type: none"> There is increasing awareness of the NPI.
Australian Capital Territory	<ul style="list-style-type: none"> One-on-one training sessions were successful and welcomed by industry.
Northern Territory	<ul style="list-style-type: none"> Inadequate funding to allow aggregate emissions data modelling as required by the NEPM before submission to the Commonwealth.

PART 3 ASSESSMENT OF NEPM EFFECTIVENESS

Memoranda of Understanding (MoUs) have been signed at heads of agency level between each jurisdiction and the Commonwealth. An MoU is in place until June 2019.

Website and Public Awareness

Reporting information is available on the NPI website at <http://www.npi.gov.au>. The number of visitors to the NPI website increased from 288,026 in 2016-17 to 306,703 in 2017-18, with 4667 views of the NPI dataset on the data.gov.au website.

There is increasing use of the NPI database by non-government organisations and the media. There is a clear need for context and interpretation of NPI data to facilitate better understanding within the community.

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.

While the online reporting system training has been well received, it is acknowledged that software errors remain and further training is essential.

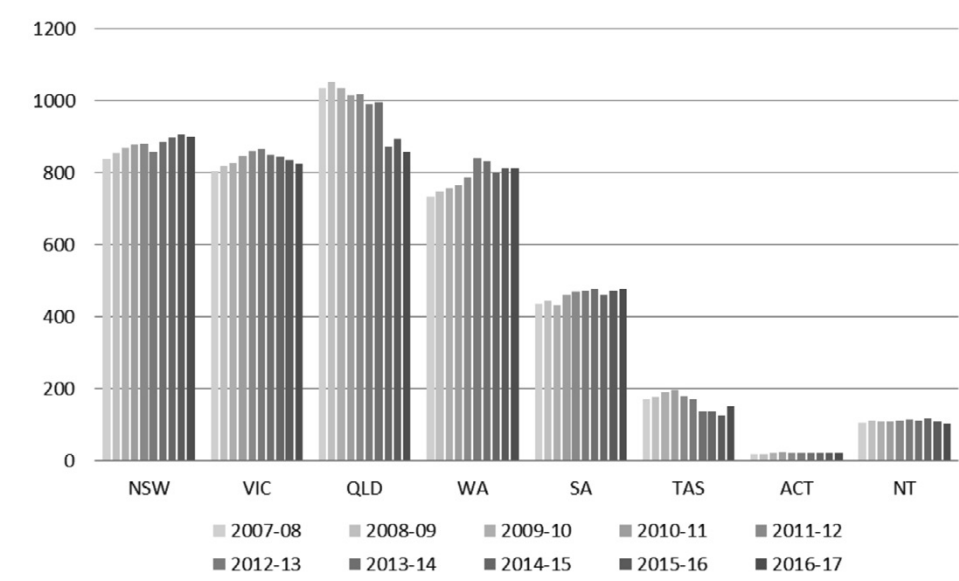
Most jurisdictions have conducted industry training programs to assist reporters to use the Online Reporting System. These training programs vary from one-on-one sessions with new reporters to more formal group sessions. The high level of turnover in industry, new small business enterprises and staff 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 4,178 in 2015-2016 to 4,146 in 2016-17.

Figure 1 below shows that the number of facilities reporting to the NPI in all jurisdictions over the past ten years.

Figure 1: NPI facility reports received by jurisdictions since 2007-08



PART 4 REPORTING ON IMPLEMENTATION BY JURISDICTIONS

The annexes to this report are in Appendix 6:

Annex 1:	Commonwealth	p. 176
Annex 2:	New South Wales	p. 179
Annex 3:	Victoria	p. 182
Annex 4:	Queensland	p. 183
Annex 5:	Western Australia	p. 184
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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: 15 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 2014
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>Environmental 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 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>.
Australian Capital Territory	<ul style="list-style-type: none">The NEPM will be implemented under the <i>Waste Management and Resource Recovery Act 2016</i>.
Northern Territory	<ul style="list-style-type: none">An Australian Packaging Covenant Organisation audit has identified businesses based in the NT which 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 2017-18 reporting year. For detailed implementation activities refer to jurisdictional reports as listed in Part 5.

In August 2015, a meeting of jurisdictions and industry resolved that jurisdictions would no longer carry out brand owner audits, and that industry would take responsibility for brand owner audits from 1 July 2016. In April 2018, the Australian Packaging Covenant Organisation conducted its first brand owner audit in conjunction with all jurisdictions.

Table 2: Summary of implementation issues arising

Jurisdiction	Summary of implementation issues arising
Commonwealth	• No issues reported.
New South Wales	• No issues reported.
Victoria	• Noted the need for further work on the methodology for auditing brand owners under the NEPM.
Queensland	• No issues reported.
Western Australia	• No Issues reported.
South Australia	• No issues reported.
Tasmania	• No issues reported.
Australian Capital Territory	• No issues reported.
Northern Territory	• 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 Part 5.

Many jurisdictions increased their NEPM advice, collaboration and compliance activities, particularly with the Australian Packaging Covenant Organisation, while others focused on 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 2018.

ACT	4
NSW	385
QLD	66
SA	48
TAS	15
VIC	328
WA	40
TOTAL	886

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

There were no complaints regarding brand owners or Covenant signatories were received in the reporting period, and no investigations or prosecutions were necessary.

PART 4 ASSESSMENT OF NEPM EFFECTIVENESS

Major reforms to the operation of the APC have been initiated in response to a comprehensive review by the Commonwealth Government. These reforms include changes to APC's governance structure, funding arrangements and the release of a new covenant. As a result of this structural change, the reporting methodology for the new covenant is evolving and the APC is working to refine the process.

At the end of June 2018, there were 886 covenant signatories, of which 96% were compliant.

Covenant signatories showed improvement in key performance reporting indicators related to supporting market development for recycled content in packaging and demonstrating innovation in developing and continuing sustainability initiatives.

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. Only 2 of the 17 NT councils have kerbside recycling.

PART 5 REPORTING ON IMPLEMENTATION BY JURISDICTIONS

The annexes to this report are in Appendix 7.

Annex 1:	Commonwealth	p. 192
Annex 2:	New South Wales	p. 194
Annex 3:	Victoria	p. 196
Annex 4:	Queensland	p. 197
Annex 5:	Western Australia	p. 198
Annex 6:	South Australia	p. 199
Annex 7:	Tasmania	p. 200
Annex 8:	Australian Capital Territory	p. 201
Annex 9:	Northern Territory	p. 203

Appendix 1:
Jurisdictional reports on
the implementation and
effectiveness of the Air Toxics
National Environment
Protection Measure

Commonwealth

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for the Commonwealth by the Hon Melissa Price MP, Minister for the Environment for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In 2017-18, 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 15 December 2015, Australia's environment ministers established the National Clean Air Agreement. The Agreement delivers actions to reduce air pollution and establishes a process for jurisdictions to work cooperatively to address emerging air quality issues—ensuring Australians continue to enjoy clean air into the future.

A Commonwealth-led initiative under the Agreement is the introduction of emissions standards for non-road spark ignition engines and equipment, such as outdoor power equipment and marine outboard engines. These products emit a range of pollutants, including some air toxics. New emissions standards were legislated in September 2017. Import offences came into effect on 1 July 2018 and supply offences will come into effect on 1 July 2019. These phase-in timeframes allow industry to transition to the new standards.

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. This is primarily achieved through state and territory agencies' ongoing monitoring and reporting of data.

In April 2018, Australian environment ministers endorsed the work plan under the National Clean Air Agreement. This work plan includes a review of the need for the Diesel Vehicle Emissions and Air Toxics National Environment Protection Measures. The review is scheduled to be completed in 2018 through a survey of jurisdictional needs for the NEPMs.

If this review concludes that either NEPM should be varied or revoked, this will involve a significant body of work. This work would only proceed if amendments to the *National Environment Protection Council Act 1994* to streamline provisions governing NEPM review, variation and revocation processes were to occur.

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. Gabrielle Upton, Minister for the Environment, Minister for Local Government, and Minister for Heritage for the reporting year ended 30 June 2018.

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 were well below the NEPM monitoring investigation levels that would trigger the NEPM requirement for ongoing ambient air toxics monitoring and therefore no further monitoring has been undertaken since 2008 – 2009.

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.nepc.gov.au/system/files/resources/ee20bb51-e1cd-82b4-559c-699771b152e7/files/nepc-annual-report-09-10.pdf) and reproduced at tables 1–4 below, 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.

NSW Air Toxics Monitoring Results 2008-2009

Tables 1 - 4: Monitoring results for benzene, benzo(α)pyrene as a marker for polycyclic aromatic hydrocarbons, formaldehyde, toluene and xylenes 2008-2009. Reproduced from the NSW Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Air Toxics) Measure, for the reporting year ended 30 June 2010.

Table 1: Monitoring Results - Benzene

	Rozelle	Turrella
Air Toxic	Benzene	Benzene
Monitoring method	USEPA TO-15	USEPA TO-15
Period of monitoring	2/10/08 to 8/10/09	2/10/08 to 29/9/09
Number of valid results	32	36
Maximum 24-hour average concentration	0.90 ppb	2.00 ppb
Annual average concentration (as arithmetic mean)	0.26 ppb	0.38 ppb
Arithmetic Standard Deviation of 24-hour average concentrations	0.17 ppb	0.34 ppb
Number of times monitoring investigation level exceeded*	0	0

* must be evaluated as “not demonstrated” if no monitoring or assessment has taken place

Table 2: Monitoring Results – Benzo(α)pyrene as a marker for Polycyclic Aromatic Hydrocarbons

	Turrella
Air Toxic	Benzo(α)pyrene
Monitoring method	USEPA TO-13
Period of monitoring	2/10/08 to 27/9/09
Number of valid results	16
Maximum 24-hour average concentration	0.40 ng/m ³
Annual average concentration (as arithmetic mean)	0.21 ng/m ³
Arithmetic Standard Deviation of 24-hour average concentrations	0.10 ng/m ³
Number of times monitoring investigation level exceeded*	0

* must be evaluated as “not demonstrated” if no monitoring or assessment has taken place

Table 3: Monitoring Results - Formaldehyde

	Rozelle	Turrella
Air Toxic	Formaldehyde	Formaldehyde
Monitoring method	USEPA TO-11	USEPA TO-11
Period of monitoring	2/10/08 to 27/9/09	2/10/08 to 27/9/09
Number of valid results	50	53
Maximum 24-hour average concentration	3.2 ppb	4.4 ppb
Annual average concentration (as arithmetic mean)	1.6 ppb	1.6 ppb
Arithmetic Standard Deviation of 24-hour average concentrations	0.65 ppb	0.66 ppb
Number of times monitoring investigation level exceeded*	0	0

* must be evaluated as “not demonstrated” if no monitoring or assessment has taken place

Table 3: Monitoring Results - Toluene

	Rozelle	Turrella
Air Toxic	Toluene	Toluene
Monitoring method	USEPA TO-15	USEPA TO-15
Period of monitoring	2/10/08 to 8/10/09	2/10/08 to 29/9/09
Number of valid results	54	53
Maximum 24-hour average concentration	3.8 ppb	6.4 ppb
Annual average concentration (as arithmetic mean)	0.9 ppb	1.8 ppb
Arithmetic Standard Deviation of 24-hour average concentrations	0.69 ppb	1.35 ppb
Number of times monitoring investigation level exceeded*	0	0

* must be evaluated as “not demonstrated” if no monitoring or assessment has taken place

Table 4: Monitoring Results – Xylenes (as total of ortho, meta and para isomers)

	Rozelle	Turrella
Air Toxic	Xylenes	Xylenes
Monitoring method	USEPA TO-15	USEPA TO-15
Period of monitoring	2/10/08 to 8/10/09	2/10/08 to 29/9/09
Number of valid results	26	30
Maximum 24-hour average concentration	2.60 ppb	4.90 ppb
Annual average concentration (as arithmetic mean)	0.73 ppb	1.2 ppb
Arithmetic Standard Deviation of 24-hour average concentrations	0.53 ppb	0.95 ppb
Number of times monitoring investigation level exceeded*	0	0

* must be evaluated as “not demonstrated” if no monitoring or assessment has taken place

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for Victoria by the Hon Lily D'Ambrosio, Minister for Energy, Environment and Climate Change, for the reporting year ended 30 June 2018.

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), subordinate legislation made under the *Environment Protection Act 1970*.

There were not implementation issues during the 2017 reporting year.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

Since 2003, no air toxics monitoring done in Victoria has measured levels exceeding the monitoring investigation levels (air quality objectives) in the NEPM.

Identification of Sites

During 2017, no suitable sites were identified as being potential stage 1 and stage 2 sites for air toxics monitoring in Victoria.

Reporting of Monitoring of Air Toxics

During 2017, no monitoring was carried out for air toxics.

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

As noted above, there has been no monitoring in Victoria that has measured levels of air toxics exceeding the monitoring investigation levels. Therefore, there has been no additional action taken to manage air toxics beyond existing programs.

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for Queensland by Leeanne Enoch MP, Minister for Environment and the Great Barrier Reef, Minister for Science, and Minister for the Arts for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Queensland, the Air Toxics NEPM (AT 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.

In the 2017-18 reporting period, monitoring of polycyclic aromatic hydrocarbons (including benzo[a]pyrene) was conducted at the Fisherman's Landing and Auckland Point monitoring sites in the Gladstone region from October 2017 until February 2018. Fisherman's Landing is an industrial area north of Gladstone, while the Auckland Point site is located in central Gladstone close to harbour storage and loading operations.

The Department continued to monitor benzene, toluene, xylenes and formaldehyde using open path Differential Optical Absorption Spectroscopy (DOAS) instrumentation at Springwood in South East Queensland and in central Gladstone in the 2017-2018 reporting period.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

The Air Toxics NEPM has resulted in the evaluation of emission sources posing the greatest potential for significant population exposure to air toxics (concluded to be motor vehicles and industrial facilities), and locations where significant population exposure to elevated ambient concentrations of air toxics are most likely to occur.

The Queensland Government has a long-running program monitoring levels of benzene, toluene, xylenes and formaldehyde using an alternative differential optical absorption spectroscopy (DOAS) technique at its ambient air quality monitoring network sites of Springwood in South East Queensland and in central Gladstone. Although the DOAS monitoring methodology is not in accordance with the protocols set out in the AT NEPM and the monitoring sites are not identified as Stage 2 sites, the data collected improves the Department's knowledge of ambient concentrations of most toxic pollutants in Schedule 1 of the AT NEPM.

Monitoring of air toxics is also carried out on occasions as part of specific studies into localised air quality to address community concerns. In such situations, the AT NEPM monitoring investigation levels provide a defensible benchmark for assessing measured concentrations.

Identification of Sites

The Stage 1 and Stage 2 sites analysis identified roadside and industrial locations as considered to have the greatest potential for significant population exposure to air toxics.

Reporting of Monitoring of Air Toxics

Air toxics monitored in the 2017-18 reporting period included polycyclic aromatic hydrocarbons (including benzo[a]pyrene) at the Fisherman's Landing monitoring site, an industrial area north of Gladstone, from 6 October 2017 to 12 February 2018 and the Auckland Point (central Gladstone) site from 5 October 2017 to 12 February 2018. Ambient monitoring of benzene, toluene, xylenes and formaldehyde using DOAS instrumentation continued at Springwood in South East Queensland and in central Gladstone.

Benzo[a]pyrene monitoring at the Fisherman's Landing and Auckland Point sites in the Gladstone region between October 2017 and February 2018 showed that monthly average concentrations were 23 per cent or less of the AT NEPM annual average monitoring investigation level of 0.3 ng/m³.

Monitoring results from South East Queensland and Gladstone monitoring sites for the 2017 calendar year are provided in Tables 2-6 below. These results indicate that levels of air toxics are well below the AT NEPM investigation levels.

Table 1: Monitoring Results for Benzene

	Springwood	Central Gladstone
Air Toxic	Benzene	Benzene
Monitoring method	DOAS	DOAS
Period of monitoring	1/1/17 to 31/12/17	1/1/17 to 31/12/17
Number of valid results	274	311
Maximum 24-hour average concentration	0.0012 ppm	0.0020 ppm
Annual average concentration (as arithmetic mean)	0.0009 ppm	0.0012 ppm
Arithmetic Standard Deviation of 24-hour average concentrations	0.0001 ppm	0.0003 ppm
Number of times monitoring investigation level exceeded	0	0

Table 2: Monitoring Results for Toluene

	Springwood	Central Gladstone
Air Toxic	Toluene	Toluene
Monitoring method	DOAS	DOAS
Period of monitoring	1/1/17 to 31/12/17	1/1/17 to 31/12/17
Number of valid results	298	328
Maximum 24-hour average concentration	0.0129 ppm	0.0042 ppm
Annual average concentration (as arithmetic mean)	0.0045 ppm	0.0019 ppm
Arithmetic Standard Deviation of 24-hour average concentrations	0.0015 ppm	0.0008 ppm
Number of times monitoring investigation level exceeded	0	0

Table 3: Monitoring Results for Xylenes

	Springwood	Central Gladstone
Air Toxic	Xylenes	Xylenes
Monitoring method	DOAS	DOAS
Period of monitoring	1/1/17 to 31/12/17	1/1/17 to 31/12/17
Number of valid results	299	298
Maximum 24-hour average concentration	0.0117 ppm	0.0096 ppm
Annual average concentration (as arithmetic mean)	0.0065 ppm	0.0051 ppm
Arithmetic Standard Deviation of 24-hour average concentrations	0.0015 ppm	0.0018 ppm
Number of times monitoring investigation level exceeded	0	0

Table 4: Monitoring Results for Formaldehyde

	Springwood	Central Gladstone
Air Toxic	Formaldehyde	Formaldehyde
Monitoring method	DOAS	DOAS
Period of monitoring	1/1/17 to 31/12/17	1/1/17 to 31/12/17
Number of valid results	295	330
Maximum 24-hour average concentration	0.0228 ppm	0.0051 ppm
Annual average concentration (as arithmetic mean)	0.0088 ppm	0.0029 ppm
Arithmetic Standard Deviation of 24-hour average concentrations	0.0030 ppm	0.0008 ppm
Number of times monitoring investigation level exceeded	0	0

Table 5: Monitoring Results for Benzo[a]pyrene

	Fisherman's Landing	Auckland Point
Air Toxic	Benzo[a]pyrene	Benzo[a]pyrene
Monitoring method	TO-13A	TO-13A
Period of monitoring	6/10/17 to 12/2/18	5/10/17 to 12/2/18
Number of valid results†	3	3
Maximum monthly average concentration†	0.008 ng/m ³	0.067 ng/m ³
Average concentration (as arithmetic mean)	0.004 ng/m ³	0.024 ng/m ³
Arithmetic Standard Deviation of monthly average concentrations†	0.003 ng/m ³	0.035 ng/m ³
Number of times monitoring investigation level exceeded	0	0

† monthly, rather than 24-hour, sampling was conducted; one sample was collected over a two-month period

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

From the monitoring results for 2017-18 reporting period, together with past results, there is no evidence that the AT NEPM monitoring investigation levels would be exceeded in ambient air in Queensland. No specific management actions to reduce air toxics concentrations have been implemented.

Repeat Identification of Stage 1 and Stage 2 Sites

As monitoring to date has shown compliance with the monitoring investigation levels, no repeat identification of Stage 1 and Stage 2 sites is currently planned.

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for Western Australia by the Hon. Stephen Dawson, MLC Minister for Environment; Disability Services for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia, the National Environment Protection (Air Toxics) Measure is implemented by the Department of Water and Environmental Regulation 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

The Department of Water and Environmental Regulation (DWER) has acquired a Remote Air Pollution Infrared Detector (RAPID) which is undergoing field trials in the Perth metropolitan region to determine its suitability for air quality investigations. The RAPID provides the capability of detecting over 80 air pollutants through the use of an infrared detector at a distance of up to 5km. The unit has a sensor which rotates through 360 degrees and scans the air to detect air pollutants including air toxics such as benzene and toluene. The system uses a Fourier Transform Infrared method similar to the Open Path Infrared (OP-FTIR) Spectrometer successfully used by DWER for recent air quality studies in Midland and Kwinana.

As part of the RAPID trial, remote sensing data were used to verify the location of potential ammonia sources in the Kwinana region that were identified by the earlier OP-FTIR monitoring study. Data visualisation techniques and associated data analysis procedures were developed to facilitate the interpretation of RAPID data. The results indicate that these infrared (IR) measurement techniques can provide complementary and consistent data and that integration of IR-based data with the analytical techniques can give powerful insights into emission source activity. The use of combined remote sensing and ambient air monitoring data is a potentially valuable approach to air toxics investigation, enabling identification of emission sources and tracking of emission plumes across large areas.

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 against 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. However, the monitoring results from these studies are invaluable when assessing ambient air toxic concentrations across Western Australia.

An updated emissions inventory for the Perth metropolitan region has been published and is available at <https://www.der.wa.gov.au/our-work/programs/460-perth-air-emissions-study-2011-2012>. The inventory includes air toxics and provides additional 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 2005-10* technical report, which is available on the DWER website www.dwer.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 planned.

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[α]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. David Speirs, Minister for Environment and Water, for the reporting year ended 30 June 2018.

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 Elise Archer, Minister for Environment, for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

- In Tasmania the enabling legislation for the National Environment Protection (Air Toxics) Measure (Air Toxics NEPM) process is the *Environmental Management and Pollution Control Act 1994* (EMPCA). The process is implemented primarily through EPA Tasmania 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 Toxics NEPM is put into effect under the Environment Protection Policy (Air Quality) 2004 (Air Policy) and the Tasmanian Air Quality Strategy 2006.
- Tasmania undertook extensive preliminary screening monitoring of air toxics in Tasmania between 2008 and 2011. Although EPA Tasmania formerly measured and collected air toxics data, the data returned consistently negligible results. Following consideration by EPA Tasmania of the low risk of air toxics as a pollutant of concern for Tasmania, air toxics monitoring was discontinued in 2011. On this basis, no air toxics monitoring was undertaken in Tasmania during the reporting year ending 30 June 2018.

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 2 sites were identified in a Desktop Analysis conducted in accord with the Air Toxics NEPM Desktop Analysis protocol.

Monitoring was 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 (eg 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 EPA Tasmania during the 2011 calendar year were reported in the 2011-2012 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 2011-2012 annual implementation report. No air toxics monitoring was conducted in Tasmania during the 2017-2018 period. Consequently, the monitoring requirements for the Air Toxics NEPM must be evaluated as “not demonstrated” for the 2017 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 NEPM sets out a 2-stage process for selecting sites for monitoring. This involves firstly a desktop assessment to identify “Stage 1” sites - that is, sites at which significantly elevated levels of one or more of the air toxics are expected to occur. Secondly, a further desktop assessment is undertaken to identify “Stage 2” sites - that is, those stage 1 sites that are judged to be a priority for monitoring on the basis of a rapid assessment of the likelihood of significant population exposure to one or more air toxics.

In 2005, fourteen stage 2 sites were identified in a Desktop Analysis conducted in accord with the Air Toxics NEPM Desktop Analysis protocol.

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 Australian Capital Territory by Mr Mick Gentleman, MLA for the reporting year ended 30 June 2018.

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 Hon Eva Lawler, Minister for Environment and Natural Resources for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

- The Northern Territory Environment Protection Authority (NT EPA) is responsible for the implementation of the NEPM in the Northern Territory through the provisions of the *Waste Management and Pollution Control Act* and the *National Environment Protection Council (Northern Territory) Act 2004*.
- 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 2017-18.
- 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 Northern Territory. Monitoring in 2005-06 has provided baseline data for further consideration.

In 2017-18 no sites were evaluated or selected and no analyses were performed.

The NT EPA is participating in the current review of the NEPM.

Appendix 2:
Jurisdictional reports
on the implementation
and effectiveness of the
Ambient Air Quality National
Environment Protection
Measure

Commonwealth

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for the Commonwealth by the Hon Melissa Price MP, Minister for the Environment for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Commonwealth is not required to undertake any direct monitoring as there are currently no non-self governing Commonwealth territories or Commonwealth areas with a population above the 25 000 Ambient Air Quality NEPM protocol threshold.

At their meeting on 15 December 2015, Australia's environment ministers established the National Clean Air Agreement. The Agreement is delivering actions to reduce air pollution and a process for jurisdictions to work cooperatively to address emerging air quality issues—ensuring Australians continue to enjoy clean air into the future. In April 2018, Australian environment ministers endorsed a work plan under the National Clean Air Agreement outlining priorities for 2018 to 2020.

Work being led by the Victorian EPA to review the Ambient Air Quality standards for ozone, nitrogen dioxide and sulfur dioxide under the National Clean Air Agreement has progressed to the final stages. This review considered new evidence on the health effects of these pollutants and produced an extensive report recommending a variation to the standards. It is expected NEPC will decide in 2019 whether to proceed to a variation.

A Commonwealth-led initiative under the Agreement is the introduction of emissions standards for non-road spark ignition engines and equipment, such as outdoor power equipment and marine outboard engines. These products emit high levels of PM₁₀, nitrogen dioxide and chemicals that lead to ground-level ozone formation. New emissions standards were legislated in September 2017. Import offences came into effect on 1 July 2018 and supply offences will come into effect on 1 July 2020. These phase-in timeframes allow industry to transition to the new standards.

The *Fuel Quality Standards Act 2000* (the Act) provides a legislative framework for setting and enforcing national fuel quality and fuel quality information standards in Australia. These standards are an important safeguard for consumers and the environment.

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 2017-18, authorised fuel inspectors visited 311 sites and tested 794 samples for compliance with the Act.

The Department of the Environment and Energy identified 20 instances of non-compliance with the Act.

The Department engaged with stakeholders following these instances to encourage voluntary compliance with the Act.

An independent review of the Act in 2015 found the regulation of fuel quality in Australia has led to a significant reduction in noxious emissions. Following this review, the Australian Government is considering further amendments to fuel standards to ensure they are better aligned with international best practice and to further reduce vehicle emissions, as well as further ways to reduce noxious emissions and improve fuel efficiency in vehicles. The Government is taking a careful consultative approach including seeking views from business and industry, consumer, health and environment groups.

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 NEPM in 2011 made 23 recommendations for changes to help minimise the risk to population health from air pollution. Some of these recommendations were addressed through the amendment of the NEPM in 2016 for particles and others are being considered as part of the review of sulfur dioxide, nitrogen dioxide and ozone reporting standards.

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 Particles - PM₁₀ and PM_{2.5}) remain essential for monitoring Australia's ambient air quality. This is a valuable resource for informing actions under the National Clean Air Agreement and its work plan.

Data collected through the Ambient Air Quality NEPM has previously informed reports including the *State of the Air in Australia 1998-2008* report and the 2011 and 2016 Australia: State of the Environment reports.

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. Gabrielle Upton, Minister for the Environment, Minister for Local Government, and Minister for Heritage for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The National Environment Protection (Ambient Air Quality) Measure (NEPM) (AAQ NEPM) is implemented under the *Protection of the Environment Operations Act 1997*, the Protection of the Environment Operations (Clean Air) Regulation 2010 and the Protection of the Environment Operations (General) Regulation 2009.

The *Protection of the Environment Operations Act 1997* sets the statutory framework for managing air quality in NSW.

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.

The Protection of the Environment Operations (General) Regulation 2009 establishes the licensing scheme for major industrial premises and economic incentives for licensed businesses and industry to reduce pollution, including emissions to air.

In NSW, the Office of Environment and Heritage (OEH) and the Environment Protection Authority (EPA) work together to reduce impacts of air pollution. OEH operates a comprehensive air quality monitoring network and undertakes air quality forecasting to provide timely information so that people can take steps to reduce their risk of exposure. The EPA 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 NSW

The EPA delivers numerous actions that target the pollutants of most concern in NSW, namely particles in the Greater Metropolitan Region (GMR) and some regional centres, and ground-level ozone by targeting precursor emissions. These actions are designed to improve knowledge about air emissions, air quality and the impacts of air pollution, inform and engage the community and other stakeholders, and reduce air quality impacts from industry, vehicles and commercial and domestic activities.

OEH operates the NSW Air Quality Monitoring Network, which includes 78 monitoring stations across several networks. Air quality data and information are made publicly available on the OEH website, updated on an hourly basis, and subscribers are sent automated text messages when air quality is measured to exceed national air quality standards. A daily forecast is also sent for the Sydney region. OEH also collaborates with the EPA, other agencies and science partners to deliver research to inform air policies and programs.

The following is an outline of the key mechanisms for managing air quality and the activities implemented in 2017–18.

Air emissions inventory

The Air Emissions Inventory for the NSW Greater Metropolitan Region (GMR) is a detailed snapshot of major sources of air pollution. It lists hundreds of different substances released to the atmosphere from natural and human-made sources within the GMR and has been updated every five years. The latest available inventory is for the 2008 calendar year.

Detailed inventory data are available in a series of technical reports on the [2008 Calendar Year Air Emissions Inventory](#) webpage. Compilation of an updated Inventory for the 2013 calendar year continued through 2017–18, with updated results due to become available to inform air quality management projects in late 2018.

The community can access air emissions inventory information about local sources of air pollution via the [Air Emissions in my Community web tool](#). The tool presents aggregated data and charts for different geographic areas within the GMR, down to local council and postcode level. When the 2013 inventory update is complete, 2013 and the 2003 emissions data will be added to the web tool to enable the display of trends over the ten-year period.

Air quality monitoring

The NSW air monitoring network totals 78 stations, consisting of 44 National Association of Testing Authorities (NATA) accredited stations plus 34 indicative rural monitoring sites. The network provides detailed air quality information that is available on the web and updated hourly. Information about the network and current and historic data can be found at www.environment.nsw.gov.au/topics/air/monitoring-air-quality.

The air quality monitoring network designated for reporting compliance with the AAQ NEPM is a subset of the total NSW network and currently consists of monitoring stations at 22 sites. The remainder of the network stations are not designated for AAQ NEPM reporting. These Non-NEPM stations include the 34 sites in the NSW rural air quality network, five sites in the Sydney region, 14 sites in the industry funded Upper Hunter network and three sites in the industry funded Newcastle local area network. Non-NEPM sites provide information on the impacts of local sources of air pollution and assist OEH and the EPA to develop actions to reduce air quality impacts.

Fine particle monitoring was extended across the NSW Air Quality Monitoring Network in 2017-18. This monitoring supports air quality and health analysis and compliance assessments against national standards for PM_{2.5} (particles 2.5 micrometres and smaller in diameter).

OEH has established air incident monitoring and modelling capabilities for incidents where air quality impacts may be experienced by the community for a period of several days or longer. This includes acquisition of three portable monitoring pods equipped with seven compliance air quality monitors (that meet Australian Standards) and other instruments and meteorological monitors. The portable pods are fitted with telemetry and communications systems coupled with web reporting capabilities for rapid transfer of information to a publicly accessible website.

OEH is collaborating with research partners and other environment agencies in Australia to investigate low cost air pollution sensors and their deployment within networks for real-time air pollution monitoring and mapping. This research will support future integration of indicative data from sensor networks with high quality data from the NSW Air Quality Monitoring Network.

Air emissions and health impacts research

Broken Hill Environmental Lead Study

The Broken Hill Environmental Lead Study was commissioned by the EPA to inform remediation efforts underway as part of the Broken Hill Environmental Lead Program to address lead contamination and exposures. This collaborative study by EPA, OEH and Macquarie University aims to monitor airborne and deposited lead and assess contributions of current emissions from Line of Lode mining leases and emissions from areas affected by historic emissions ('legacy lead'). See: www.environment.nsw.gov.au/topics/air/research/current-research/broken-hill-environmental-lead-study.

Sydney Air Quality Study

This multi-year study commenced in 2016 to improve the understanding of air quality and the impacts of air pollution in the Greater Sydney region. The study will extend the evidence base for air policies and programs, providing information on past, current and future air quality and its impacts on public health and the environment in the Greater Sydney region.

The study will support evidence-based air policies and programs by identifying persistent and emerging issues, and highlighting opportunities to improve air quality and realise public health and economic benefits. See: www.environment.nsw.gov.au/topics/air/research/current-research/sydney-air-quality-study.

Enhancing Air Quality Forecasting in NSW

This program was established to progressively expand the scope and enhance the accuracy of air quality forecasting capabilities in NSW. OEH issues a daily air quality forecast for the Greater Sydney region, and the overall accuracy of forecasts is currently considered to be moderate. Through this program OEH will work towards more accurately forecasting air quality for Greater Sydney and its sub-regions, and will progressively expand forecasting to the

whole of the NSW Greater Metropolitan Region and major regional areas. The program involves several projects to develop specific advanced tools and capabilities, some involving collaboration with science partners. See: www.environment.nsw.gov.au/topics/air/research/current-research/air-quality-forecasting.

Clean air public consultation

In July 2017, following the Clean Air Summit held in June 2017, the EPA conducted a stakeholder survey on the management of air quality in NSW. Results of the survey were published on the EPA [clean air webpage](#). Stakeholder input through public consultation processes contributes to the ongoing development of NSW air quality actions and programs.

Industry emissions

In 2017-18, the EPA continued to implement its regulatory responsibilities, including licensing scheduled industry activities and conducting compliance and enforcement programs. The *Protection of the Environment Operations Act 1997*, the Protection of the Environment Operations (Clean Air) Regulation 2010 and the Protection of the Environment Operations (General) Regulation 2009 set the framework for managing air pollution from major industries in NSW.

The EPA's load-based licensing (LBL) scheme requires some environment protection licensees to pay part of their annual licence fees based on the load of certain air and water pollutants their activities release to the environment. By tying the fees payable to pollutant loads, the scheme aims to provide an ongoing economic incentive for licensees to improve their environmental performance beyond the levels required by regulation or licence conditions alone. In 2017-18, the EPA continued to progress a review of the LBL scheme, which aims to improve the scheme's efficiency and effectiveness.

In 2017-18 the EPA completed a [Review of Coal Fired Power Stations Air Emissions and Monitoring](#). The review involved detailed analysis of large amounts of monitoring data and information. The review found that there were few instances of non-compliance with regulatory requirements. The EPA has worked with licensees to resolve any compliance matters identified in the review and is working to standardise coal fired power stations environment protection licence conditions where appropriate.

Non-road diesel and marine emissions

The EPA [Diesel and marine emissions management strategy](#) sets out NSW actions to address emissions from non-road diesel equipment, diesel locomotives operating in NSW and shipping.

- *Non-road diesel plant and equipment*

Following consultation on best practice measures to reduce non-road diesel exhaust emissions, in early 2017 the EPA released a draft Pollution Reduction Study (PRS) and draft Special Licence Condition (SLC) for consultation with the coal mining industry. The draft PRS requires operating open-cut coal mines to provide information on the emission performance of the existing non-road diesel fleet, measures already adopted, and investigation of any further reasonable and feasible emission reduction measures that could be implemented. The draft SLC also requires new non-road diesel equipment commissioned at NSW coal mines to meet the US EPA Tier 4 final emission standard. Consultation continued into 2017-18 and stakeholder comments are under consideration by the EPA.

In 2017-18 OEH continued to administer the NSW [Government Resource Efficiency Policy](#) (GREP). The GREP includes requirements to address non-road diesel engine emissions through government procurement and contracts. A review of the GREP requirements which commenced in mid-2017, was progressed over 2017-18.

- *Locomotives*

In February 2017 the EPA published the [Diesel Locomotive - Fuel Efficiency and Emissions Testing](#) report. Together with the 2015 [Diesel locomotive emissions reduction technology study](#), this demonstrated that particle emission reductions conforming to US Tier 0+ emission standards can be achieved through emission upgrade kits or other locomotive upgrade programs. In early 2018 the EPA commenced an economic appraisal of introducing diesel locomotive exhaust emission limits in NSW. This study is expected to be completed in late 2018. Results of these studies will inform policy development for management of emissions from locomotives operating in NSW.

Vehicle and fuel emissions

- *Smoky vehicle program*

The EPA operates a [public smoky vehicle reporting program](#) that targets vehicles emitting excessive air impurities. In 2017-18, the EPA issued 681 letters to vehicle owners reported by members of the community, advising the vehicle owners to have the vehicles inspected and repaired if necessary.

In 2017 NSW Roads and Maritime Services (RMS) continued its Smoky Vehicle Enforcement Project in Sydney's M5 East tunnel. The camera system detects, identifies, and records smoky vehicles, and includes fines for the operators of smoky vehicles. In 2017 the EPA issued 33 penalty notices to vehicle owners referred by the RMS camera detection system.

- *Vapour recovery at service stations*

Vapour recovery stage 1 technology (VR1) captures displaced vapours from storage tanks when a tanker delivers fuel to a service station, while vapour recovery stage 2 technology (VR2) captures vapours displaced at the bowser when a motorist refuels. Service stations with a petrol throughput of 3.5 to 12 million litres per year, located in the Sydney metropolitan area were required to have VR2 installed by 1 January 2017. Any 'new or modified' service stations in the Sydney, Central Coast and Wollongong metropolitan areas are also required to install VR2 equipment as part of the site development.

Data for the 2017-18 reporting period show 99% of service stations required to have installed VR1 technology have done so, while 95% of those requiring VR2 technology have it installed and operational.

As of 30 June 2017, regulatory responsibility of vapour recovery at service stations transitioned from EPA to local councils. However, the EPA retains responsibility for the small number of service stations that are currently not compliant with the vapour recovery requirements and will follow up with appropriate compliance and enforcement actions. To date, the EPA's compliance actions have included more than 450 site inspections, 600 advisory letters, 48 formal warning letters, 87 show cause letters and three penalty notices.

The implementation of vapour recovery at these service stations is estimated to reduce emissions of volatile organic compounds (VOCs) by approximately 5,750 tonnes per year.

- *Summer low-volatility petrol*

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

- *National vehicle and fuel standards*

Fuel quality and vehicle emission standards for new road vehicles are managed by the Commonwealth Government. In 2017-18 a national review of vehicle emission and fuel standards continued. NSW previously made submissions to the Commonwealth supporting early introduction of tighter national vehicle emission and fuel standards in March 2017. These proposed standards would more closely harmonise with international best practice for national vehicle emissions and fuel quality standards, and will improve health outcomes.

Wood smoke management

In July 2017 the EPA released a [new package of education materials](#) to raise awareness about wood smoke impacts on people's health and environment. During the winter of 2017 the EPA trialled the education package in two regional centres in the Upper Hunter - Singleton and Muswellbrook, ahead of state-wide roll out in 2018. The EPA also presented these materials to officers from local councils across the state at a workshop in March 2018.

Hunter region air quality management

The Upper Hunter Valley Dust Risk Forecasting System was trialled from 1 September to 30 November 2017. The system aims to predict weather that will increase dust generation, so that mines can take extra precautions at those critical times. During the trial, the EPA required mines to record the mass of material moved each day as a measure of their activity. The development of the scheme is documented in the report [Upper Hunter Dust Risk Forecasting Scheme Development](#). The EPA and OEH are now completing analysis of the results and considering the next steps in consultation with the Upper Hunter Air Quality Advisory Committee.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

The NSW Air Quality Monitoring Program is the largest in Australia, with a comprehensive monitoring network operated by OEH. The NEPM network is a sub-set of the entire Air Quality Monitoring Network operated by OEH.

During 2017 NEPM standards were met 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 NSW from January 2005 due to the extremely low concentrations of lead now found in ambient air. The Sydney Particle Characterisation Study confirmed the low levels of lead in ambient air.

During 2017 NEPM standards were not met for ozone and particles as PM_{10} (10 micrometers and smaller in diameter) and as $PM_{2.5}$ (2.5 micrometers and smaller in diameter). These exceedances are summarised below.

Ozone

During 2017, the NEPM standard for ozone was exceeded at stations in the Sydney, Illawarra, Central Coast and Lower Hunter regions. The most extensive ozone event occurred between 9 and 12 February 2017 when maximum temperatures exceeded 40°C on consecutive days, during south-east Australia's most severe heatwave.

Photochemical activity (as ozone) typically occurs during the warm months (January, February, March, November and December). Meeting the NEPM standards for ozone remains a challenge for Sydney in summer in most years, due to continuing pressures from increasing economic activity, motor vehicle use, urban expansion and emissions of volatile organic compounds (which are precursors of ozone) from sources such as paints, solvents, aerosols and small engines.

Particles

- PM_{10}

Hazard Reduction Burning throughout the Sydney GMR during August-September, agricultural activities at Wagga Wagga North and dust storms were the major influences on elevated PM_{10} levels throughout NSW.

To attain the daily goal for particles as PM_{10} , no exceedance days of the 24-hour PM_{10} standard is allowed unless identified as an exceptional event. During 2017, Bringelly, Chullora, Rozelle, Kembla Grange, Wollongong and Wagga Wagga North did not attain this goal due to pollution events that were deemed non-exceptional.

All monitoring sites met the annual PM_{10} goal by not exceeding the NEPM annual average standard of $25.0 \mu\text{g}/\text{m}^3$.

- $PM_{2.5}$

Extensive Hazard Reduction Burning throughout the Sydney GMR during August-September, and agricultural activities at Wagga Wagga North were the major influences on elevated $PM_{2.5}$ levels throughout New South Wales.

To attain the daily goal for particles as $PM_{2.5}$, no exceedance days of the 24-hour $PM_{2.5}$ standard is allowed unless identified as an exceptional event. During 2017, Chullora, Liverpool and Wagga Wagga North did not attain this goal due to pollution events deemed non-exceptional.

The same three monitoring sites did not meet the annual $PM_{2.5}$ goal due to exceeding the NEPM annual average standard of $8.0 \mu\text{g}/\text{m}^3$: Chullora, Liverpool, and Wagga Wagga North.

The particle goals (as PM_{10} and as $PM_{2.5}$) are influenced by Hazard Reduction Burns in the Sydney GMR and mining and agricultural activities in rural areas. Solid fuel heaters also produce elevated levels of particles in autumn and winter in both urban and rural areas. Elevated particle levels can occur due to effects of emission sources combined with the local climate and topography (e.g. impacts of agricultural burning in Wagga Wagga North).

NSW programs targeting the primary emission sources of ozone and particle pollution are outlined in the previous section.

Monitoring data

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 (some stations are designated as NEPM stations for particular pollutants but not designated for other pollutants). The standards and goals, with accompanying definitions and explanations appear in Schedule 2 of the NEPM.

For averaging times shorter than one year, NEPM standards and goals are met if:

- at least 75 per cent of data are captured in each quarter of the year; and
- the NEPM standard is exceeded during no more than a specified number of days per calendar year. All pollutants can exceed the standard on one day per year, except for PM_{10} , and $PM_{2.5}$ which are only allowed ‘exceptional’ exceedance days (i.e. those determined to be either due to planned hazard reduction burns or natural events like bushfire and dust storm).

Hourly updated data from the total NSW Air Quality Monitoring Network are reported at <http://www.environment.nsw.gov.au/AQMS/aqi.htm>.

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

The NSW Air Quality Monitoring Plan is located at <http://www.environment.nsw.gov.au/research-and-publications/publications-search/national-environment-protection-measure-for-ambient-air-quality-monitoring-plan-for-nsw>.

CO

Carbon monoxide

(NEPM standard 8 hours = 9.0ppm)

Station	Number of exceedances	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		
Wyong	0	Met
Illawarra		
Wollongong	0	Met
Lower Hunter		
Newcastle	0	Met

During 2017 compliance with the Ambient Air Quality NEPM for carbon monoxide was demonstrated at all sites in the Sydney, Illawarra, Central Coast and Lower Hunter regions.



Nitrogen Dioxide

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

Station	1 Hour		1 Year	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Sydney				
Bringelly	0	Met	0.005	Met
Camden	0	Met	0.005	Met
Campbelltown West	0	Met	0.011	Met
Chullora	0	Met	0.012	Met
Liverpool	0	Met	0.012	Met
Prospect	0	Met	0.010	Met
Richmond	0	Met	0.005	Met
Rozelle	0	Met	0.011	Met
Central Coast				
Wyang	0	Met	0.005	Met
Illawarra				
Albion Park South	0	Met	0.004	Met
Wollongong	0	Met	0.006	Met
Lower Hunter				
Newcastle	0	Met	0.007	Met
Wallsend	0	Met	0.008	Met

During 2017 compliance with the Ambient Air Quality NEPM for nitrogen dioxide was demonstrated at all sites in the Sydney, Illawarra, Central Coast and Lower Hunter regions.



Ozone

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

Station	1 Hour		4 Hour	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
Sydney				
Bringelly	0	Met	1	Met
Camden	1	Met	3	Not Met
Campbelltown West	0	Met	1	Met
Chullora	1	Met	3	Not Met
Liverpool	2	Not Met	2	Not Met
Oakdale	0	Met	0	Met
Prospect	1	Met	2	Not Met
Richmond	0	Met	2	Not Met
Rozelle	1	Met	1	Met
St Marys	1	Met	4	Not Met
Central coast				
Wyong	1	Met	2	Not Met
Illawarra				
Albion Park South	2	Not Met	2	Not Met
Kembla Grange	2	Not Met	4	Not Met
Wollongong	2	Not Met	2	Not Met
Lower Hunter				
Newcastle	0	Met	0	Met
Wallsend	1	Met	2	Not Met

During 2017, all four regions monitoring ozone recorded levels above the national ozone standards. Illawarra and Sydney regions were most widely impacted.

The most extensive ozone event occurred between 9 and 12 February 2017 when maximum temperatures exceeded 40°C on consecutive days, during south-east Australia's most severe summer heatwave.

Photochemical activity (as ozone) typically occurs during the summer months (January, February, November and December).



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 exceedances	NEPM goal compliance	Number of exceedances	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						
Wyang	0	Met	0	Met	0.001	Met
Illawarra						
Albion Park South	0	Met	0	Met	0.001	Met
Wollongong	0	Met	0	Met	0.001	Met
Lower Hunter						
Newcastle	0	Met	0	Met	0.002	Met
Wallsend	0	Met	0	Met	0.001	Met

During 2017 compliance with the Ambient Air Quality NEPM for sulfur dioxide was demonstrated at all sites in the Sydney, Illawarra, Central Coast and Lower Hunter regions.

PM₁₀Particles as PM₁₀(NEPM standard 1 day = 50 µg/m³, 1 year = 25 µg/m³)

Station	1 day			1 year	
	Non-exceptional exceedances	Exceptional exceedances	NEPM goal compliance	Annual average (25 µg/m ³)	NEPM goal compliance
Sydney					
Bringelly	2	4	Not Met	19.8	Met
Camden	0	0	Met	14.7	Met
Campbelltown West	0	1	Met	15.7	Met
Chullora	2	2	Not Met	20.1	Met
Liverpool	0	2	Met	20.8	Met
Oakdale	0	0	Met	12.1	Met
Prospect	0	1	Met	18.9	Met
Richmond	0	1	Met	16.0	Met
Rozelle	1	0	Not Met	18.1	Met
Central coast					
Wyong	0	1	Met	16.1	Met
Illawarra					
Albion Park South	0	0	Met	15.3	Met
Kembla Grange	2	2	Not Met	20.5	Met
Wollongong	1	0	Not Met	18.1	Met
Lower Hunter					
Beresfield	0	0	Met	19.6	Met
Newcastle	0	1	Met	22.4	Met
Regional					
Albury	0	0	Met	15.8	Met
Bathurst	0	0	Met	14.1	Met
Tamworth	0	2	Met	15.3	Met
Wagga Wagga North	10	0	Not Met	20.6	Met

During 2017, a large number of stations exceeded the national 1-day standard for PM_{10} . This was the result of dust storms, extensive Hazard Reduction Burns throughout the Greater Metropolitan Region and agricultural activities at Wagga Wagga North. However, after excluding these major influences on elevated PM_{10} levels, six stations did not meet the daily NEPM goal due to localised events: Bringelly, Chullora, Rozelle, Kembla Grange, Wollongong and Wagga Wagga North.

The national 1-day PM_{10} standard was exceeded on 22 distinct calendar days, of which seven were deemed exceptional. Overall, there were 15 distinct non-exceptional days throughout the state. Of the 15 days, eight occurred exclusively at Wagga Wagga North; however, there was a total of 10 non-exceptional days at this site.

All stations met the AAQ NEPM annual PM_{10} goal.

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

Station	1 day			1 year	
	Non-exceptional exceedances	Exceptional exceedances	NEPM goal compliance	Annual average (8 µg/m ³)	NEPM goal compliance
Sydney					
Bringelly	0	2	Met	7.5	Met
Camden	0	2	Met	6.7	Met
Campbelltown West	0	0	Met	7.4	Met
Chullora	4	4	Not Met	9.5	Not Met
Earlwood	0	2	Met	7.3	Met
Liverpool	1	2	Not Met	8.9	Not Met
Oakdale	0	1	Met	6.0	Met
Prospect	0	3	Met	7.7	Met
Richmond	0	3	Met	7.0	Met
Rozelle	0	2	Met	7.2	Met
Central Coast					
Wyong	0	1	Met	5.8	Met
Illawarra					
Albion Park South*	0	0	ND*	6.6	ND*
Kembla Grange	0	0	Met	6.9	Met
Wollongong	0	0	Met	7.1	Met
Lower Hunter					
Beresfield	0	0	Met	7.6	Met
Newcastle	0	0	Met	7.4	Met
Wallsend	0	0	Met	7.3	Met
Regional					
Albury**	0	0	ND**	7.3	ND**
Bathurst	0	0	Met	6.1	Met
Tamworth	0	0	Met	7.8	Met
Wagga Wagga North	2	3	Not Met	8.1	Not Met

* ND (not determined) – the Albion Park South station did not meet 75% data availability criteria for PM_{2.5} for the 2nd quarter due to invalidation of large negative readings.

** ND (not determined) – the Albury station did not meet 75% data availability criteria for PM_{2.5} for the 1st quarter since the instrument was not commissioned until 7 February 2017.

During 2017, a large number of stations exceeded the national 1-day standard for $PM_{2.5}$. This was the result of extensive Hazard Reduction Burns throughout the Greater Metropolitan Region and agricultural activities at Wagga Wagga North. However, after excluding these major influences on elevated $PM_{2.5}$ levels, three stations did not meet the daily NEPM goal due to localised events: Chullora, Liverpool and Wagga Wagga North.

The national 1-day $PM_{2.5}$ standard was exceeded on 18 distinct calendar days, of which 11 days were deemed exceptional. Four out of the seven non-exceptional days occurred at Chullora.

Three stations did not meet the national annual $PM_{2.5}$ goal: Chullora, Liverpool and Wagga Wagga North.

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Victoria by the Hon Lily D'Ambrosio, Minister for Energy, Environment and Climate Change for the reporting year ended 30 June 2018.

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.

For carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂) and PM_{2.5} data capture was high, with all stations above the data capture target of 75%.

For ozone (O₃), data capture was below the target of 75% at Dandenong, Melton, Mooroolbark and Point Cook stations as these instruments only operated during summer periods where peak ozone formation occurs.

For PM₁₀, data capture was above 75% at all stations except Dandenong due to an issue with instrument calibration.

There were no other significant implementation issues.

PART 2 — ASSESSMENT OF NEPM EFFECTIVENESS

Victoria's air quality in 2017 was generally good, with some parameters shown to be improving over time. Monitoring in 2017 showed the AAQ NEPM goals and standards were met for CO, NO₂, O₃ and SO₂. There were some exceedances for particles. In general, exceedances were attributed to local dust, fire or urban emissions.

The PM₁₀ goal was not met at Geelong South due to two exceedances of the standard, which were due to local dust sources.

There was an additional exceedance at Geelong South related to planned burns, which were considered exceptional events.

The PM₁₀ goal was met at Mooroolbark, however there were two exceedances of the standard related to planned burns.

The PM_{2.5} goal was not met at any of the stations as all had one or more exceedances of the standard. Alphington and Traralgon each exceeded the annual standard. A majority of exceedances during 2017 were related to urban sources such as domestic wood heaters and occurred on days where the minimum temperature was less than 5°C and there were low winds which limited the ability of the environment to disperse the smoke.

The results from issue-specific monitoring stations in Brooklyn and the Latrobe Valley are displayed on EPA's website. <http://www.epa.vic.gov.au/our-work/monitoring-the-environment/epa-airwatch>.

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 <https://www.epa.vic.gov.au/~media/Publications/1703.pdf>.

The monitoring plan for Victoria is available from <http://www.epa.vic.gov.au/our-work/publications/publication/2002/january/763>.

CO

Carbon monoxide

(NEPM standard 8 hours = 9.0ppm)

Station	Number of exceedances	NEPM goal compliance
Alphington	0	Met
Footscray	0	Met
Geelong South	0	Met

NO₂

Nitrogen dioxide

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

Station	1 hour		1 year	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Alphington	0	Met	0.010	Met
Footscray	0	Met	0.012	Met
Geelong South	0	Met	0.006	Met
Traralgon	0	Met	0.006	Met



Ozone

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

Station	1 hour		4 hours	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
Alphington	0	Met	0	Met
Dandenong	0*	ND	0*	ND
Footscray	0	Met	0	Met
Geelong South	0	Met	0	Met
Melton	0*	ND	0*	ND
Mooroolbark	0*	ND	0*	ND
Point Cook	0*	ND	0*	ND
Traralgon	0	Met	0	Met

* <75% data capture during year, insufficient data to demonstrate compliance

ND – Not demonstrated



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 exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Alphington	0	Met	0	Met	0.0004	Met
Altona North	0	Met	0	Met	0.0015	Met
Geelong South	0	Met	0	Met	0.0003	Met
Traralgon	0	Met	0	Met	0.0010	Met



Lead

(NEPM standard 1 year = 0.50 $\mu\text{g}/\text{m}^3$)

Station	Annual average ($\mu\text{g}/\text{m}^3$)	NEPM goal compliance
NA	NA	NA

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.

PM₁₀ Particles as PM₁₀

(NEPM standard 1 day = 50 µg/m³)

Station	Number of exceedances	NEPM goal compliance
Alphington	0	Met
Dandenong	0*	ND
Footscray	0	Met
Geelong South	3**	Not Met
Mooroolbark	2**	Met
Richmond	0	Met
Traralgon	0	Met

* <75% data capture during year, insufficient data to demonstrate compliance

** One or more exceedance/s attributed to jurisdiction-authorised hazard reduction burning and is considered an exceptional event for the purpose of assessing compliance with the goal

ND – Not demonstrated

PM_{2.5} Particles as PM_{2.5}

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

Station	1 year	
	Number of exceedances	Annual average (µg/m ³)
Alphington	8 (1)	Not Met
Footscray	4 (2)	Not Met
Geelong	2 (1)	Not Met
Traralgon	5 (4)	Not Met

() number of exceedances attributed to jurisdiction-authorised hazard reduction burning and is considered an exceptional event for the purpose of assessing compliance with the goal

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Queensland by Leeanne Enoch MP, Minister for Environment and the Great Barrier Reef, Minister for Science, and Minister for the Arts for the reporting year ended 30 June 2018.

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.
- In the 2017-18 reporting period, monitoring was conducted in five of the ten regions identified in the Monitoring Plan: South East Queensland, Gladstone, Mackay, Townsville and Mount Isa. Eleven of the nineteen sites nominated in the monitoring plan, and two additional reporting sites, were operational. Monitoring at four of the eight remaining sites concluded prior to 2017-18 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 with Filter Dynamics Measurement System (FDMS) continued at two sites in South East Queensland (Rocklea and Springwood) and one site in Gladstone (South Gladstone) during 2017.
- Carbon monoxide monitoring re-commenced at Woolloongabba in South East Queensland on 6 June 2017. The new location on Ipswich Road is approximately 100 metres north of the original site, which closed on 17 June 2016 due to building works that required the removal of the monitoring equipment.
- Monitoring commenced at a new site at North Ward in Townsville on 7 December 2017. The North Ward site replaces the former Pimlico monitoring site that closed on 20 February 2016 due to planned redevelopment of the property.
- A new monitoring site at Southport on the Gold Coast in South East Queensland was established in February 2018. Pollutants monitored at this site include carbon monoxide, nitrogen dioxide, ozone, PM₁₀ and PM_{2.5}.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

- The results of Queensland's ambient air quality monitoring in 2017 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 in Mount Isa.
- Although industrial emission sources in Mount Isa have significantly reduced total sulfur dioxide emissions to air in recent years through capture and conversion to sulfuric acid and improved monitoring and process control feedback mechanisms, compliance with the NEPM one-hour and 24-hour sulfur dioxide standards was unlikely to be achieved under existing regulatory controls.
- In May 2008, the Queensland Government amended legislation regulating Mount Isa smelter emissions to bring these operations under the stricter controls within the EP Act. In December 2011, the Queensland Government issued the smelter operator an Environmental Authority (EA) applying contemporary environmental conditions to the site. In April 2012, a Transitional Environmental Program (TEP) under the provisions of the EP Act was approved, recognising that the smelter operations could only achieve contemporary air quality standards following considerable investment and further work. The TEP listed a staged program of works, including the closure of the copper smelter in 2016, designed to bring the site into compliance with AAQ NEPM air quality standards by 2016.
- In September 2015 the Queensland Government issued the smelter operators with an amended EA to allow operation of the copper smelter to continue until 2022. Consequently, the TEP was cancelled in February 2016. While still progressively reducing emissions to air at the site, the amended EA allows for one-hour average sulfur dioxide levels in excess of the AAQ NEPM goal.

- The AAQ NEPM PM₁₀ 24-hour standard (the numerical threshold) was exceeded on three days at the West Mackay monitoring site during 2017 due to bushfire smoke, and three days at The Gap monitoring site in Mount Isa due to windblown dust from natural surfaces. However, PM₁₀ at The Gap and West Mackay complied with the NEPM goal in 2017 as, under the exceptional event rule, these exceedances are excluded from the determination of compliance with the NEPM goal.

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 2017 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

CO Carbon monoxide

(NEPM standard: 8 hours=9.0 ppm)

Station	Number of exceedances	NEPM goal compliance
South-east Queensland		
Woolloongabba	0	not demonstrated*

* not demonstrated due to insufficient data (i.e. less than 75 per cent) in one or more quarters due to temporary closure while station relocated

NO₂ Nitrogen Dioxide

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

Station	1 hour		1 year	
	Number of exceedances	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	0.006	met
Springwood	0	met	0.006	met
Flinders View	0	met	0.007	met
Gladstone				
South Gladstone	0	met	0.005	met
Townsville				
North Ward	0	not demonstrated*	insufficient data	not demonstrated*

* not demonstrated due to insufficient data (i.e. less than 75 per cent) in one or more quarters due to monitoring not commencing until December



Ozone

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

Station	1 hour		4 hour	
	Number of exceedances	NEPM goal compliance	Number of exceedances	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



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 exceedances	NEPM goal compliance	Number of exceedances	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	0.001	met
Gladstone						
South Gladstone	0	met	0	met	0.002	met
Townsville						
North Ward	0	not demonstrated*	0	not demonstrated*	insufficient data	not demonstrated*
Stuart	0	met	0	met	0.000	met
Mount Isa						
Menzies	24	not met	0	met	0.005	met
The Gap	13	not met	0	met	0.005	met

*not demonstrated due to insufficient data (i.e. less than 75 per cent) in one or more quarters due to monitoring not commencing until December

Pb**Lead**(NEPM standard 1 year = $0.50\mu\text{g}/\text{m}^3$)

Station	Annual average ($\mu\text{g}/\text{m}^3$)	NEPM goal compliance
Townsville		
Coast Guard	0.09	met
Mount Isa		
The Gap	0.08	met

PM₁₀**Particles as PM₁₀**(NEPM standard 1 day = $50\mu\text{g}/\text{m}^3$)

Station	Number of exceedances	NEPM goal compliance
South East Queensland		
Mountain Creek	0	met
Rocklea	0	met
Springwood	0	met
Flinders View	0	met
Gladstone		
South Gladstone	0	met
Mackay		
West Mackay	3†	met
Townsville		
North Ward Δ	0	not demonstrated*
Mount Isa		
The Gap	3‡	met

† exceedances due to bushfire smoke (exceptional events)

 Δ monitoring by TAPI T640X optical particle spectrometer

* not demonstrated due to insufficient data (i.e. less than 75 per cent) in one or more quarters due to monitoring not commencing until December

‡ exceedances due to windblown dust from natural surfaces (exceptional events)

PM_{2.5}

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

Station	1 year	
	Number of exceedances	Annual average (µg/m ³)
South East Queensland		
Rocklea†	0	7.3
Springwood†	0	5.4
Gladstone		
South Gladstone†	0	5.6
Townsville		
North WardΔ	0	Insufficient data*

† monitoring by TEOM Model 1405DF instrumentation fitted with FDMS
Δ monitoring by TAPI T640X optical particle spectrometer
* insufficient data due to monitoring not commencing until December

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Western Australia by the Hon. Stephen Dawson, MLC Minister for Environment; Disability Services for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

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

Implementation activities may be viewed in two categories:

1. 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
2. those activities within Western Australia (including regulatory activities) designed to ensure that air quality is in compliance with the NEPM goal for each of the seven criteria pollutants.

In the first category, DWER has:

- continued to liaise with local governments and other organisations as required to facilitate the establishment of fixed ambient monitoring stations.
- maintained monitoring of carbon monoxide, oxides of nitrogen, ozone, sulfur dioxide and PM₁₀ and PM_{2.5} particle fractions.

In the second category, DWER 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.
- 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 receptor areas, particularly where these areas may be impacted by industrial emissions.
- maintained community access to the regularly updated air quality index through DWER's webpage (www.der.wa.gov.au/your-environment/air); and
- Regulated emissions from industrial premises through works approvals and licences to control emissions of the criteria pollutants.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

The Ambient Air Quality 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 air quality improvement strategies and are 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. For example, sulfur dioxide has 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, PM₁₀ and PM_{2.5} remain pollutants of concern in the Perth metropolitan region and are the focus of attention within the AQMP, particularly the management of domestic PM₁₀ and PM_{2.5} sources. In regional areas, PM₁₀ and PM_{2.5} are the pollutants of most significance with respect to the NEPM standards.

The data presented below, show that Western Australia met the NEPM goals for all pollutants in calendar year 2017 except for daily average PM₁₀ at Caversham, Albany, Collie and Geraldton and daily average PM_{2.5} NEPM goal at Caversham, Duncraig, South Lake and Bunbury. The annual goal for PM_{2.5} was not met at Caversham, Duncraig, South Lake, Bunbury and Busselton.

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 at least 75% of data are captured in each quarter and 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 and PM_{2.5}, which may not be exceeded unless caused by an exceptional event).

NEPM goal compliance at Quinns Rocks was not demonstrated as the site was decommissioned in early 2017 due to redevelopment of the site. A new site has been found and is currently being prepared to replace the decommissioned site.

The data are presented in greater detail in the Annual Western Australia Air Monitoring Report available on the DWER website, along with the West Australian Monitoring Plan at <https://www.der.wa.gov.au/your-environment/air/2013-air-quality-publications>.

CO

Carbon monoxide

(NEPM standard 8 hours = 9.0ppm)

Station	Number of exceedances	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 exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Perth				
North Metro	0	Met	0.006	Met
North East Metro	0	Met	0.005	Met
Outer North Coast	0	Not demonstrated	0.002	Not demonstrated
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 exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
Perth				
North East Metro	0	Met	0	Met
Outer North Coast	0	Not demonstrated	0	Not demonstrated
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 exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Perth						
South Metro	0	Met	0	Met	0.001	Met
South Coast	0	Met	0	Met	0.001	Met
South-east Metro	0	Met	0	Met	0.003	Met



Lead

(NEPM standard 1 year = 0.50 $\mu\text{g}/\text{m}^3$)

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 = $50\mu\text{g}/\text{m}^3$, 1 year = $25\mu\text{g}/\text{m}^3$)

Station	1 day		1 year	
	Number of exceedances	NEPM goal compliance	Annual average ($\mu\text{g}/\text{m}^3$)	NEPM goal compliance
Perth				
North East Metro ¹	3	Not met	16.1	Met
North Metro ¹	1	Met	15.7	Met
South East Metro ¹	0	Met	16.7	Met
Southwest				
Albany ¹	2	Not met	16.6	Met
Bunbury ¹	0	Met	16.5	Met
Collie ¹	11	Not met	21.7	Met
Midwest				
Geraldton ¹	3	Not met	21.3	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 = $25\mu\text{g}/\text{m}^3$, 1 year = $8\mu\text{g}/\text{m}^3$)

Station	1 day		1 year	
	Number of exceedances	NEPM goal compliance	Annual average ($\mu\text{g}/\text{m}^3$)	NEPM goal compliance
Perth				
North East Metro ¹	5	Not met	8.5	Not met
North Metro ¹	3	Not met	8.2	Not met
Outer North Coast ¹	0	Not demonstrated	7.8	Not demonstrated
South East Metro ¹	3	Not met	8.7	Not met
Southwest				
Bunbury ¹	6	Not met	8.7	Not met
Busselton ¹	1	Met	8.2	Not met

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. David Speirs, Minister for Environment and Water, for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In South Australia the National Environment Protection (Ambient Air Quality) Measure is implemented by the South Australian Environment Protection Authority (EPA) taking into account the Ambient Air Quality Monitoring Plan for South Australia, developed under the AAQ NEPM, and PRC Technical Papers.

Air quality monitoring data are displayed on the EPA website in real time, and uploaded quarterly as summaries. Datasets are made available at the website www.data.sa.gov.au.

An EPA mobile monitoring station was installed at Port Augusta on 9 March 2017. This station is equipped to continuously monitor total suspended particulates (TSP), particles (PM_{10} and $PM_{2.5}$) and meteorological conditions, as part of a program to evaluate local air quality.

Compliance with the standards and goals could not be demonstrated for some pollutants at some sites, due to data availability rates less than the 75% criteria for one or more quarters. This was due to numerous factors including technical issues with instrumentation and equipment breakdowns, vandalism, and the commissioning of replacement monitors.

There were no other significant implementation issues.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

Data for South Australia shows that air quality was generally good in 2017.

In the Adelaide metropolitan region:

- Carbon monoxide - monitoring at Elizabeth ceased early in 2017 due to instrumentation issues. Due to the low data availability rates (22.4% in the first quarter and an annual rate of 5.5%) carbon monoxide has not been included in the tables below.
- Nitrogen dioxide - the 1-hour and 1-year standards and goals were met at Christie Downs and Northfield, but compliance was not demonstrated at Elizabeth Downs, Kensington, Netley and North Haven due to insufficient data in either the first or fourth quarters.
- Ozone - the 1-hour and 4-hour standards and goals were met at all Adelaide monitoring stations except for Elizabeth Downs, where there was insufficient data capture during the first quarter to demonstrate compliance.
- Sulfur dioxide - the 1-hour, 1-day and 1-year standards and goals were met at Northfield but compliance was not demonstrated at North Haven due to data availability rates being less than 75% for all but the 3rd quarter of the year.
- Particles (PM_{10}) - the 1-day standard and goal was not met at North Haven as a result of 2 exceedances that were attributed to local sources. Compliance with the 1-year standard and goal could not be demonstrated due to data availability rates less than 75% in the second quarter. There were no exceedances at any of the other Adelaide metropolitan stations and both the 1-day and 1-year standards were met at the other sites.
- Particles ($PM_{2.5}$) - the 1-year standard was not met at Netley but was met at North Haven. The 1-day standard and goal was met at both sites. Compliance with the 1-year and 1-day standard and goal was not demonstrated at Elizabeth due to low data availability rates in the fourth quarter.

In 2016 the South Australian EPA replaced the TEOMs at Netley and North Haven with Beta Attenuation Monitors (BAMs) for monitoring PM_{2.5}. In 2018 the EPA also progressively replaced the TEOMs used to monitor PM₁₀ with BAMs in the Adelaide metropolitan area.

In the Spencer Region:

- Particles (PM₁₀) - compliance with the 1-day and 1-year standards and goals was not demonstrated at Port Pirie (Oliver Street) due to insufficient data capture in the first quarter of 2017, however both standards were met at Whyalla (Schulz Reserve).
- Sulfur dioxide - compliance with the annual standard and goal could not be demonstrated at Port Pirie Oliver Street due to data availability rates less than 75% in the first and second quarters. The 1-hour and 1-day standards and goals were not met due to numerous exceedances of both standards.
- Lead - the standard and goal was met at both NEPM monitoring stations in Port Pirie.
- Although there have been increases in the amount of lead-in-air recorded in Port Pirie in recent years, it is expected that concentrations will reduce in the future as a result of reduced fugitive emissions and new technology installed at the plant as part of the smelter transformation. Sulfur dioxide levels are also expected to reduce in the 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 and PM_{2.5} which does not allow for any exceedances except where they can be attributed to exceptional events) and at least 75% of data are captured in each quarter.

The data are presented in greater detail in the Air Monitoring Report for South Australia 2017 - Compliance with the National Environment Protection (Ambient Air Quality) Measure available from https://www.epa.sa.gov.au/data_and_publications/air_quality_monitoring/reports_and_summaries (yet to be published)

The monitoring plan for South Australia is available from https://www.epa.sa.gov.au/files/12061_airnepm.pdf.

The Environment Protection Authority also publishes monitoring data on the EPA and Data SA websites:

- Hourly data
https://www.epa.sa.gov.au/data_and_publications/air_quality_monitoring
- Summary reports
https://www.epa.sa.gov.au/data_and_publications/air_quality_monitoring/reports_and_summaries
- Validated data
<https://data.sa.gov.au/>



Nitrogen dioxide

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

Station	1 hour		1 year	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Adelaide				
CHD01- Christie Downs	0	Met	0.005	Met
ELI01 – Elizabeth Downs	0	Not demonstrated*	0.004	Not demonstrated*
KEN01- Kensington Gardens	0	Not demonstrated*	0.004	Not demonstrated*
NET01 – Netley	0	Not demonstrated*	0.008	Not demonstrated*
NOR01 – Northfield	0	Met	0.007	Met
NHV01 – North Haven	0	Not demonstrated*	0.006	Not demonstrated*

*Insufficient data to demonstrate compliance, data availability was less than 75% in one or more quarters during 2017



Ozone

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

Station	1 hour		4 hours	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
Adelaide				
CHD01 – Christie Downs	0	Met	0	Met
ELI01 – Elizabeth Downs	0	Not demonstrated*	0	Not demonstrated*
KEN01 – Kensington Gardens	0	Met	0	Met
NET01 – Netley	0	Met	0	Met
NOR01 – Northfield	0	Met	0	Met
NHV01 – North Haven	0	Met	0	Met

*Insufficient data to demonstrate compliance, data availability was less than 75% in one or more quarters during 2017



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 exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Adelaide						
NOR01 – Northfield	0	Met	0	Met	0.000	Met
NHV01 – North Haven	0	Not demonstrated*	0	Not demonstrated*	0.001	Not demonstrated*
Spencer						
PTP01 – Pt Pirie Oliver street	40	Not met	3	Not met	0.012	Not demonstrated*

*Insufficient data to demonstrate compliance, data availability was less than 75% in one or more quarters during 2017



Lead

(NEPM standard 1 year = 0.50µg/m³)

Station	Annual average (µg/m³)	NEPM goal compliance
Spencer		
PTP05 – Pt Pirie Frank Green Park	0.26	Met
PTP05 – Pt Pirie Oliver Street	0.40	Met

PM₁₀

Particles as PM₁₀

(NEPM standard 1 day = $50\mu\text{g}/\text{m}^3$, 1 year = $25\mu\text{g}/\text{m}^3$)

Station	1 day		1 year	
	Number of exceedances	NEPM goal compliance	Annual average ($\mu\text{g}/\text{m}^3$)	NEPM goal compliance
Adelaide				
CHD01 – Christie Downs	0	Met	14.1	Met
ELI01 – Elizabeth Downs	0	Met	13.2	Met
KEN01 – Kensington Gardens	0	Met	12.9	Met
NET01 – Netley	0	Met	15.0	Met
NHV01 – North Haven	2	Not met	19.6	Not demonstrated*
Spencer				
PTP01 – Pt Pirie Oliver Street	0	Not demonstrated*	15.8	Not demonstrated*
WHY07 – Whyalla Schulz Park	0	Met	14.2	Met

*Insufficient data to demonstrate compliance, data availability was less than 75% in one or more quarters during 2017

PM_{2.5}

Particles as PM_{2.5}

(NEPM standard 1 day = $25\mu\text{g}/\text{m}^3$, 1 year = $8\mu\text{g}/\text{m}^3$)

Station	1 day		1 year	
	Number of exceedances	NEPM goal compliance	Annual average ($\mu\text{g}/\text{m}^3$)	NEPM goal compliance
Adelaide				
ELI01 – Elizabeth Downs	0	Not demonstrated*	7.3	Not demonstrated*
NET01 – Netley	0	Met	8.8	Not met
NHV01 – North Haven	0	Met	6.7	Met

*Insufficient data to demonstrate compliance, data availability was less than 75% in one or more quarters during 2017

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Tasmania by Elise Archer, Minister for the Environment, for the reporting year ended 30 June 2018.

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 EPA Tasmania in 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 EPA Tasmania's website at www.epa.tas.gov.au.
- Wood smoke, 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. These regulations expired in mid-2017, and have been remade for one-year pending further review.
- In 2009 the then 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. In 2017-18 this network consisted of 35 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 Tasmania 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 Tasmania'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 EPA Tasmania.
- 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 EPA Tasmania 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.

Officers of EPA Tasmania and various Councils work together on the 'Burn Brighter this Winter' projects. 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 data enable appropriate information to be conveyed to specific households.

- In winter 2017 a comprehensive series of car-based smoke-measurement surveys were undertaken in Launceston. The EPA Tasmania-designed 'Travel BLANKET' mobile instruments were used to make spatially-located measurements of $PM_{2.5}$ across the city. Over 50,000 individual measurements were made across 11 separate evenings. Together with surveys from 10 nights in winter 2015, these data provide a spatial view of winter-smoke distributions across Launceston. Analysis is proceeding to investigate the utility of these data in deriving spatial estimates of mean winter-time population exposure to particles as $PM_{2.5}$. Population exposure data will be required for reporting under the Air NEPM from 2018 onwards.
- 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.
- The instruments at the major air stations of Hobart and Launceston, as well as at some of the earlier established BLANKET stations, are reaching the end of their operational life. There is likely to be a need for replacement of some of this equipment in the next few years.
- 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 exceedances 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.

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}

There was one exceedance of the 24 hour PM_{10} standard of $50 \mu\text{g}/\text{m}^3$ measured in Launceston in 2017. Data capture rates for the four quarters of 2017 were 100%, 100%, 98% and 80% respectively, giving an annual rate of 95%. The annual average PM_{10} was $14.9 \mu\text{g}/\text{m}^3$, which meets the annual PM_{10} standard of less than $25 \mu\text{g}/\text{m}^3$.

$PM_{2.5}$

The 24-hour $PM_{2.5}$ standard of $25 \mu\text{g}/\text{m}^3$ was exceeded on 16 days in Launceston in 2017. This is comparable with results from recent years (9 in 2016, 12 in 2015, 11 in 2014, 12 in 2013, 16 in 2012; 6 in 2011; 11 in 2010; and 12 in 2009). Overall, the 2017 result is a considerable improvement on the 35 exceedance days observed when $PM_{2.5}$ monitoring was introduced in 2006. The annual average $PM_{2.5}$ concentration in 2017, of $8.6 \mu\text{g}/\text{m}^3$ does not meet the annual $PM_{2.5}$ standard of less than $8 \mu\text{g}/\text{m}^3$. It is however comparable with annual averages from the past few

years (7.8 $\mu\text{g}/\text{m}^3$ in 2016; 8.7 in 2014; 8.1 $\mu\text{g}/\text{m}^3$ in 2013; 8.4 $\mu\text{g}/\text{m}^3$ in 2012; 7.5 $\mu\text{g}/\text{m}^3$ in 2011; 8.3 $\mu\text{g}/\text{m}^3$ in 2010; and 7.5 $\mu\text{g}/\text{m}^3$ in 2009).

Hobart

PM₁₀

In Hobart in 2017 there were no exceedances of the 24-hour PM_{10} standard. Data capture rates were 100% in each quarter and annually. The annual average PM_{10} level was 11.1 $\mu\text{g}/\text{m}^3$, which meets the annual PM_{10} standard of less than 25 $\mu\text{g}/\text{m}^3$.

PM_{2.5}

The 25 $\mu\text{g}/\text{m}^3$ 24-hour standard for $\text{PM}_{2.5}$ was not exceeded in Hobart in 2017. For comparison, in 2016 there were three days above the standard. In 2015 there was one day above the standard. In 2014 and 2013 there were 3 days above the standard, 3 in 2012 and none in 2011. The annual average $\text{PM}_{2.5}$ concentration of 5.7 $\mu\text{g}/\text{m}^3$ was similar to that of the recent years (5.5 $\mu\text{g}/\text{m}^3$ in 2016, 5.8 $\mu\text{g}/\text{m}^3$ in 2015; 6.7 $\mu\text{g}/\text{m}^3$ in 2014; 6.1 $\mu\text{g}/\text{m}^3$ in 2013; 6.5 $\mu\text{g}/\text{m}^3$ in 2012; and 6.2 $\mu\text{g}/\text{m}^3$ in 2011), and met the annual average $\text{PM}_{2.5}$ standard of 8 $\mu\text{g}/\text{m}^3$ for the tenth consecutive year since $\text{PM}_{2.5}$ monitoring started at the New Town station.

Devonport

PM₁₀

2017 was the fifth full year of operation of the Devonport air monitoring station. Only one exceedance of the 24 hour PM_{10} standard was recorded in 2017. This is fewer than the four days above the 24 hour PM_{10} standard in 2106, which were all due to bushfires. The annual average PM_{10} level was 14.8 $\mu\text{g}/\text{m}^3$, which meets the annual PM_{10} standard of less than 25 $\mu\text{g}/\text{m}^3$.

PM_{2.5}

The 24-hour $\text{PM}_{2.5}$ concentrations measured in Devonport exceeded the $\text{PM}_{2.5}$ standard of 25 $\mu\text{g}/\text{m}^3$ on three days during 2017. These all occurred in April, during the autumn planned burning season. It cannot be determined if the elevated levels arose from hazard reduction burning alone, hence these three days have all been counted as exceedances. The annual average $\text{PM}_{2.5}$ concentration of 6.7 $\mu\text{g}/\text{m}^3$ met the annual standard of 8 $\mu\text{g}/\text{m}^3$.

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 PM_{10} , 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 AAQ NEPM monitoring reports for Tasmania.

The monitoring plan for Tasmania is available from www.epa.tas.gov.au. (<http://epa.tas.gov.au/epa/air/monitoring-air-pollution/nepm-monitoring-information>).

CO

Carbon monoxide

(NEPM standard 8 hours = 9.0ppm)

Not measured in Tasmania for NEPM reporting.

NO₂**Nitrogen dioxide**

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

Not measured in Tasmania for NEPM reporting.

O₃**Ozone**

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

Not measured in Tasmania for NEPM reporting.

SO₂**Sulfur dioxide**

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

Not measured in Tasmania for NEPM reporting.

Pb

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

Not measured in Tasmania for NEPM reporting.

PM₁₀**Particles as PM₁₀**(NEPM standard 1 day = 50µg/m³; 1 year: 25 µg/m³)

Station	Number of day exceedances	Annual average µg/m ³
Hobart (New Town)	0	11.1
Launceston (Ti Tree Bend)	1	14.9
Devonport (TAFE)	1	14.8

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

Station	1 year	
	Number of exceedances	Annual average (µg/m ³)
Hobart (New Town)	0	5.7
Launceston (Ti Tree Bend)	16	8.6
Devonport (TAFE)	3	6.7

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 Mick Gentleman, MLA for the reporting year ended 30 June 2018.

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 ACT's air quality in 2017 was assessed against the NEPM standards. In accordance with its agreed policy position, the ACT assessed its compliance for the annual average for particulate matter less than 10 microns (PM₁₀) against a lower standard of 20µg/m³ rather than the NEPM standard of 25µg/m³ from 2016.

Due to a lack of heavy industry, the ACT has never monitored sulfur dioxide (SO₂) as it is primarily an industrial pollutant, and lead monitoring ceased in 2002 with the phase out of leaded petrol.

The NEPM monitoring network in the ACT consisted of three monitoring stations in 2017.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

Monitoring results in 2017 demonstrate that Canberra's air quality is generally good, with no exceedances of the AAQ NEPM standards for carbon monoxide, nitrogen dioxide and ozone. There was one exceedance of the 24-hour PM₁₀ standard recorded at Civic. There were 13 exceedances of the daily PM_{2.5} standard recorded at Monash and Civic. The daily reporting standard for PM_{2.5} and PM₁₀ were both exceeded at Civic on 30 August 2017 due to smoke coming from a hazard reduction burn but have not been included for compliance purposes under the exceptional event rule.

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.

The data are presented in greater detail in the *ACT Air Quality Report 2017*, available through https://www.accesscanberra.act.gov.au/app/answers/detail/a_id/1320/kw/air%20qualit%20yreport%20-%20!tabs-4#!tabs-4.

CO

Carbon monoxide

(NEPM standard 8 hours = 9.0ppm)

Station	Number of exceedances	NEPM goal compliance
Monash	0	MET
Florey	0	MET



Nitrogen dioxide

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

Station	1 Hour		1 Year	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Monash	0	MET	0.004	MET
Florey	0	MET	0.005	MET



Ozone

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

Station	1 Hour		4 Hours	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
Monash	0	MET	0	MET
Florey	0	MET	0	MET
Civic	0	MET	0	MET



Particles as PM_{10}

(NEPM standard 1 day = $50\mu\text{g}/\text{m}^3$, 1 year = $25\mu\text{g}/\text{m}^3$)

Station	1 Day		1 Year	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
Monash	0	MET	0	MET
Florey	0	MET	0	MET
Civic	1	ND	0	ND



Particles as $\text{PM}_{2.5}$

(NEPM standard 1 day = $25\mu\text{g}/\text{m}^3$, 1 year = $8\mu\text{g}/\text{m}^3$)

Station	1 Day		1 Year	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
Monash	12	NOT MET	0	MET
Florey	0	MET	0	MET
Civic	1	MET	0	MET

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for the Northern Territory by the Hon Eva Lawler, Minister for Environment and Natural Resources for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

- The Northern Territory Environment Protection Authority is responsible for implementing the Ambient Air Quality NEPM in the Northern Territory through the provisions of the *Waste Management and Pollution Control Act* and the *National Environment Protection Council (Northern Territory) Act*.
- Major pollutants in the Darwin air shed - $PM_{2.5}$ and PM_{10} - 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.
- A new ambient air quality monitoring station (AQMS) was installed at Stokes Hill to monitor potential air quality impacts from industrial development and increased shipping traffic in Darwin Harbour. It will also provide improved air quality information for residents of the Darwin CBD and surrounds.
- The Stokes Hill station did not collect sufficient data to enable assessment of the compliance of pollutants monitored there with the AAQ NEPM standards for the 2017-18 reporting year, as the station was only established in the second quarter of 2017.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

During 2017, all the ambient air quality monitoring stations in the Darwin region showed no exceedances of the AAQ NEPM standards for carbon monoxide (CO), sulfur dioxide (SO₂) and nitrogen dioxide (NO₂). However, as explained below, although some exceedances were recorded for ozone (O₃), PM_{10} and $PM_{2.5}$, the NEPM goals were met.

Ozone: To comply with the NEPM goal for 1-hour average ozone, one exceedance day per year is allowed. Ozone data recorded at the stations did not exceed this standard. There was only one exceedance of the 4-hour rolling average standard for ozone, occurring at Palmerston.

PM_{10} : To comply with the 24-hour NEPM goal for particulates as PM_{10} , no exceedances of the 24-hour standard are allowed, unless determined as an exceptional event. All the recorded exceedances were linked to hazard reduction burns which are considered exceptional events. All monitoring sites complied with the annual NEPM goal for particulates as PM_{10} .

$PM_{2.5}$: To comply with the 24-hour NEPM goal for particulates as $PM_{2.5}$, no exceedances of the 24-hour standard are allowed, unless determined to be an exceptional event. During 2017, all the exceedances of the $PM_{2.5}$ standard were related to hazard reduction burns or other natural fire activities and are therefore classified as exceptional events. All monitoring sites complied with annual NEPM goal for particulates as $PM_{2.5}$.

Data from relevant monitoring stations are presented in tabular form below.

The data are presented in greater detail in <http://ntepa.webhop.net/NTEPA/Default.ltr.aspx>.

The monitoring plan for Northern Territory is available from https://ntepa.nt.gov.au/_data/assets/pdf_file/0010/284986/monitoringplan.pdf.



Carbon monoxide

(NEPM standard 8 hours = 9.0ppm)

Station	Number of exceedances	NEPM goal compliance
Palmerston	0	Met
Stokes Hill	0	Not demonstrated
Winnellie	0	Met



Nitrogen Dioxide

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

Station	1 Hour		1 Year	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Palmerston	0	Met	0.0022	Met
Stokes Hill	0	Not demonstrated	0.0025	Not demonstrated
Winnellie	0	Met	0.0031	Met



Ozone

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

Station	1 Hour		4 Hours	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
Palmerston	0	Met	1	Met
Stokes Hill	0	Not demonstrated	0	Not demonstrated
Winnellie	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 exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Palmerston	0	Met	0	Met	0.0003	Met
Stokes Hill	0	Not demonstrated	0	Not demonstrated	0.0003	Not demonstrated
Winnellie	0	Met	0	Met	0.0004	Met

Pb

Lead

(NEPM standard 1 year = $0.50\mu\text{g}/\text{m}^3$)

No monitoring for lead is undertaken in the NT

PM₁₀

Particles as PM₁₀

(NEPM standard 1 day = $50\mu\text{g}/\text{m}^3$)

Station	Number of exceedances	NEPM goal compliance
Palmerston	7	Met
Stokes Hill	0	Not demonstrated
Winnellie	2	Met

PM_{2.5}

Particles as PM_{2.5}

(NEPM standard 1 day = $25\mu\text{g}/\text{m}^3$, 1 year = $8\mu\text{g}/\text{m}^3$)

	1 year	
Station	Number of exceedances	Annual average ($\mu\text{g}/\text{m}^3$)
Palmerston	10	7.3
Stokes Hill	1	7.3
Winnellie	6	6.7

Appendix 3:
Jurisdictional reports on
the implementation and
effectiveness of the
Assessment of
Site Contamination
National Environment
Protection Measure

Commonwealth

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for the Commonwealth by the Department of the Environment and Energy for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Australian Government agencies are continuing to conduct many site assessments in accordance with the Assessment of Site Contamination NEPM.

There are a range of sites across Australia that have contamination by per- and poly-fluoroalkyl substances (PFASs), including sites that are owned or managed by Australian Government agencies. The ASC NEPM provides a known framework for Australian Government agencies to use in assessing PFAS contamination, as a critical step towards managing that contamination.

The approaches in the Assessment of Site Contamination NEPM underpin the collaborative work amongst the Commonwealth, states and territories on the PFAS National Environmental Management Plan, agreed by all environment ministers in February 2018. Further guidance for version 2.0 of the PFAS National Environmental Management Plan is being developed across 2018-19.

Together, the ASC NEPM and the PFAS NEMP set out nationally-agreed approaches, guidance and standards for understanding and assessing PFAS contamination.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

The Assessment of Site Contamination NEPM (ASC NEPM) provides an effective and consistent national methodology which is highly beneficial for achieving agency goals. Matters for future strengthening could include consideration of mechanisms for interim revisions outside the 10-year review cycle to enable responsiveness, and amendment to include investigation levels for emerging contaminants of concern including PFOS, PFOA, PFHxS, and other per- and poly-fluoroalkyl substances (PFASs).

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. Gabrielle Upton MP, Minister for the Environment, for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The NSW Environment Protection Authority considers the National Environment Protection (Assessment of Site Contamination) Measure (NEPM) when making a decision on whether a contaminated site requires regulation under the *Contaminated Land Management Act 1997* (NSW).

During the year ending 30 June 2018, the NSW Environment Protection Authority was notified of 39 contaminated sites, finalised 495 site assessments, regulated 9 new contaminated sites, and ended regulation of 6 sites that had been remediated under the *Contaminated Land Management Act 1997* (NSW).

The NSW Environment Protection Authority also 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 2018 accredited site auditors issued a total of 208 site audit statements; 166 statutory audits and 42 non-statutory audits under the *Contaminated Land Management Act 1997* (NSW).

Overall, the NEPM has improved the efficiency of regulating contaminated sites in NSW.

The limited number of ecological investigation levels (EILs) continues to present challenges and the EPA supports work to develop a consistent framework for deriving and adopting new EILs.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

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

The reviews of the application of the NEPM criteria are 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 Lily D'Ambrosio, Minister for Energy, Environment and Climate Change, for the reporting year ended 30 June 2018.

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.

Issues of note:

- 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 soil characterisation guidance e.g. what soil/fill is acceptable to remain on individual sites (for particular land uses) and what is accepted to landfill.
- The adequacy of the Health Investigation Levels (HILs) for lead in soil for the protection of human health following the release of the [NHMRC Statement: Evidence on the effects of lead on human health](#) (the Statement) and associated publications on blood lead levels. Contaminated sites regulators are being questioned by risk assessors and contaminated site assessors and auditors in relation to the applicability of the lead HILs as screening criteria for soil and also the appropriate assumptions and inputs when deriving a site-specific clean-up target value for lead in soil. This issue was raised in 2016 and remains an issue that has been raised with EnHealth and is still to be resolved.
- Administrative error during the drafting of Schedule B3 resulted in information regarding acetone/hexane being omitted from the table in section 10.2.8. This issue was raised in 2016 and remains an issue to be resolved.
- Lack of guidance relating to emerging chemicals of concern, in particular PFAS, which has led to issues dealing with a number of highly PFAS contaminated sites. It is noted that the PFAS NEMP addresses some of these issues.

In response, Victoria has contributed to the following:

- The National Contaminated Environments Network, which comprises representatives of the contaminated sites regulators of Australia, has written to enHealth seeking advice on the protectiveness of the current HIL for lead provided in the NEPM.
- The National Contaminated Environments Network has informed the NEPC secretariat of the omission of acetone/hexane and requested it for inclusion in the errata.
- EPA Victoria is currently reviewing Victoria's Industrial Waste Resource Regulations (2009) and related guidance and this will include a review of soil fill acceptance criteria.
- Contributed to the development of the PFAS NEMP.

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. A number of the draft documents have been circulated publicly for comment, more details are available: <http://www.crccare.com/knowledge-sharing/national-remediation-framework>.

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for Queensland by The Hon Leeanne Enoch MP, Minister for Environment and the Great Barrier Reef, Minister for Science, and Minister for the Arts for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

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

Commencing on 1 July 2018, under the Planning Regulation 2017, prohibited development is that which is commenced on land listed on Queensland's Environmental Management Register (EMR) or Contaminated Land Register (CLR), unless the land is remediated fit for purpose. The Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP) is the administering authority of the planning regulation. DES provides DSDMIP with advice on matters related to contaminated land.

In Queensland, it is mandatory for contaminated land investigation documents, which includes site investigation reports, validation reports and draft site management plans, to be certified by an approved auditor prior to being submitted to DES.

DES has appointed 19 contaminated land auditors to perform regulatory functions under section 568 of the EP Act.

The following relevant operational data associated with NEPM implementation were collected in the reporting period 2017-18.

- 110 Contaminated Land Investigation Documents, reviewed for compliance with NEPM prior to statutory decisions regarding EMR/CLR status of the subject land. All reports submitted as Contaminated Land Investigation Documents were reviewed by approved auditors.
- 33 sites were listed on the EMR for a hazardous contaminant.
- 153 sites were listed on the EMR as a notifiable activity under Schedule 3 of the EP Act.
- DES has appointed 19 contaminated land auditors which includes mutual recognition on the basis of approvals held in other jurisdictions. These auditor applications are assessed by a DES approved technical panel who are engaged to review contaminated land auditor applications on behalf of DES.
- 94 sites were finalised as being adequately assessed according to NEPM, remediated and removed from the EMR.
- 16 Site Management Plans were issued for development or use of a site, including those that were assessed and partially remediated with management of residual contamination for restricted land uses.
- 263 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. It is 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 DES through the provisions of the operational policy and guidelines relating to assessment of contaminated land. All applications to DES for statutory decisions about site contamination and changing the status of land on the EMR/CLR must demonstrate compliance with the current NEPM in accordance with the EP Act.

The NEPM (1999) was used as an effective technical basis for site assessment for contaminated site professionals operating in Queensland.

The introduction of the amended NEPM has addressed the following previous limitations: adequate guidance for selected types of contamination affecting terrestrial ecosystem, vapour flux, aesthetic and management impacts of petroleum hydrocarbon compounds in soil and groundwater, and fragments of cement bonded asbestos commonly encountered on contaminated sites. Statutory approval conditions related to land development require current NEPM adherence. The quality control procedures applied by DES 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 19 auditors. The selection and approval of the persons to be auditors has been structured around Schedule B9 of the amended NEPM 1999.

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.

Implementation of the general provisions of the NEPM is limited by the lack of adequate guidance for particular common types of contamination. This includes fluorinated organic chemicals that are now commonly encountered on contaminated sites.

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

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for Western Australia by the Hon. Stephen Dawson, MLC Minister for Environment; Disability Services for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Department of Water and Environmental Regulation (DWER) is responsible for regulating the assessment of site contamination in Western Australia (WA) under the Contaminated Sites Act 2003 (CS Act) and the Contaminated Sites Regulations 2006.

The NEPM and other relevant technical guidelines are taken into account by DWER 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 2018, 188 known or suspected contaminated sites were reported to DWER compared with 374 in the previous year. In the same period, DWER received 82 mandatory 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 contaminated or possibly contaminated site.

Compliance with the NEPM and departmental guidelines is assessed in the site classification/reclassification process under the CS Act. The Department classified 452 sites (including reclassifications) during the year, bringing the total number of classified sites to 3784.

As of 30 June 2018, 1034 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 to protect public health and/or the environment and/or environmental values.

Environmental practitioner's awareness of the amended NEPM requirements has continued to improve in WA and as a result, the assessment reports submitted to DWER generally apply the guidance in an appropriate and consistent manner.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

DWER regularly liaises with environmental regulators in other jurisdictions to ensure a nationally consistent approach can be developed for any new implementation issues as they arise.

The limited number of Ecological Investigation Levels (EILs) provided in the NEPM is a major limitation identified in consistency in implementation. Although the NEPM provides a detailed methodology in Schedule B5b for developing new EILs, this is rarely done in practice for individual site assessments due to the time and effort required to carry out an appropriately detailed literature search to identify and assess relevant ecotoxicity data.

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 inclusion of relevant supporting material in the NEPM Tool Box assists in promoting a nationally consistent approach to emerging issues.

The inclusion of new EILs in the Tool Box, derived using the NEPM methodology by appropriately qualified experts and endorsed by environmental regulators, would be consistent with the purpose and desired environmental outcome of the NEPM.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for South Australia by Hon. David Speirs MP, Minister for Environment and Water for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

- The South Australian Environment Protection Authority (EPA) is responsible for administering the implementation of the *National Environment Protection (Assessment of Site Contamination) Measure* (the NEPM) in South Australia.
- Site contamination is regulated by the EPA through a framework established under the *Environment Protection Act 1993* (the Act).
- The purpose and desired environmental outcome of the NEPM and the NEPM technical guidance continues to be supported by the EPA through published guidelines and advice. The NEPM guidance informs EPA's risk-based regulatory decision making and actions in relation to site contamination.
- The EPA provides written and verbal guidance and information in respect to site contamination and the NEPM to the community, peak groups, industry, developers, site owners, planning authorities, site contamination consultants and accredited site contamination auditors. Selected guidelines are 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 2017-2018 reporting period, the EPA recorded 116 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 34 site contamination audit reports. As of 30 June 2018, there were 25 site contamination auditors accredited by the EPA.
- EPA's site contamination advice, guidelines and an index of site contamination information and auditor register are available on the EPA's website.
- EPA's actions which support the implementation of the NEPM during 2017/2018 include the following:
 - Establishment of a second groundwater prohibition area to protect the community from exposure to contaminated groundwater. Work on further groundwater prohibition areas continues to be undertaken.
 - Implementing orphan site contamination assessment programs to investigate identified risk to public health.
 - Use of the EPA regulatory framework and statutory tools to support consistency and predictability in regulatory decision-making in relation to site contamination.
 - Enhanced engagement with local communities impacted by site contamination.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

The EPA continues to strengthen its systems, communications, guidance and tools to support the implementation of the NEPM with consideration of the most current technical advice and best practice. Several important issues which influence the effectiveness of the NEPM in South Australia include the following:

- Site contamination policy

The EPA has developed a policy in relation to the certification of site contamination practitioners, which is intended to support the guidance provided in Schedule B9 of the NEPM and ensure that appropriately qualified and experienced site contamination professionals undertake and report on the assessment of site contamination. The policy describes the minimum standards for certification bodies to be recognised by the EPA and circumstances in which the EPA will require the use of certified professionals. Requirements for the use of certified professionals will come into effect on 1 August 2019.

The EPA is progressing the development of further policy to give effect to the NEPM.

- Site contamination guidelines

The EPA published new guidance on the assessment and remediation of site contamination in July 2018 to support the nationally consistent approach and processes established by the NEPM and provide greater certainty and consistency in assessment and remediation being undertaken and reported in SA. Implementation of the guidance is being supported through EPA training made available for practitioners.

- Development and planning

The planning system has an important role in ensuring risks posed by site contamination are minimised when land changes use or is otherwise developed. EPA is collaboratively working on a site contamination planning framework to properly integrate site contamination into planning and development legislation.

- National harmonisation of auditor accreditation

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 EPA strongly supports the development and implementation of an agreed national approach.

- Community and stakeholder engagement

Open and effective engagement and the exchange of information with local communities affected by site contamination can be challenging for parties responsible for undertaking the assessment and remediation of site contamination. The EPA continues to work to ensure that effective and appropriate community engagement is planned and implemented by all parties through improved and updated guidance and access to specialist expertise within the EPA.

- Emerging issues

The emergence of new issues where there may be limited or no specific guidance in the NEPM will continue to provide challenges in relation to the assessment of risk to human health and the environment. National responses to emerging issues, such as the development of the PFAS National Environmental Management Plan, demonstrate the importance of mechanisms to support jurisdictions being able to work collaboratively and effectively to develop a nationally consistent approach.

The current NEPM has now been in effect for 5 years and includes an in-built 10 year review period (or lesser period if so determined). Planning for the review of the NEPM is 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.

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for Tasmania by Hon. Elise Archer MP, Minister for Environment, for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The National Environment Protection (Assessment of Site Contamination) Measure (NEPM) automatically became Tasmanian state policy under the State Policies and Projects Act 1993.

The NEPM is implemented in the following ways:

- Notices issued under the *Environmental Management and Pollution Control Act 1994* routinely require NEPM compliant environmental site assessment;
- Works required pursuant to the Environmental Management and Pollution Control (Underground Petroleum Storage Systems) Regulations 2010 (UPSS Regulations) must comply with the NEPM.
- UPSS decommissioning guidelines were revised to bring them into line with the assessment approach provided by the NEPM.
- Tasmanian Planning Authorities may require NEPM compliant assessments where land is changing to a more sensitive use.
- The Potentially Contaminated Land Code applies to planning schemes and will be progressively implemented by Tasmanian Planning Authorities. The Code requires that environmental site assessments submitted to satisfy planning purposes are prepared in accordance with the NEPM.
- Ensuring contaminated land site assessor's work is compliant with the NEPM is a key focus in Tasmania. To help improve work quality and outcomes in the assessment and management of site contamination, the Director, EPA now requires that contaminated site assessments are completed by persons certified under an approved accreditation scheme.
- Regulatory effort on site contamination continues to be drawn to the management of pollution associated with service stations. Through the implementation of UPSS Regulations regulatory focus has shifted towards prevention of pollution arising from UPSS systems, however management of contaminated site remains a priority.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

In Tasmania, the implementation of the NEPM has helped ensure a consistent and authoritative framework for the assessment and management of contaminated sites.

Tasmania supports the continued development of the NEPM including guidance on management of emerging contaminants of concern, and ongoing review, and where necessary addition, of criterion.

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for Australian Capital Territory by Mr Mick Gentleman, MLA for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Access Canberra within the Chief Minister, Treasury and Economic Development Directorate, is responsible for the implementation and administration of the National Environment Protection (Assessment of Site Contamination) Measure (the NEPM). In the ACT the Environment, Planning and Sustainable Development Directorate (EPSDD) is responsible, for the development of legislation and policies to ensure the NEPM is appropriately implemented.

The provisions of the NEPM are implemented under the *Environment Protection Act 1997* (the Act) by the Environment Protection Authority (Access Canberra). 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 was recently updated to reference the amended NEPM as the key resource for assessing contaminated land in the ACT.

All contaminated site assessments undertaken in the ACT must be undertaken in accordance with the NEPM.

Contaminated land professionals working in the ACT have not raised any significant issues regarding implementation of the NEPM.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

The NEPM is the primary reference tool used by contaminated land practitioners in the ACT. This ensures an effective and consistent approach to contaminated land assessment in the ACT.

Practitioners have expressed the need for legislative or other changes to NEPC procedures to allow for the inclusion of criteria for emerging contaminants in the NEPM outside of the formal review process.

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 Hon Eva Lawler, Minister for Environment and Natural Resources for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In the reporting period of 1 July 2017 to 30 June 2018 the Northern Territory (NT) has continued to implement the ASC NEPM through the following measures.

The Northern Territory Environment Protection Authority (NT EPA) has continued to disseminate the *Northern Territory Contaminated Land Guideline* published in 2017, covering all aspects of the ASC NEPM and its application with the relevant NT legislation. The NT EPA has commenced discussions with relevant industry bodies to assist with furthering the education of consultants involved with contaminated site assessment, the planning process, and those carrying out development within the NT.

The NT Government has committed to a range of environmental reforms to address current issues with the environmental management regulatory framework. The reforms are aimed at designing and implementing a best practice environmental management regulatory framework. One stage of this involves incorporating environmental management provisions of the Northern Territory *Waste Management and Pollution Control Act* and various other relevant legislation into a new environment protection Act. This will include establishing a regulatory framework for contaminated land management for the NT to minimise the environmental impacts of contamination in the NT from past, current and future land uses. The procurement of services to develop this framework has commenced.

Asbestos, per- and poly-fluoro alkyl substances (PFAS) and herbicides and pesticides (including Mirex) continue to be identified as contaminants of concern in the NT.

Asbestos matters are being addressed through the implementation of an NT interagency asbestos committee, including development of an asbestos register which will form part of the contaminated sites register. The inter-agency asbestos committee has been developing a new website to act as a “one stop shop” to help inform Territorians how to deal with their asbestos concerns, and which agency would be the lead depending on the specific situation. The NT EPA and the Commonwealth have collaborated on issues such as asbestos assessment and remediation at RAAF Base Darwin and the Cox Peninsula.

The NT EPA has been actively involved in the investigation, assessment and management of sites that have potentially been impacted by PFAS. The NT EPA participates in a variety of PFAS steering committees and working groups, which allows the NT EPA to be at the forefront of this environmental issue and provide input on a Territory and national scale. Screening level and preliminary investigations are ongoing on PFAS prioritised sites across the Territory, to determine the presence or absence of sites impacted with PFAS. Based on the results, further investigations may be required to determine appropriate management measures for these sites.

Herbicides and pesticides (including Mirex - defined as a Persistent Organic Pollutant) have been identified as potential contaminants associated with mango orchards, banana plantations and market gardens within the NT. The NT EPA is continuing to provide advice to proponents regarding the NT planning process when they are changing the use of former market gardens to more sensitive uses like residential, to ensure preliminary site investigations are undertaken in accordance with the ASC NEPM.

The NT EPA has commenced responding to enquiries regarding historical sites that may pose a risk of contamination, including former wartime defence establishments, and waste disposal locations operating prior to self-governance and the subsequent formation of the NT Government and the local government entities.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

The NEPM has allowed for the ‘level playing field’ for site contamination assessment and remediation to be established in the Northern Territory. It continues to help ensure 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. This is being progressed through the continuing development of the strategies mentioned in Part 1 and further interaction and consultation with planning authorities, professional organisations such as the Australian Land and Groundwater Association, and the community.

Appendix 4: Jurisdictional reports on the implementation and effectiveness of the Diesel Vehicle Emissions National Environment Protection Measure

Commonwealth

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for the Commonwealth by the Hon Melissa Price MP, Minister for the Environment for the reporting year ended 30 June 2018

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The National Environment Protection (Diesel Vehicle Emissions) Measure 2001 (Diesel NEPM) is supported by the Australian Design Rules (ADRs) and Fuel Quality Standards Act 2000.

The ADRs are national standards for vehicle safety, anti-theft and emissions. They are administered by the Australian Government under the *Motor Vehicle Standards Act 1989*. The ADRs set emissions standards for light and heavy diesel vehicles.

The *Fuel Quality Standards Act 2000* (the Act) provides a legislative framework for setting and enforcing national fuel quality and fuel quality information standards in Australia. These standards are an important safeguard for consumers and the environment.

The objects of the Act are to:

a) regulate the quality of fuel supplied in Australia in order to:

- reduce the level of pollutants and emissions arising from the use of fuel that may cause environmental and health problems; and
- facilitate the adoption of better engine technology and emission control technology; and

b) allow the more effective operation of engines; and

ensure that, where appropriate, information about fuel is provided when the fuel is supplied.

In 2017-18, authorised fuel inspectors visited 311 sites and tested 794 samples for compliance with the Act. The Department of the Environment and Energy identified 20 instances of non-compliance with the Act. The Department engaged with stakeholders following these instances to encourage voluntary compliance with the Act.

An independent review of the Act in 2015 found the regulation of fuel quality in Australia has led to a significant reduction in emissions. Following this review, the Australian Government is considering further amendments to fuel standards to ensure they are better aligned with international best practice and to further reduce vehicle emissions, as well as further ways to reduce noxious emissions and improve fuel efficiency in vehicles. The Government is taking a careful consultative approach including seeking views from business and industry, consumer, health and environment groups.

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 Australian Design Rules and fuel quality standards.

In April 2018, Australian environment ministers endorsed a new work plan under the National Clean Air Agreement. This work plan includes a review of the need for the Diesel Vehicle Emissions and Air Toxics National Environment Protection Measures. The review is scheduled to be completed in 2018 through a survey of jurisdictional needs for the NEPMs.

If this review concludes that the NEPMs should be varied or revoked, this will involve a significant body of work. This work would proceed following amendments to the *National Environment Protection Council Act 1994* to streamline provisions governing NEPM review processes.

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. Gabrielle Upton, Minister for the Environment, Minister for Local Government, and Minister for Heritage for the reporting year ended 30 June 2018.

IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In NSW, 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 emissions from the in-service diesel fleet.

In 2011, the Commonwealth Department of the Environment and Energy (formerly the Department of Sustainability, Environment, Water, Population and Communities) advised NSW Roads and Maritime Services (RMS) that, as the National Environment Protection (Diesel Vehicle Emissions) Measure (DNEPM) Funding Agreement had expired, D-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.

As at 30 June 2018, Roads and Maritime Services had not received any further information regarding the Funding Agreement and accordingly all D-NEPM projects have now been terminated.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

In NSW, the Environment Protection Authority (EPA) and NSW transport agencies, Roads and Maritime Services and the State Transit Authority, continue to collect data on the diesel vehicle fleet and implement a range of NSW Government funded programs to reduce diesel emissions. In 2017-18, NSW continued the Smoky Vehicle Program, implementation of the EPA's [Diesel and Marine Emissions Management Strategy](#), the Clean Fleet Program, and the State Transit Authority's diesel bus upgrade program.

NSW diesel fleet profile

Diesel vehicles as a percentage of total NSW vehicle fleet

Roads and Maritime Services registration data show that the proportion of diesel vehicles in the fleet constituted 19.50 per cent of the total NSW fleet at 30 June 2018 (see Table 1 below). This is compared to 18.14 per cent in 2017, 16.95 per cent in 2016, and 18.56 per cent in 2015.

Roads and Maritime Services registration data indicate that, between June 2017 and June 2018, the number of diesel vehicles registered in NSW increased by 111,239 or 9.54 per cent. Light commercial vehicles increased by 11.77 per cent over the previous year, and constitute the largest sector of the diesel fleet at 37.94 per cent. Off-road passenger vehicles account for 35.17 per cent of the diesel fleet. Together, these categories account for 73.11 per cent of the total diesel fleet in NSW. Table 2 shows changes in diesel vehicles by category between June 2017 and June 2018.

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

Diesel vehicles (%)									
NSW June 2018	Passenger vehicles	Off-road passenger vehicles	Light commercial vehicles	Heavy trucks	Prime movers	Small buses	Buses	Other	Total
Diesels in total NSW fleet	2.66%	6.8%	7.40%	1.54%	0.34%	0.16%	0.20%	0.35%	19.50%
Vehicles by category in diesel fleet	13.61%	35.17%	37.94%	7.92%	1.72%	0.80%	1.04%	1.79%	100%

Source: Roads and Maritime Services registration data (June 2018).

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 change (%)
	Jun-17	Jun-18			
Passenger Vehicles	146,769	173,911	27,142	18.49%	24.40%
Off-Road Passenger Vehicles	423,628	449,281	25,653	6.06%	23.06%
People movers	9,714	10,379	665	6.85%	0.60%
Small Buses	9,927	10,241	314	3.16%	0.28%
Light Trucks	433,649	484,669	51,020	11.77%	45.87%
Light Plants	1,591	1,362	-229	-14.39%	-0.21%
Buses	12,889	13,276	387	3.00%	0.35%
Heavy Trucks	97,002	101,182	4,180	4.31%	3.76%
Prime Movers	21,117	21,972	855	4.05%	0.77%
Heavy Plants	3,912	3,632	-280	-7.16%	-0.25%
Other	6,013	7,545	1,532	25.48%	1.38%
Total	1,166,211	1,277,450	111,239	9.54%	

Source: Roads and Maritime Services registration data (June 2018).

Diesel vehicles emissions estimates

Diesel vehicles made up 19.50 per cent of the total NSW fleet as at 30 June 2018, 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 Sydney¹ region.

Based on projections from the 2008 Air Emissions Inventory for the NSW Greater Metropolitan Region, diesel vehicles currently contribute approximately 58 per cent of NO_x and 87 per cent of exhaust particle emissions (as PM_{10}) from all on-road mobile sources in the Sydney region.

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

Except for 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 rate of reduction in PM_{10} emissions is larger than the rate of increase in vehicle kilometres travelled, 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 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.

In March 2017, the NSW Government made formal submissions responding to Commonwealth consultations on Australian vehicle emission and fuels quality standards. The government's submissions supported adopting the latest and most health protective (Euro6/VI) emission standards for light and heavy-duty vehicles, and low sulfur (10ppm) petrol to maximise environmental health benefits. Should this proposal be adopted, significant emission reductions will result for diesel vehicles into the future.

Smoky vehicles program

In NSW, it is an offence for a vehicle to emit excessive air impurities for a continuous period of more than 10 seconds. In 2017-18 authorised officers issued six penalty notices to the registered owners of diesel vehicles emitting excessive air impurities.

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 2017-18 there were two prosecutions, both involving diesel vehicles.

The public may also report smoky vehicles via the EPA's Environment Line website or mobile phone application. An average of 117 smoky vehicle reports are received each month from the public (over 1,400 public reports over the year), indicating a high level of awareness in the community of the unacceptability of excessive visible emissions.

In 2017-18, the EPA issued 681 advisory letters based on public reports, of which 438 advisory letters were to diesel vehicle owners.

Additionally, 22 defective vehicle notices were issued in 2017-18 of which 17 were diesel vehicles. 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 EPA 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.

M5 East tunnel smoky vehicle detection system

The NSW Roads and Maritime Services Smoky Vehicle Enforcement Project in Sydney's M5 East Tunnel continued until December 2017 when funding for the program ceased. Up to December 2017 details of smoky vehicles recorded in the M5 East tunnel were referred to the EPA for review and possible fines. From July to

¹ 'Sydney region' is as defined in the Air Emissions Inventory for the NSW Greater Metropolitan Region, which can be found on the EPA's website <http://www.epa.nsw.gov.au/air/airinventory.htm>.

December 2017, the EPA issued four penalty notices to vehicle owners referred by the RMS camera detection system. Of these, 100% were diesel vehicles. RMS is currently conducting an evaluation of the cost-effectiveness of its smoky vehicle enforcement programs. The review is due to be finalised in late 2018.

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.

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

Table 3: Smoky vehicles - actions taken

	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	July 15 – June 16	July 16 – June 17	July 17 – June 18
Total number of vehicles that received fines	616	373	303	301	186	114	289	78	89	75	6
Diesel vehicles that received fines	495	351	278	286	173	109	283	76	89	74	6
Percentage of all vehicles fined that were diesel vehicles	80%	94.1%	91.7%	95%	95%	96%	98%	97%	100%	99%	100%
Total vehicles that received advisory and warning letters	755	530	740	750	556	552	891	812	782	957	681
Diesel vehicles that received advisory and warning letters	103	123	133	135	96	74	462	423	433	475	438
Percentage of all vehicles that received advisory and warning letters that were diesel vehicles	14%	23.2%	17%	18%	17%	11%	52%	52%	55%	59%	64%

Diesel vehicle emission testing and repair programs

In the absence of D-NEPM funding, NSW Roads and Maritime Services is no longer delivering a Diesel Vehicle Emissions Testing and Repair program.

Audited maintenance programs for diesel vehicles

NSW Roads and Maritime Services operates an audited maintenance program known as “Clean Fleet”. This was launched in 2006 and has approximately 6,725 vehicles in the program. In the absence of D-NEPM funding, there was a small reduction in participation and no promotional activities or training courses held under the program in 2017-18.

Diesel vehicle retrofit programs

In the absence of D-NEPM funding, NSW Roads and Maritime Services is no longer delivering diesel vehicle retrofit programs.

State Transit Authority diesel bus upgrade program

Since 2006 the NSW State Transit Authority has been replacing older diesel buses in the Sydney Region with Euro 5 and EEV (enhanced environmentally friendly vehicle) buses that use AdBlue as a catalyst to reduce emissions of oxides of nitrogen (NO_x). EEV vehicles have the same NO_x limits as Euro 5, and tighter particle limits (one third lower particle levels under the European transient test cycle). NO_x has known human health impacts, including impacts on the respiratory system, and contributes to the formation of ground level ozone and fine particles. AdBlue is a diesel engine exhaust treatment that is injected into the exhaust stream to convert NO_x into nitrogen gas and water vapour by means of a chemical reaction.

In 2017-18, the State Transit Authority received 97 new Euro 5 or EEV diesel buses into its bus fleet, with 82% of the fleet now Euro 3 or higher emissions standard (up from 80% in 2016-17), and 47% of the fleet Euro 5 or EEV emissions standard (up from 45% Euro 5 or equivalent in 2016-17).

Non-road diesel vehicle programs

Construction Industry

In 2017-18 the NSW Office of Environment and Heritage (OEH) continued to administer the NSW [Government Resource Efficiency Policy](#) (GREP). The GREP includes requirements to address non-road diesel engine emissions through government procurement and contracts. OEH commenced a review of the GREP in 2017 to analyse whole-of-government progress towards implementation, identify challenges faced by agencies, and determine if reforms are required. The review was progressed over 2017-18.

Locomotives

In February 2017 the EPA published the [Diesel Locomotive - Fuel Efficiency and Emissions Testing](#) report. Together with the 2015 [Diesel locomotive emissions reduction technology study](#), this demonstrated that particle emission reductions conforming to US Tier 0+ emission standards can be achieved through emission upgrade kits or other locomotive upgrade programs. In early 2018 the EPA commenced an economic appraisal of introducing diesel locomotive exhaust emission limits in NSW. This study is expected to be completed in late 2018. Results of these studies will inform policy development for management of emissions from locomotives operating in NSW.

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for Victoria by the Hon Lily D'Ambrosio, Minister for Energy, Environment and Climate Change, for the reporting year ended 30 June 2018

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The diesel NEPM in Victoria is administered and implemented by the Environment Protection (Vehicle Emissions) Regulations 2013. These 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.

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 an 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 2017/2018, the program resulted in 657 smoky vehicle letters being issued for public reports and 233 cautionary letters being issued for official reports.

The following table indicates the number of smoky vehicle letters being sent from the public and official reporting programs over the past eleven 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 2013-2016 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 11 years.

Year	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14*	2014/15*	2015/16*	2016/17	2017/18
Number of public reports	10,315	7,068	6443	5884	6177	5766	4895	3910	2012	2124	1901	1471	649
Number of official reports /cautionary letters	1,538	849	946	708	445	630	495	554	145	193	95	138	235

*Note: These numbers include all vehicles in the official program, not just diesel-engine vehicles. Diesel vehicle reports were not included in past reports between 2013/14 – 2015/16, the above table has been updated to reflect the addition of these.

Diesel vehicle emission testing and repair programs

EPA Victoria ceased engagement with Vipac in 2016 and no longer has a emission testing and repair 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 Steven Miles MP – Acting Minister for Main Roads, Road Safety and Ports, for the reporting year ended 30 June 2018.

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. There are no significant issues to report.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

Motor vehicles are the main contributor to ambient carbon monoxide, oxides of nitrogen and particulate matter (PM) concentrations in urban areas. The Environmental Monitoring and Assessment Sciences Division, Department of Environment and Science (DES) is responsible for monitoring air quality in Queensland. There is a network of testing stations around the state containing instruments capable of recording and storing [meteorological](#) and [air pollutant](#) data. This network includes air monitoring to assess compliance with the standards and goals of the Ambient Air Quality (AAQ) NEPM.

In 2017, there were no exceedances of AAQ NEPM standards at compliance monitoring sites in Queensland, with the exception of sulfur dioxide in Mount Isa due to industrial activities and PM₁₀ in Mackay and Mount Isa due to bush fires and windblown dust. However, PM₁₀ at Mackay and Mount Isa complied with the NEPM goal in 2017 as, under the exceptional event rule, these exceedances are excluded from the determination of compliance with the NEPM goal. So no exceedances were attributed to diesel engine emissions.

The Commonwealth Department of Infrastructure and Regional Development released a discussion paper in February 2016 on vehicle emission standards and sought public feedback on possible measures to reduce vehicle emissions in Australia. Submissions were received from 80 interested parties. This was followed by the release of three further consultation papers:

- a draft Regulation Impact Statement (RIS) on improving the efficiency of new light vehicles
- a draft RIS on strengthening noxious emissions standards for light and heavy vehicles
- a discussion paper on improving fuel quality standards.

No further work has been done to introduce any new standards or legislation to control vehicle emissions in 2017. The current standard for heavy vehicle emissions remains, ADR80/03, and is based on the Euro V standards, although equivalent US or Japanese standards are accepted as alternatives. Euro VI standards have been adopted in Europe since 2013, and although it is yet to be implemented, there are Euro VI compliant heavy vehicles in use in Queensland. The ADR 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. There are no timeframes in place around the introduction of Euro VI requirements.

Other programs currently in place to complement the ADRs and reduce diesel vehicle emissions are described below.

Smoky vehicles program

The Smoky Vehicle Hotline now 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 1 July 2017 to 30 June 2018 a total of 1992 vehicles were reported which is a reduction on 2138 reported in the previous year, 1234 of the reported vehicles (62%) were diesel powered.

This is a significant increase from the previous reporting period when 42% were diesel powered vehicles. It was noted in the 2016 report that the number of diesel powered vehicles reported had increased with more than twice the number of diesel vehicles reported than the previous year. The slight falls in residential construction between 2016 and 2017 may explain this change in the trend.

TMR does not have the technology to test emissions of reported diesel vehicles, therefore there is no data retained beyond the number of diesel vehicles reported to the smoky vehicle hotline. TMR issued 231 initial warning letters and 4 secondary warning letters requesting that drivers have their vehicles checked. There were 2 PVOs issued to vehicles during this time.

Increased uptake in diesel vehicles

Diesel vehicle emissions are expected to continue to decrease moderately through fleet turnover, as higher polluting older heavy vehicles are replaced with newer, less polluting heavy vehicles. The 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.

However as highlighted in the Australian Bureau of Statistics, 2018 Motor Vehicle Census the demand for diesel powered vehicles continues to grow with diesel vehicles now accounting for 23% of the national fleet. There were 115 679 diesel vehicles registered in Queensland which is a 7.2% increase on 2017 registrations. Over a five-year period, diesel powered vehicles have increased by from 775,091 in 2013 to 1,115,679 in 2018 representing an increase of 44% in Queensland. The light vehicle sector has experienced the most growth.

Brisbane City Council has around 1200 buses in their fleet, with almost half running on Compressed Natural Gas (CNG). Whole of life costs for CNG are no longer favourable compared to diesel buses due to the cost of technology and the additional safety risks, while diesel technology can now achieve Euro VI standards, thereby eroding the initial advantage of CNG. There is now no second hand market for CNG buses, which need considerable refuelling infrastructure to be successfully implemented.

Council uses new generation, high-efficiency Enhanced Environmentally-friendly Vehicle (EEV) diesel engine technology for all new buses. Four Volvo B8 Euro VI buses were delivered in early 2017, while a Volvo B5 diesel-electric hybrid bus provides services on the City Loop route. Recent bus purchases by Queensland Government and Council have been clean diesel (EEV). This is an example of the return to diesel from fuel sources that were previously considered to be preferable, either in terms of efficiency, emissions, or economics.

Diesel vehicle emission testing and repair programs

TMR operates a compulsory programmed inspection regime for heavy vehicles registered in Queensland. The standard of muffler and exhaust 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, public passenger vehicles, such as buses, are inspected every six months.

TMR inspected 41,209 heavy vehicles, while private accredited inspection stations inspected 72,987 heavy vehicles in the 2017-18 financial year. These totals include rigid heavy vehicles, prime movers and buses. The programmed inspection ensures defective engine performance, which contributes to increased diesel emissions, can be identified and repaired.

In Queensland, the Brisbane City Council (BCC) owns and operates the only facility for testing diesel powered heavy vehicles for emissions under the DT80 emission testing regime. During the 2017-18 financial year BCC tested a total of 22 diesel powered vehicles, only one vehicle was manufactured prior to 1996 and tested to meet fuel tax credit environmental criterion 3. The remainder were manufactured after December 1995 and complied with ADR/70 emission standards or later.

All of the diesel-powered vehicles tested passed. Of the 22 heavy vehicles tested 12 were from BCC's fleet and 10 were from external operators. This represents a 50% decrease on the previous year's testing numbers, again indicating that there is limited uptake of DT80 emission testing in Queensland. DT80 testing is voluntary and costs are relatively high at \$679+GST which may deter operators.

The National Heavy Vehicle Regulator (NHVR) is now overseeing heavy vehicle standards and is proposing a new simplified Portable Emissions Measuring system (PEMS) for testing modified heavy vehicle engines to ensure that

they remain compliant with the appropriate ADR. It may be possible that this testing system could be expanded to include smoky vehicles in the future.

Audited maintenance programs for diesel vehicles

The Queensland Government encourages owners and operators of heavy vehicles to participate in the National Heavy Vehicle Accreditation Scheme (NHVAS), now administered by the National Heavy Vehicle Regulator. The scheme gives heavy vehicle owners more responsibility for servicing their vehicles and ensuring they 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 39,820 Queensland registered heavy vehicles currently participating in the NHVAS maintenance scheme and 857 operators accredited in Queensland, representing a 7.8% increase on last year's NHVAS accreditations. The majority of vehicles participating in the NHVAS use diesel fuel.

Diesel vehicle retrofit programs

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

Other programs

Queensland supports the introduction of innovative, higher productivity heavy vehicles through Performance Based Standards (PBS) which allow for vehicles to comply based on performance rather than prescriptive standards. PBS vehicle combinations equate to fewer heavy vehicles, less congestion and better safety outcomes on the network. On some routes in Queensland, PBS heavy vehicles (A-doubles) have halved the number of trips for certain freight tasks through increased capacity and smart design PBS is improving efficiency, increasing diesel fuel savings and reducing associated emissions.

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for Western Australia by the Hon. Stephen Dawson, MLC Minister for Environment; Disability Services for the reporting year ended 30 June 2018

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia, the National Environment Protection (Diesel Vehicle Emissions) Measure is implemented by the Department of Water and Environmental Regulation (DWER) 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, which are administered by the Department of Transport (DoT). The 'ten-second rule' in the regulations is the primary mechanism used to target visually polluting diesel and petrol vehicles.

In addition to smoky vehicle regulation, DWER operate a remote sensing device (RSD) that measures on-road vehicle emissions and provides immediate feedback to drivers on their vehicle emissions relative to the wider vehicle fleet. The data collected by the RSD is used to track emission trends from vehicle groups of concern and inform vehicle policy development.

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

DWER undertakes roadside monitoring to assess the health of the Perth vehicle fleet. Vehicle emission measurements from a portable roadside gas analyser deployed late 2017 were analysed to determine any significant changes in the Perth vehicle fleet emissions, including diesel vehicles.

Western Australia does not have in-service emissions standards to compare sampling results against.

Implementation of vehicle emissions reduction initiatives of the AQMP and the CleanRun Program are the foundation of vehicle emissions reduction strategies undertaken by DWER. DWER 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 2017-2018 the Smoky Vehicle Reporting Program (SVRP) received 415 reports, which is an average of 35 reports per month, representing a 14 per cent decrease in reports from 2016-2017. The decrease in reports received was attributed to a refinement in the reporting process to eliminate false identification of vehicles smoking for less than 10 seconds.

Prior to contacting reported vehicles, DWER and DoT verify reports by comparing reported vehicle details against the DoT vehicle registration database, discarding reports if details do not sufficiently match. 353 advisory letters were sent to reported vehicle owners in 2017-2018 (85 per cent valid report rate).

Table 1 summarises the responses received for vehicles reported from July 2017 to June 2018.

Table 1. Responses from owners of reported vehicles

Response	2014-2015	2015-2016	2016-2017	2017-2018
Reports received	268	455	480	415
Letters sent	N/A	372	424	353
Responses received	146	282	292	(48.2%) ¹
Vehicle repaired	57 (48%)	127 (45.0%)	136 (46.6%)	(69.4%)
Vehicle does not smoke	45 (38%)	90 (31.9%)	96 (32.9%)	(23.5%)
Can't afford to repair	1 (<1%)	3 (1.1%)	6 (2.1%)	(0%)
Disposed of vehicle	3 (2%)	8 (2.8%)	16 (5.5%)	(2.9%)
Wrong vehicle	6 (5%)	11 (3.9%)	19 (6.5%) ²	(0.6%)
Other	8 (7%)	40 (14.2%)	19 (6.5%)	(3.5%)
Petrol	35 (30%)	57 (20.2%)	49 (16.8%)	(20.3%)
Diesel	71 (60%)	194 (68.8%)	208 (71.2%)	(79.7%)
LPG	2 (<2%)	1 (0.4%)	0 (0%)	(0%)
Fuel type not reported	13 (11%)	30 (10.6%)	35 (12.0%)	(0%)

2017-2018 saw a significant increase in vehicle owners reporting they had repaired or serviced their vehicle. This was attributed to fewer false positives received as a result of refinements to the reporting process. This is also evidenced by the drop in 'vehicle does not smoke' responses for 2017-2018.

Diesel vehicles continue to represent the most significant vehicle group reported, with the proportion of petrol vehicles reported falling each year.

There were 17 vehicles reported more than once in 2017-2018, nine of which were reported twice or more within 30 days. Of the vehicles reported more than once, only four vehicle owners responded to the second advisory letter sent. Two vehicles were reported three times. No response was received to the advisory letters sent to those two vehicle owners.

Diesel vehicle emission testing and repair programs

DWER operates a portable roadside gas analyser that provides an efficient, cost effective method of characterising vehicle emissions and raising community awareness of vehicle emissions.

In November and December 2017 this remote sensing device (RSD) was deployed for twelve days across six sites in the Perth metropolitan area. Valid emissions data for 19,047 vehicles were collected, including 4,950 samples of diesel vehicles.

Overall, diesel fleet emissions are seen to be reducing over time. Compared to the previous 2016 roadside monitoring data:

- Median carbon monoxide emissions are 3 per cent lower
- Median hydrocarbon emissions are 5 per cent higher
- Median nitric oxide emissions are 20 per cent lower
- Median smoke emissions are 16 per cent lower

Improvements to diesel fleet performance can be mostly attributed to newer and cleaner vehicle technology coming online and older more polluting vehicles gradually being retired.

¹ Responses to the most recent mail out covering May and June reports were still being received at the time of preparing this report. The average response rates for July-April is provided as an indicator.

² A mailing error resulted in several vehicle owners receiving incorrect vehicle details (though registration and location details were still correct). Outside this event, only one wrong vehicle response was received.

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

The Western Australia government does not operate a diesel vehicle retrofit program.

Other programs

There are no other programs currently run by the Western Australia government relevant to the Diesel NEPM.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for South Australia by the Hon. David Speirs, Minister for Environment and Water, for the reporting year ended 30 June 2018.

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 NOx 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.

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

Unlike most states, South Australia does not conduct a 'Dob in a Smoky Vehicle' program administered by the EPA, where members of the public can report a smoky vehicle on-line with follow-action in the form of a letter of concern sent to the registered owner of the vehicle. In South Australia it is expected that the matter would be reported directly to the Police. There is some evidence of very occasional reports to Police, but they are reluctant to undertake a time consuming investigation without their own first hand evidence of non-compliance. There is no reporting by Police of any complaints made.

With the closure of the Regency Park Emissions Test Facility during the 2013-14 financial year due to high maintenance costs and ongoing reliability issues, there has been no means to accurately test diesel emissions in South Australia other than by simple visual assessment.

In the absence of effective reporting, vehicle testing and compliance mechanisms this program has become ineffective in South Australia.

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

The South Australian Government has set a target of 30% Low Emission Vehicles in its own fleet by 2019, which will be achieved ahead of schedule. While this will mostly be met by a mix of full hybrid and small capacity turbocharged engine vehicles, it includes the uptake of plug-in hybrids. Further opportunities to take up full battery electric vehicles are being explored with a large standing order placed for Tesla Model 3 vehicles.

The Government has funded the development of two new full battery electric buses by Precision based in northern Adelaide. They will now be trialled in the metro bus fleet with a focus on City Connector bus services (free loop around the City of Adelaide).

The Government with the Adelaide City Council established electric vehicle recharging infrastructure in central Adelaide in 2017-18. This includes:

- Franklin Street EV Charging Station - comprising Tesla Superchargers, 50kW DC Fast Chargers and 22kW Type 2 AC chargers.
- U-Park Car Parks – with banks of 10 x 22kW AC Type 2 chargers in the Rundle Mall and Adelaide Central Market car parks.
- On-street 22kW AC Type 2 charging bollards across the city.

The Government with Flinders University will establish a 'Solar Garage' Charging Station at the Tonsley Innovation District in 2018/19, comprising multiple DC Fast and 22kW AC chargers housed in a structure with 160m² of solar PV on the roof. Generated power will be stored in ex-EV batteries house in the Garage and will contribute to charging demand.

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for Tasmania by Hon Elise Archer MP, Minister for Environment, for the reporting year ended 30 June 2018

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 TasTAFE 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 2018 there were 13945 diesel powered heavy vehicles (that is vehicles over 4.5 tonnes) and 121891 diesel powered light vehicles registered in the State. This represents an increase of 1.4 % and an increase of 7.4 % respectively since 1 July 2017. Of the total of 618107 vehicles registered in Tasmania on 30 June 2018, 22.0 % were diesel powered.

Smoky vehicles program

The Department of State Growth maintains a strong focus on road safety and do not actively target vehicle emissions as part of light vehicle Compliance and Enforcement activities with the National Heavy Vehicle Regulator being responsible for vehicle standards applicable to all heavy vehicles. The Department does not possess diesel vehicle emission measurement facilities. However standards applicable to light and also heavy vehicles include “*the vehicle must not emit visible emissions for a continuous period of at least 10 seconds*” also known as the ten second rule. When issued a Defect Notice and/or Traffic Infringement Notices by Authorised Officers, remedial action and subsequent inspection by an Approved Vehicle Examiner is required to enable the defective vehicle status to be cleared from the registry.

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 specific to diesel vehicle emissions in Tasmania, however the National Heavy Vehicle Regulator now administer the National Heavy Vehicle Accreditation Scheme (previously performed individually by jurisdictions). Heavy vehicle Maintenance Management Accreditation is one module within this scheme that encourages heavy vehicle operators to take more responsibility for maintaining their vehicles correctly and ensuring that they are always in good mechanical condition, compliant with relevant vehicle standards and operating efficiently. Fuel quality and fault repair activity standards apply in this module. Scheduled compliance audits and triggered audits are requirements of this accreditation.

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 the Australian Capital Territory by Mr Mick Gentlemen MLA for the reporting year ended 30 June 2018.

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 Schedule 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 Schedule 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
- 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, Transport Canberra took delivery of an additional 14 Euro VI buses in 2017-18. A total of 109 Euro VI buses have been delivered as at June 30, 2018. A fleet of 70 CNG powered buses, purchased between 2004 and 2008, also remains in service.

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 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 as a result of 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 Hon Eva Lawler, Minister for Environment and Natural Resources for the reporting year ended 30 June 2018.

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

In the Northern Territory, there are approximately 64 000 diesel vehicles registered, representing around 40 per cent of the total vehicle fleet, which is much higher than the national proportion of diesel vehicles in the vehicle fleet (approximately 23 per cent). Australian Bureau of Statistics data indicate that diesel vehicles registered in the Northern Territory represent approximately 1.4 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, with 15 per cent in Alice Springs, 8 per cent in Katherine and 2 per cent in Tennant Creek.

In the Darwin region, approximately 37 per cent of all registered vehicles are diesels, which is lower than in Alice Springs where diesels represent 41 per cent of the total vehicle fleet. In Katherine and Tennant Creek the diesel portion of the total fleet is 56 per cent and 58 per cent respectively, indicating a higher reliance on diesel vehicles in remote areas.

Of the heavy vehicle diesels registered in the Northern Territory, 62 per cent are registered in the Darwin region, 19 per cent in Alice Springs and 10 per cent in Katherine. The distribution of light diesel vehicle registrations in the Territory differs slightly, with 70 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 small number 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 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 efficient road freight vehicles in the world.

Other programs

The Northern 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
National Environment
Protection Measure

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 Department of the Environment and Energy by Commonwealth for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Australian Government supports the Controlled Waste NEPM through the activities of the hazardous waste reform program.

In the 2017-18 year, key activities under the reform program related to tracking and understanding Australia's interstate movements of hazardous and controlled waste included:

- Analysis linking Australian waste trade and waste movement data to inform compliance and enforcement activities
- As part of the design of a possible national electronic tracking system for waste movements, produced a common national electronic tracking certificate
- Produced a report identifying and analysing the content and issues for a proposed national data sharing agreement between Australian jurisdictions on hazardous waste
- Developed a draft protocol for consistent national sampling and testing for key contaminants in waste, as a step towards a harmonised approach to hazardous and controlled waste definition and classification, including for the purposes of regulating interstate transport
- Completed the first national baseline assessment of amounts of hazardous and controlled wastes held in stockpiles and regulator-approved storages.

For more information on the hazardous waste reform program, see www.environment.gov.au/protection/hazardous-waste/reform.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

Not applicable for the Commonwealth

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 NSW Environment Protection Authority for the reporting year ended 30 June 2018.

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 70,788 tonnes of controlled waste in 4832 movements was reported between 2017 and 2018 as having been transported into NSW (Tables 2 and 4). This is a 0.5% increase on the 70,420 tonnes and a minor increase on the 4,809 movements in 2016-17. This compares to the reported 24% increase in controlled waste tonnage and 4% increase in waste movements from 2015-16 to 2016-17.

NSW received less waste in 2017-18 compared to 2016-17 from all states except Victoria, Queensland and Tasmania. The greatest decrease was from South Australia followed by Western Australia and then the Australian Capital Territory. Victoria had the largest increase on volume (2,288 tonnes) but Tasmania had an increase of 507% (108.2 tonnes) of waste transported into New South Wales.

Victoria: transport of alkalis into New South Wales has increased considerably by 371 % (273 tonnes) while the transport of organic chemicals and soil/sludge have decreased by 55 % and 33 % respectively.

Queensland: mostly consistent; with transport of plating & heat treatment dropping to 0 and oils increasing by 205 tonnes.

Western Australia: total movement volume was down for this state with organic solvents decreasing by 108 tonnes while soil/sludge increased by 156 tonnes.

South Australia: there was an apparent increase in transport of acids by 599 tonnes.

Tasmania: an overall increase of 108 tonnes for the year was mainly due to an increase of 65 tonnes of oil transport.

ACT: had an apparent increase of soil/sludge transport of 745 tonnes.

Northern Territory: total transported volume was down for last year; mostly due to a decrease in the transport of inorganic chemicals (which includes lead acid batteries) from 897 tonnes to 158 tonnes.

NOTE: the data contains some discrepancies due to the nature of the online system and cannot be relied upon to be completely correct.

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

Reporting Year	Consignment authorisations issued
2016–17	15,843
2017–18	10,806

Table 2: Quantity of controlled waste into New South Wales for the period 1 July 2017 to 30 June 2018—tonnes per waste category by State/Territory

Code	Description	State							Total
		Vic	Qld	WA	SA	TAS	ACT	NT	
A	Plating and heat treatment	0	0	0	0	0	0.03	0	0.03
B	Acids	19953.57	13.02	0.11	647.95	0	0.56	0	20615.21
C	Alkalies	346.55	2.33	3.69	2.3	20.6	4.45	0	379.92
D	Inorganic chemicals	11776.47	6853.66	4823.75	2255.98	17.38	24.26	158.97	25910.47
E	Reactive chemicals	15.16	3.84	0.07	0	0	0.11	0	19.18
F	Paints, resins, inks, organic sludges	1416.59	301.38	0	50.87	0	24.73	0	1793.57
G	Organic solvents	125.21	263.51	20.17	21.71	0	20.60	0	451.2
H	Pesticides	0.66	31.96	0	4.8	3.02	0.56	0	41
J	Oils	2593.89	527.2	160.33	33.03	86.74	2863.8	130.6	6395.59
K	Putrescible/organic wastes	2517.72	0.46	0	0	0	5564.47	0	8082.65
L	Industrial washwater	0	0	0	0	0		0	0
M	Organic chemicals	103.65	338.72	8	92.91	1.76	42.59	0	587.63
N	Soil/sludge	2762.24	1160.23	159.68	148.44	0	906.15	302.38	5439.12
R	Clinical and Pharmaceutical	4.42	0	0	0	0	306.27	0	310.69
T	Misc	354.25	219.55	0	0.82	0	187.61	0	762.23
TOTAL		41970.38	9715.86	5175.8	3258.81	129.5	9946.19	591.95	70788.49

Table 3: Discrepancies in movements of controlled waste into New South Wales for the period 1 July 2017 to 30 June 2018—percentage of total movements

Discrepancy Type	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
Transport without authorisation	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
Waste data	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 New South Wales for the period 1 July 2017 to 30 June 2018

Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*	Total
2196	685	267	142	6	1498	37	0	4832

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 Lily D'Ambrosio, Minister for Energy, Environment and Climate Change, for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The NEPM is implemented in Victoria by the Waste Management Policy (Movement of Controlled Waste between States and Territories). 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 2017-18 reporting period, Victoria issued 416 authorisations. This is an increase of 104 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 39386 tonnes. This was an increase of 3767 tonnes from the amount reported in 2016-17.

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 2017-18 (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 in 2017-18. The inorganic chemicals waste stream, consisting of metallic constituents, accounted for 34% of the total volume in 2017-18.

In 2017-18, 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
2016-17	312
2017-18	416

Table 2: Quantity of controlled waste into Victoria for the period 1 July 2016 to 30 June 2018—Tonnes per waste category by State/Territory

WASTE TYPE		QTY (TONNE)									Percent (%)
		NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Total	
A	Plating & heat treatment	0		0	0	70	0	0	0	70	0.2
B	Acids	288		0	51	1	15	0	0	355	0.9
C	Alkalis	380		12	0	9	11	0	0.4	412	1
D	Inorganic chemicals	375		0	11518	234	1265	2	27	13421	34.1
E	Reactive chemicals	19		1			10	0	0	30	0.1
F	Paints, resins, inks, organic sludges	3934		1257	260	867	44	4	0	6367	16.2
G	Organic solvents	845		207	224	171	120	0	0	1566	4
H	Pesticides	120		98	377	30	0	0	0	625	1.6
J	Oils	3110		243	57	834	168	0	0	4412	11.2
K	Putrescible/organic waste	2556		20	0	28	0	0	0	2604	6.6
L	Industrial washwater	1544		21	0	70	11	0	363	2009	5.1
M	Organic chemicals	351		56	31	5	98	0	0	541	1.4
N	Soil/sludge	2118		116	17	223	346	0	0	2819	7.2
R	Clinical/pharmaceutical	886		0	130	176	2	0	1	1195	3
T	Misc.	2780		3	2	134	42	0	0	2961	7.5
TOTAL										39386	100

Table 3: Discrepancies in movements of controlled waste into Victoria for the period 1 July 2017 to 30 June 2018—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 2017 to 30 June 2018

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr [*]
3463	1953	176	591	506	218	2	23	n/a

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. Leeanne Enoch MP, Minister for Environment and the Great Barrier Reef, Minister for Science and Minister the Arts for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Queensland Department of Environment and Science (DES) 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)¹. 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.

- DES 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) approved for the 2017/18 year was 406, which is a 35% increase from the 2016/17 year (300).
- 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 2017/18 period was 109,782.47 tonnes which is a 47% increase from the 2016/17 year (74,626.8 tonnes). While the number of transportations (Table 4) for the 2017/18 year was 3,823 which is an 8.6% increase on 3,521 in 2016/17.
- During the 2017/18 year, the departments compliance efforts have continued to be focussed on intrastate movements, one company was fined for bringing waste into Queensland unauthorised.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by {name of jurisdiction}

Reporting Year	Consignment authorisations issued
2016-17	300
2017-18	406

¹ - 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 2017 to 30 June 2018—Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	Act	NT	Ext-Terr*	Total (tonnes)
A	Plating & heat treatment	0	0	N/A	0	0	0	0	0	0	0.0
B	Acids	11.77	0	N/A	0	0	0	0	0	0	11.77
C	Alkalis	181.8	0	N/A	0	0	0	0	0	0	181.8
D	Inorganic chemicals	2561.8	863.46	N/A	0	0	95.8	0	0	0	3521.06
E	Reactive chemicals	0	0	N/A	0	0	0	0	0	0	0
F	Paints, resins, inks, organic sludges	323.0	18.3	N/A	0	0	0	0	0	0	341.3
G	Organic solvents	13.5	0	N/A	0	0	0	0	0	0	13.5
H	Pesticides	1331.6	0	N/A	0	1.1	0	0	0	0	1332.7
J	Oils	29637.8	527.9	N/A	0	0.0	0	0	5624.6	0	35790.3
K	Putrescible / organic waste	5596.8	5624.6	N/A	0	8.5	0	0	0	0	11229.9
L	Industrial washwater	1.5	0	N/A	0	0	0	0	0	0	1.5
M	Organic chemicals	6914.0	71.7	N/A	0	10	10.6	0	0	36.4	7042.7
N	Soil / Sludge *	48814.8	303	N/A	0	14	0	0	0	11.5	49143.3
R	Clinical & pharmaceutical	278.9	0.04	N/A	0	0	0	0	0	0	278.94
T	Miscellaneous	782.1	20.4	N/A	0	0	0	0	91.2	0	893.7
State Totals		96449.37	7429.4	N/A	0	33.6	106.4	0	5715.8	47.9	109,782.47

Table 3: Discrepancies in movements of controlled waste into Queensland for the period 1 July 2017 to 30 June 2018—Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr *
Consignment non-arrival*	0%	0%	0%	0%	0%	0%	0%	0%	0%
Transport without authorisation*	0.03%	0%	0%	0%	0%	0%	0%	0%	0%
Non-matching documentation*	0%	0%	0%	0%	0%	0%	0%	0%	0%
Waste data*	0%	0%	0%	0%	0%	0%	0%	0%	0%

* During the 2017/18 year, the departments compliance efforts have continued to be focussed on intrastate movements, one company was fined for bringing waste into Queensland unauthorised.

Table 4: Number of movements of controlled waste into Queensland for the period 1 July 2017 to 30 June 2018

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
3,664	76	N/A	0	6	2	0	75	0

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for Western Australia by the Hon. Stephen Dawson, MLC Minister for Environment; Disability Services for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

On 1 July 2017, the Western Australian Department of Environment Regulation (DER) amalgamated with the Department of Water (DOW) and the Office of the Environmental Protection Authority (EPA) to form a new agency, the Department of Water and Environmental Regulation (DWER). DWER is responsible for administering the implementation of the *National Environment Protection (Movement of Controlled Waste between States and Territories) Measure*, under the *National Environment Protection Council (WA) Act 1996* and the *Environmental Protection Act 1986*, in Western Australia.

The provisions of the *Environmental Protection (Controlled Waste) Regulations 2004* provide for the licensing of carriers, drives, vehicles and/or tanks, and the use of controlled waste tracking forms to ensure controlled waste is transported to an appropriate waste facility.

Western Australia is carrying out a review of the *Environmental Protection (Controlled Waste) Regulations 2004* (the Regulations) to ensure the Regulations are risk-based, streamlined and effective.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by Western Australia

Reporting Year	Consignment authorisations issued
2016–17	10
2017–18	6

Table 2: Quantity of controlled waste into Western Australia for the period 1 July 2017 to 30 June 2018—Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr*	Total (tonnes)
A	Plating & heat treatment										-
B	Acids								56.1		56.1
C	Alkalies										-
D	Inorganic chemicals								169.0		169.0
E	Reactive chemicals										-
F	paints, resins, inks organic sludges										-
G	Organic solvents										-
H	Pesticides										-
J	Oils										-
K	Putrescible / organic waste								565.5		565.5
L	Industrial washwater								324.0		324.0
M	Organic chemicals										-
N	Soil / sludge								278.8		278.8
R	Clinical & pharmaceutical										-
T	Misc.										-
State Totals (tonnes)		0	0	0	0	0	0	0	1,393.4	0	1,393.4

Table 3: Discrepancies in movements of controlled waste into Western Australia for the period 1 July 2017 to 30 June 2018—Percentage of total movements

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

Table 4: Number of movements of controlled waste into Western Australia for the period 1 July 2017 to 30 June 2018

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
			n/a				56	

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 Hon. David Speirs MP, Minister for Environment and Water for the reporting year ended 30 June 2018

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The NEPM is implemented by the Environment Protection (Movement of Controlled Waste) Policy 2014 under the *Environment Protection Act 1993*.

The Environment Protection (Controlled Waste) Policy 2012 (the Policy) is the legal instrument to enforce the obligations of the NEPM.

In 2017 -2018, South Australia as chair of the Controlled Waste NEPM Implementation Working Group continued to pursue consistency with other jurisdictions in the national tracking of controlled waste in a manner to underpin the desired environmental outcomes of the Measure

No implementation issues were reported during 2017-18.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by {name of jurisdiction}

Reporting Year	Consignment authorisations issued
2016–17	193
2017–18	159

Table 2: Quantity of controlled waste into {name of jurisdiction} for the period 1 July 2016 to 30 June 2018—Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-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	1.21	0.00	0.00	3.97	0.00	0.00	0.00	49.72		54.90
C	Alkalis	18.00	1.85	0.00	7.35	0.00	0.00	0.00	393.52		420.72
D	Inorganic chemicals	10707.26	19700.59	0.00	167.78	0.00	212584.80	0.00	284.56		243444.99
E	Reactive chemicals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
F	Paints, resins, inks organic sludges	0.30	362.49	0.00	59.30	0.00	0.00	0.00	243.02		665.11
G	Organic solvents	54.86	4.80	0.00	0.00	0.00	0.00	0.00	0.00		59.66
H	Pesticides	40.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00		40.94
J	Oils	445.82	308.56	24.00	219.48	0.00	10.00	0.00	832.76		1840.62
K	Putrescible/organic waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	67.50		67.50
L	Industrial washwater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
M	Organic chemicals	0.00	63.38	0.00	0.00	0.00	0.00	0.00	0.00		63.38
N	Soil/sludge	0.00	1248.97	0.00	0.00	0.00	0.00	0.00	276.63		1525.60
R	Clinical & pharmaceutical	0.00	0.00	0.00	0.00	0.00	22.02	0.00	145.11		167.13
T	Misc.	5.92	0.00	0.00	0.15	0.00	0.00	0.00	0.00		6.07
State Totals (tonnes)		11274.31	21690.64	24.00	458.03	0.00	212616.82	0.00	2292.82		248356.62

Table 3: Discrepancies in movements of controlled waste into {name of jurisdiction} for the period 1 July 2017 to 30 June 2018—Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr *
Consignment non-arrival	30	42	50	50	n/a	44	100	52	0
Transport without authorisation	0	0	0	0	n/a	0	0	0	0
Non-matching documentation	0	0	0	0	n/a	0	0	0	0
Waste data	0	0	0	0	n/a	0	0	0	0

Table 4: Number of movements of controlled waste into {name of jurisdiction} for the period 1 July 2017 to 30 June 2018

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
376	597	1	44	n/a	67	0	266	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. Elise Archer MP, Minister for the Environment, for the reporting year ended 30 June 2018.

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*.

Tasmania consults with Australian jurisdictions on NEPM matters such as consignment authorisations and the appropriateness of treatment/disposal proposals.

Tasmania receives controlled waste from Antarctica. Waste received from Antarctica is reported under *External Territories* in the Tables below.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by Tasmania

Reporting Year	Consignment authorisations issued
2016–17	29
2017–18	30

Table 2: Quantity of controlled waste into Tasmania for the period 1 July 2017 to 30 June 2018—Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr*	Total (tonnes)
A	Plating & heat treatment										0.00
B	Acids									6.00	6.00
C	Alkalies									0.20	0.20
D	Inorganic chemicals	15.00	8500.00							1.22	8516.22
E	Reactive chemicals									0.02	0.02
F	Paints, resins, inks organic sludges		21.00							2.00	23.00
G	Organic solvents		2800.00							30.00	2830.00
H	Pesticides										0.00
J	Oils									65.00	65.00
K	Putrescible/ organic waste									92.00	92.00
L	Industrial washwater										0.00
M	Organic chemicals									0.15	0.15
N	Soil/sludge									37.50	37.50
R	Clinical & pharmaceutical									0.60	0.60
T	Misc.									2.50	2.50
State Totals (tonnes)		15.00	11321.00	0.00	0.00	0.00	0.00	0.00	0.00	237.19	11573.19

Table 3: Discrepancies in movements of controlled waste into Tasmania for the period 1 July 2017 to 30 June 2018—Percentage of total movements

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

Table 4: Number of movements of controlled waste into Tasmania for the period 1 July 2017 to 30 June 2018

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr**
1	6				n/a			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 the Australian Capital Territory by Mr Mick Gentleman MLA for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Access Canberra, within the Chief Minister, Treasury and Economic Development Directorate, is responsible for the implementation and administration of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure (the NEPM).

The Environment Planning and Sustainable Development Directorate is responsible for the development of legislation and policy to ensure the NEPM is appropriately implemented in the Australian Capital Territory (ACT).

The provisions of the NEPM are implemented through the *Environment Protection Act 1997* and Environment Protection Regulation 2005 by the Environment Protection Authority (Access Canberra).

The NEPM has been fully implemented and operational in the ACT since March 2000 with no major issues identified with its operation.

NEPM information sheets (which include an explanation of producer, transporter and waste facility responsibilities and instructions on how to complete a waste transport certificate) have been produced by the ACT Government to assist stakeholders in meeting their statutory obligations.

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 Ampcontrol Services (NSW) Pty Ltd and from the surrounding New South Wales regions for the treatment of clinical waste by Daniels Health Services Pty Ltd.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by the ACT

Reporting Year	Consignment authorisations issued
2016–17	41
2017–18	49

Table 2: Quantity of controlled waste into the ACT for the period 1 July 2017 to 30 June 2018—
Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr ²	Total (tonnes)
A	Plating & heat treatment										0.00
B	Acids										0.00
C	Alkalis										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	207.86	32.50	32.70							273.06
K	Putrescible/organic waste	7.00									7.00
L	Industrial washwater										0.00
M	Organic chemicals										0.00
N	Soil/sludge	28.21									28.21
R	Clinical & pharmaceutical	289.86									289.86
T	Misc.										0.00
State Totals (tonnes)		532.93	32.50	32.70	0.00	0.00	0.00	0.00	0.00		598.13

Table 3: Discrepancies in movements of controlled waste into the ACT for the period 1 July 2017 to 30 June 2018—Percentage of total movements

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

Table 4: Number of movements of controlled waste into the ACT for the period 1 July 2017 to 30 June 2018

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
772	3	3				N/A		

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for the Northern Territory by the Hon Eva Lawler MLA, Minister for Environment and Natural Resources for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Northern Territory *Waste Management and Pollution Control Act* 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) 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*.

The movement and volume of controlled waste into the NT will increase significantly should the proposed development of an underground waste storage facility south of Alice Springs proceed.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

Movement of controlled waste currently tends to be from the NT to other states. The NEPM provides 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 system to facilitate more efficient waste tracking under the NEPM. Discrepancies in movements of controlled waste into the NT for the period largely relate to errors in completing the paper-based waste transport certificates.

Table 1: Number of consignment authorisations issued by the Northern Territory

Reporting Year	Consignment authorisations issued
2016–17	3
2017–18	5

Table 2: Quantity of controlled waste into the Northern Territory for the period 1 July 2017 to 30 June 2018—Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr**	Total (tonnes)
A	Plating & heat treatment								n/a		0.00
B	Acids								n/a		0.00
C	Alkalies								n/a		0.00
D	Inorganic chemicals								n/a		0.00
E	Reactive chemicals								n/a		0.00
F	Paints, resins, inks organic sludges								n/a		0.00
G	Organic solvents								n/a		0.00
H	Pesticides								n/a		0.00
J	Oils			125.84	292.00				n/a		417.84
K	Putrescible/ organic waste								n/a		0.00
L	Industrial washwater								n/a		0.00
M	Organic chemicals								n/a		0.00
N	Soil/sludge								n/a		0.00
R	Clinical & pharmaceutical								n/a		0.00
T	Misc.								n/a		0.00
State Totals (tonnes)		0.00	0.00	125.84	292.00	0.00	0.00	0.00	0.00		417.84

Table 3: Discrepancies in movements of controlled waste into the Northern Territory for the period 1 July 2017 to 30 June 2018—Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr *
Consignment non-arrival			0	0				N/A	0
Transport without authorisation			0	0				N/A	0
Non-matching documentation			0	0				N/A	0
Waste data			0	8				N/A	0

Table 4: Number of movements of controlled waste into the Northern Territory for the period 1 July 2017 to 30 June 2018

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
0	0	6	7	0	0	0	N/A	0

Appendix 6:
Jurisdictional reports on
the implementation and
effectiveness of the
National Pollutant Inventory
National Environment
Protection Measure

Commonwealth

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for the Commonwealth by the Hon Melissa Price MP, Minister for the Environment, for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

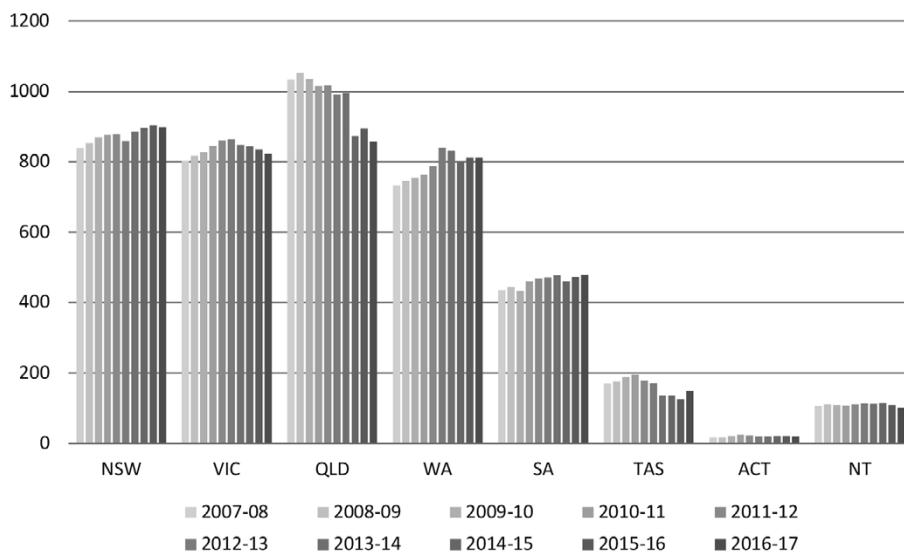
- The Commonwealth implements the NEPM administratively and ensures that its obligations under the *National Environment Protection Act 1994* and *National Environment Protection Measures (Implementation) Act 1998* are met.
 - On 29 March 2018, the Department published NPI data for 2016–17. This data details emissions from over 4000 industry facilities, and represent the 19th year of NPI publication of emissions from industry.
 - Of the top ten datasets published by the Department of the Environment and Energy on data.gov.au, 4667 views of NPI data were logged, making it the most frequently viewed dataset
 - The Commonwealth fielded enquiries from industry in relation to reporting, chaired and provided secretariat support for the NPI Review Steering Committee, as well as provided secretariat support for the NPI Intergovernmental Working Group, which oversees key NPI administration activities.
 - The NPI team was relocated within the Department of the Environment and Energy into the National Inventory Systems and International Reporting Branch, recognising shared experiences and practices in managing emissions methods, industry regulation, and emissions inventory systems.
- The Commonwealth managed work on the review of the National Pollutant Inventory (NPI). This work included:
 - Chairing and providing secretariat support for two meetings of the NPI Review Steering Committee, comprising senior officials from the states and territories, to provide oversight and direction for the review process; and
 - Chairing and providing secretariat support for two meetings of the NPI Intergovernmental Working Group (IWG) to support delivery of the review; and
 - Preparing a discussion paper to inform a public consultation process.
- The Commonwealth acknowledges the valuable contribution of states and territories towards the Review.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

The Commonwealth published the 2016-17 National Pollutant Inventory (NPI) on 29 March 2018. The number of facilities reporting to the NPI fell from 4178 in 2015–16 to 4146 in 2016–17.

Figure 1 below shows the number of facilities reporting to the NPI in each jurisdiction over the past 10 years.

Figure 1: Number of reporting facilities in each jurisdiction by year since 2007-08



The Commonwealth continued to work cooperatively with all jurisdictions to administer the NPI NEPM and support the online reporting system to ensure reliable collection of industry data.

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
PUBLIC		
<ul style="list-style-type: none"> • 306,703 visitors on the NPI website • 4667 views of the NPI dataset on data.gov.au 	<ul style="list-style-type: none"> • The number of user sessions increased from 288,026 in the previous year. • Software errors in the NPI database frequently affected public users who searched on the data. 	<ul style="list-style-type: none"> • 70 calls were received by the Commonwealth through the free call phone line. This was a 26 fewer calls than the previous year. Most of these calls were industry requests for help with NPI reporting and most industry calls were referred to the relevant state or territory NPI team. • 153 messages were sent in response to emails received in the NPI inbox. This was 71 fewer messages than the previous year.
INDUSTRY		
<ul style="list-style-type: none"> • 4146 reports for 2016–17 • 4178 reports for 2015–16 • 85 new reporters • No new sectors reporting • No confidentiality claims submitted 	<ul style="list-style-type: none"> • Industry reported some compatibility and usability problems with the NPI calculation tools. 	<ul style="list-style-type: none"> • The Commonwealth presented an update on the NPI review at a meeting of the Australian Environmental Business Network in September 2017. • The Commonwealth helped industry reporters when state and territory National Pollutant Inventory teams were unable to.
GOVERNMENT		
<ul style="list-style-type: none"> • 7 facilities from 2 different Commonwealth departments reported to the NPI in 2016–17. 	<ul style="list-style-type: none"> • NPI data was used by the Department of the Environment and Energy to inform Australia's ratification of the United Nations Minamata Convention on Mercury. • The Department of the Environment and Energy analysed NPI data to prepare background for a discussion paper on the NPI Review. • The Department of the Environment and Energy assessed NPI data on emissions of particulate matter $\leq 2.5 \mu\text{m}$ ($\text{PM}_{2.5}$) as a potential input into a national inventory of black carbon emissions. 	<ul style="list-style-type: none"> • The Commonwealth chaired and provided secretariat support for the NPI Review Steering Committee, which oversees the review of the NPI. • The Commonwealth chaired and provided secretariat support for the NPI Intergovernmental 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. Gabrielle Upton, Minister for the Environment, Minister for Local Government, and Minister for Heritage for the reporting year ended 30 June 2018.

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

National Pollutant Inventory facility emissions and transfers are reported for the 2016-17 reporting period.

The Environment Protection Authority conducts face-to-face training when required, which assists 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 with guidance on transfer destinations
- emission factors for non-standard fuels such as landfill gas burnt in flares or engines
- improved fugitive emission estimation methods
- an interactive on-line training program
- NSW contributing to the NPI review.

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 is 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 they identify environmental issues of concern. <p>Some issues have been identified:</p> <ul style="list-style-type: none"> Community users of National Pollutant Inventory 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 strong need to provide additional contextual information. 	<ul style="list-style-type: none"> Presentation to stakeholders during consultation.

Industry and Government activities

There were 17 new reporters in 2016-17.

The Environment Protection Authority undertakes industry sector reviews to identify facilities that may be required to report data to the National Pollutant Inventory. Generally, these industry sector reviews include facilities that currently hold an environment protection licence issued under the *Protection of the Environment Operations Act 1997*.

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
INDUSTRY		
<ul style="list-style-type: none"> 899 reports for 2016-17 (compared to 906 reports for 2015-16) 17 new reporters in 2016-17 No confidentiality claims submitted 	<ul style="list-style-type: none"> Training and support provided by the Environment Protection Authority to facility reporters has improved data quality and reduced costs to National Pollutant Inventory facility reporters. 	<ul style="list-style-type: none"> During 2016-17, the Environment Protection Authority trained approximately 30 reporters, including in use of the National Pollutant Inventory online reporting system. Ongoing industry requests to the Environment Protection Authority for training and guidance material on transfers of National Pollutant Inventory substances in waste streams.

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
GOVERNMENT		
<ul style="list-style-type: none"> 899 desktop audits. 	<ul style="list-style-type: none"> The Environment Protection Authority continues to use the National Pollutant Inventory to inform policy and regulatory approaches. The Environment Protection Authority continues to use the National Pollutant Inventory to analyse environmental outcomes in relation to the regulation of substances at industrial facilities. 	<ul style="list-style-type: none"> The Environment Protection Authority continues to utilise an internal communication program to inform staff about the importance of the National Pollutant Inventory and the emission estimation techniques. Regular National Pollutant Inventory officer meetings facilitate information exchange and knowledge sharing between jurisdictions and seek to ensure a consistent 'harmonised' approach for reporters with multiple facilities across Australia.

Victoria

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Victoria by the Hon Lily D'Ambrosio, Minister for Energy, Environment and Climate Change for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The NPI NEPM is implemented in Victoria through the Waste Management Policy (National Pollutant Inventory) 2012 (WMP NPI).

While EPA experienced no major NPI-related implementation issues in 2017/18, EPA has some concerns regarding the quality and timeliness of the NPI data provided by industrial facilities. Neither the WMP NPI nor NPI NEPM contains any penalty provisions as their intention was to encourage industry participation in the program. Absence of penalty provisions aiding enforcement makes it difficult to ensure that the NPI reports are submitted on time and contain accurate and comprehensive data.

EPA will continue to raise the issue of the NPI data quality and program enforceability during the upcoming statutory review of the NPI NEPM.

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"> The number of community member visits to the National Pollutant Inventory website was recorded by the Commonwealth. 		
INDUSTRY		
<ul style="list-style-type: none"> 824 published reports for 2016-17 837 published reports for 2015-16 11 new reporters 0 confidentiality claims submitted 	<ul style="list-style-type: none"> 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"> 96% of published industry reports for 2016-17 were submitted on time. 96.5 % of published industry reports for 2016-17 were submitted online.
GOVERNMENT		
<ul style="list-style-type: none"> 181 desktop audits 6 on-site audits 0 regulatory actions 	<ul style="list-style-type: none"> No specific feedback was received from the government. <p>EPA has used the NPI data for air quality modelling; cross-checking licence compliance; prioritising compliance work; and for the re-view of the Scheduled Premises Regulations and Environment Protection (Vehicle Emissions) regulations.</p>	

Queensland

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Queensland by Hon. Leeanne Enoch MP, Minister for Environment and the Great Barrier Reef, Minister for Science, and Minister for the Arts for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Opportunities exist to improve the effectiveness and implementation of the National Pollutant Inventory (NPI) through a strategic review. 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"> The number of community member visits to the National Pollutant Inventory website was recorded by the Commonwealth. 	<ul style="list-style-type: none"> 24 news articles were circulated in the 2017-18 year compared to 20 in the 2016-17 year There has been limited interest in the NPI from the general public during the period. 	
INDUSTRY		
<ul style="list-style-type: none"> 858 reports for 2016-17 897 reports for 2015-16 0 new reporters 0 new sectors reporting 0 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. 	<ul style="list-style-type: none"> 51% of facility reports were subject to desktop evaluation. Two in-depth on-site NPI audits were conducted during the reporting period for port terminal operations.
GOVERNMENT		
<ul style="list-style-type: none"> 442 desktop audits 2 on-site audits 0 regulatory actions 	<ul style="list-style-type: none"> The Queensland Department of Environment and Science (DES) utilised the industry pollutant emissions data to contribute to the development of emissions inventories and specific externally funded projects. 	<ul style="list-style-type: none"> Where possible the Qld NPI team conducted audits in conjunction with local DES Officers.

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Western Australia by the Hon. Stephen Dawson, MLC Minister for Environment; Disability Services for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia, the Department of Water and Environmental Regulation (DWER) 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 Regulations. The implementation of the National Environment Protection Measure (NEPM) continues to be successful in Western Australia.

DWER has identified opportunities for enhanced administration of the National Pollutant Inventory NEPM through the collection and reporting of aggregated emissions data. Work on the Perth Air Emissions Study 2011-12 was undertaken during the 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"> The number of community visits to the National Pollutant Inventory website was recorded by the Commonwealth. 	<ul style="list-style-type: none"> Environment groups and the media utilise National Pollutant Inventory NEPM data where environmental issues of concern are identified. 	
INDUSTRY		
<ul style="list-style-type: none"> 813 reports for 2016–17 812 reports for 2015–16 24 new reporters no new sectors reporting no confidentiality claims submitted 	<ul style="list-style-type: none"> Widespread compliance with the online reporting system with 96 per cent uptake in WA for 2016–17. 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 accurately reflect site emissions. Support provided by the Department of Water and Environmental Regulation staff acknowledged by reporters. 	<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 to follow-up potential reporters in several industry sectors. Reporters regularly reminded of reporting deadlines and supplied 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"> • 813 desktop audits • 11 on-site audits • no regulatory actions 	<p>The Department of Water and Environmental Regulation uses National Pollutant Inventory NEPM data to inform policy development, program implementation and to support regulatory activity.</p> <p>The Department of Water and Environmental Regulation uses National Pollutant Inventory NEPM data for the development of an emissions inventory for the greater Perth metropolitan region.</p> <p>National Pollutant Inventory NEPM data is used to identify and rank WA's major emitters with comparisons made with national data.</p>	<p>The Department of Water and Environmental Regulation uses toxic equivalency potentials to support the assessment of risk.</p>

South Australia

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for South Australia by Hon. David Speirs, Minister for Environment and Water, for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In South Australia the Environment Protection Authority implements the National Environment Protection (National Pollutant Inventory) Measure through the *Environment Protection (National Pollutant Inventory) Policy 2008*.

South Australia has been involved in the Review of the National Pollutant Inventory (NPI) through our involvement within the NPI Intergovernmental Working Group (IWG) and the Steering Committee formed to oversee the Review. This has included the development of the NPI Review Discussion Paper that was released for public consultation on 2 July 2018. The Review has involved consultation with other SA government agencies in particular in the preparation of a SA government agencies response to the Discussion Paper. The Review of the NPI is seen as critical to deliver the necessary improvements to the NPI programme to ensure its longevity and utility in the future.

A detailed air emissions inventory remains a strategic priority for both the NPI programme and the South Australian Environment Protection Authority (SA EPA). Aggregated emissions data are required for reliable comparison with industry emissions, however overall funding levels do not currently permit appropriate resourcing for the updating of aggregate emissions data (last done in South Australia in 2003).

South Australia strongly supports the recent provision of a national NPI dataset to <https://data.gov.au/dataset/npi>. This is an important step in making information more accessible, easier to use for data analysis and for comparing to other datasets.

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">• The number of community member visits to the National Pollutant Inventory website was recorded by the Commonwealth.	<ul style="list-style-type: none">• There are occasional enquiries about NPI data from the general public.• The media use NPI data.	<ul style="list-style-type: none">• Prompt responses are made when NPI data is requested.• Participated in the GovHack 2017 open data competition as a data mentor.

Participation Levels	Feedback from the Community, Industry and Government	Implementation Activity Effectiveness
INDUSTRY		
<ul style="list-style-type: none"> • 479 reports for 2016–17 • 473 reports for 2015–16 • 13 new reporters • No new sectors 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 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.
GOVERNMENT		
<ul style="list-style-type: none"> • 479 desktop audits • No on-site audits • No regulatory actions 	<ul style="list-style-type: none"> • The SA EPA utilises NPI data to implement the Resource Efficiency Component of its load based or ‘polluter pays’ licensing system. <p>NPI data are vital for developing air quality modelling to provide comprehensive, spatially distributed diffuse and industrial point pollutant emission data across all SA airsheds.</p>	<p>Participation in the NPI Intergovernmental Working Group remains important for the discussion of policy, strategy and technical implementation details.</p> <p>Participation in the Review of the NPI is critical to ensuring its longevity and utility in the future.</p>

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Tasmania by the Hon. Elise Archer MP, Minister for Environment for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The National Pollutant Inventory (NPI) Environment Protection Measure continues to be implemented in Tasmania.

Tasmania is participating in the Steering Committee for the Review of the NPI. Promotion of the national Review of the NPI generated interest by Tasmanian media, and NGOs.

Use of the NPI by Tasmanian environmental regulators is gradually increasing as work to improve awareness continues.

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"> The number of community member visits to the National Pollutant Inventory website was recorded by the Commonwealth. 	<ul style="list-style-type: none"> Awareness of the NPI is slowly increasing Promotion of the national review of the NPI contributed to local media interest There is a clear need for context and interpretation of NPI data to facilitate better understanding within the community. 	<ul style="list-style-type: none"> NPI educational material has been used once this year at a school science festival
INDUSTRY		
<ul style="list-style-type: none"> 150 reports for 2017–18 154 reports for 2016–17 0 new reporters 0 new sectors reporting 0 confidentiality claims submitted 	<ul style="list-style-type: none"> Feedback indicates NPI is an established part of environmental reporting for large scale industry in Tasmania Smaller scale businesses indicate the reporting burden relative to environmental risk is too high Review and update of EET manuals remains an ongoing need. 	<ul style="list-style-type: none"> Work to improve reporting levels in the quarrying industry continues within the EPA. Review of Tasmanian industry regulated as a 'fuel burner' but not reporting to NPI has commenced, and is ongoing. Review of Level 2 activities regulated by the EPA and reporting to the NPI is approximately 50% complete.
GOVERNMENT		
<ul style="list-style-type: none"> 150 desktop audits 0 on-site audits 0 regulatory actions 	<p>NPI data used to assess mercury emissions and sources within Tasmania for an Australian Government review, and to assess natural gas usage by an emitter to justify quarterly stack tests</p>	<p>Highlighting the NPI during meetings and forums continues.</p> <p>Inclusion of the NPI on signature blocks and the EPA website has improved awareness</p>

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Australian Capital Territory by Mr Mick Gentleman, MLA for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Access Canberra, within the Chief Minister, Treasury and Economic Development Directorate, is responsible for the implementation and administration of the National Environment Protection (National Pollutant Inventory) Measure (the NEPM).

The Environment Planning and Sustainable Development Directorate is responsible for the development of legislation and policy to ensure the NEPM is appropriately implemented in the Australian Capital Territory (ACT).

The provisions of the NEPM are implemented through the *Environment Protection Act 1997* by the Environment Protection Authority (Access Canberra).

This section should include a brief outline (in dot point format) of any issues arising during the reporting year, that reflect on the efficiency and simplicity of NEPM administration.

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"> The number of community member visits to the National Pollutant Inventory website was recorded by the Commonwealth. 	<ul style="list-style-type: none"> No specific feedback was received from the community. 	
INDUSTRY		
<ul style="list-style-type: none"> 21 reports for 2016–17 22 reports for 2015–16 No new reporters No new sectors reporting No confidentiality claims submitted 	<ul style="list-style-type: none"> Due to staff turnover, training was welcomed by the industry 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 continued liaising 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 the Northern Territory by the Hon Eva Lawler, Minister for Environment and Natural Resources for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

- The National Pollutant Inventory (NPI) program is implemented in the Northern Territory through an Environment Protection Objective (EPO) established under the *Waste Management and Pollution Control Act*. Overall responsibility for implementation of the NPI rests with the Northern Territory Environment Protection Authority (NT EPA).
- Due to limited resourcing, reports were validated selectively based on evidence of significant emissions changes from previous years and facility size.
- The Northern Territory does not have sufficient funding to 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 2 ASSESSMENT OF NEPM EFFECTIVENESS

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">• No feedback was received from the public	<ul style="list-style-type: none">• None known
INDUSTRY		
<ul style="list-style-type: none">• 101 reports for 2016–17• 110 reports for 2015–16• 0 new reporters• 0 new sectors reporting• 0 confidentiality claims submitted	<ul style="list-style-type: none">• No feedback was received from industry	<ul style="list-style-type: none">• None known
GOVERNMENT		
<ul style="list-style-type: none">• 14 desktop audits• 0 on-site audits• 0 regulatory actions	<ul style="list-style-type: none">• None known	<ul style="list-style-type: none">• None known

Appendix 7:
Jurisdictional reports on
the implementation and
effectiveness of the
Used Packaging Materials
National Environment
Protection Measure

Commonwealth

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for the Commonwealth by the Hon Josh Frydenberg MP, Minister for the Environment and Energy, for the reporting year ended 30 June 2018.

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 between government and industry in the packaging supply chain that aims to change the culture of business to design more sustainable packaging and increase recycling rates. The Australian Packaging Covenant Organisation (APCO) is the industry body responsible for managing signatories to the Covenant and supporting industry action against the goals of the Covenant.

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. Each state implements the NEPM through its own regulations.

The NEPM requires participating state and territory governments to report annually on brand owners that are subject to NEPM requirements, survey 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 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 NEPM requires the Commonwealth to provide information annually to NEPC on the overall national performance of the Covenant. In accordance with Section 19 of the NEPM, the Commonwealth is to be provided information 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.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

At the end of June 2018, there were 886 Covenant signatories, of which 96 per cent were compliant. Non-compliant signatories are removed from the register of Covenant signatories and referred to the relevant state or territory government for follow up under the NEPM in that jurisdiction.

To comply with the Covenant, brand owner signatories are required to take the following actions:

- within three months of becoming a Signatory, submit an action plan that sets out what the Signatory proposes to do to contribute to the Covenant's aim and meets the obligations published by APCO

- by 31 March each year, commencing in the financial year following the year in which a company becomes a Signatory, submit an annual report that outlines performance against all of the action plan commitments and meets the reporting obligations as published by APCO
- publish the action plan and annual reports on its website in a prominent and readily identifiable way
- make annual financial contributions in the form of membership fees payable to APCO
- implement policies or procedures to buy products made from recycled materials
- establish collection and recycling programs for used packaging materials generated on-site
- take action, where appropriate, to reduce litter
- allow independent audits of annual reports and the implementation of action plans, including allowing access to relevant supporting documentation demonstrating application of the Sustainable Packaging Guidelines, or an alternative to the Guidelines, and
- assist APCO to respond to complaints from the public about the design and use of packaging materials.

Covenant signatories showed meaningful improvement across key performance reporting indicators related to supporting market development for recycled content in packaging, and demonstrating innovation in developing and continuing sustainability initiatives.

Reporting Year	Number of covenant signatories
2016–17	919
2017–18	886

The number of signatories reduced in 2017-18 from the previous reporting year. This reduction can be attributed to enhanced compliance activities, a renewed referral process and a comprehensive data cleansing project of all member data.

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.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for New South Wales by Gabrielle Upton, Minister for the Environment for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Under the Waste Less, Recycle More initiative, the NSW Government has continued to commit to reducing packaging waste in the State through a range of funding priorities, including waste and recycling infrastructure, business recycling and littering. Up to July 2018 Waste Less, Recycle More has awarded \$53.5 million towards the construction of 17 new major resource recovery facilities and \$16 million towards the expansion and enhancement of 34 existing resource recovery facilities, funded free bin trim waste assessment and support for over 22,000 small to medium businesses to reduce their waste and recycle more and supported 200 litter prevention projects with \$8.3 million in funding.

The NSW Government and EPA are undertaking a number of programs and initiatives to drive a reduction in litter including:

- Working with the Australian Packaging Covenant Organisation to reduce the impacts of packaging waste through involvement in six working groups, three of which focus on plastics; expanded polystyrene, polymer-coated paperboard, and soft plastics.
- The Don't be a Tosser! Campaign and Report to EPA online portal which has resulted in 29,701 littering fines since it was introduced in February 2015.
- NSW has reduced its litter volume by 37 per cent since 2013-14, which is the baseline year for the Premier's Priority target. It has been driven both by the NSW Government's broad litter reduction program and the Return and Earn scheme. The community has embraced Return and Earn, with over 500 million drink containers returned across the state since the scheme commenced on 1 December 2017. The broad litter reduction program targets the NSW litter stream that isn't drink bottles. It is led by the Tosser campaign and includes \$8.3 million given in grant funding for over 200 projects to councils and community groups. It has delivered 24 points of the 37 per cent reduction. The Return and Earn campaign has delivered the remaining litter reduction in a very short space of time. From November 2017 to May 2018, drink container litter reduced by 33%.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

NSW has worked closely with the Australian Packaging Covenant Organisation (APCO) to ensure business compliance with the National Environment Protection (Used Packaging Materials) Measure (NEPM) by:

1. supporting APCO's June 2018 brand audit
2. responding to enquiries from businesses that are not members of APCO or abiding by the relevant state law on packaging (Part 8 of the *Protection of the Environment Operations (Waste) Regulation 2014* (NSW Waste Regulation)).

This action led to new signatories. NSW has also communicated with a number of businesses that have sought clarification on their regulatory requirements.

Reporting Year	Number of covenant signatories
2016–17	394
2017–18	380

Recovery Data

Nil (no brand owner was subject to record-keeping obligations under the NSW Waste Regulation).

Supporting Data

A 2017-18 brand owner survey was conducted in June 2018, with 1,818 NSW companies approached by the APCO.

15 businesses were referred to the NSW Government between July 2017 and 30 June 2018. All were non-compliant signatories to the 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

NSW has continued to focus on the reduction of packaging waste through *Waste Less, Recycle More*. It has also engaged with the APCO and relevant businesses to meet the NEPM's outcomes.

Local Government Data

Local government data is available on the NSW Environment Protection Authority's website <http://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 Lily D'Ambrosio, Minister for Energy, Environment and Climate Change, for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The NEPM is implemented in Victoria is through the 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 (as required by clause 20(1)).

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.

As of 30 June 2018, there were 874 signatories to the Covenant nationally. Victoria has 324 signatories, making 37.07% of all signatories.

Reporting Year	Number of covenant signatories
2016–17	341
2017–18	328

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. In August 2015, a meeting of jurisdictions and industry resolved that jurisdictions would not carry out the brand owner audit during the reporting period, and that industry would take responsibility for brand owner audits from 1 July 2016.

Supporting Data

Nil

Complaints, Investigations and Prosecutions

Nil

Statement of Interpretation of the Information

Nil

Local Government Data

Local government recycling data for 2017/2018 is published on EPA Victoria's website (<http://www.epa.vic.gov.au/your-environment/waste/local-government-kerbside-recycling>).

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Queensland by the Department of Environment and Science for the reporting year ended 30 June 2018.

IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

No issues arose during the reporting year.

ASSESSMENT OF NEPM EFFECTIVENESS

Jurisdictions should provide an overview of the effectiveness of the NEPM in their jurisdiction. This overview should focus on achievement of the NEPM Goal and Desired Environmental Outcomes(s) and should identify significant factors which have contributed to or hindered achievement of the Goal and Desired Environmental Outcome(s).

Reporting Year	Number of covenant signatories
2016–17	71
2017–18	66

Recovery Data

Audits of brand owner records were not conducted in 2017/18.

Supporting Data

Nil response

Complaints, Investigations and Prosecutions

No complaints received, investigations commenced or prosecutions commenced.

Statement of Interpretation of the Information

Nil response.

Local Government Data

This data will be available once the 2017/18 annual recycling and waste report is published. This is expected by late 2018/early 2019.

The report will be published at www.qld.gov.au/environment/pollution/management/waste/data-reports/recycling-waste.

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Western Australia by the Hon. Stephen Dawson, MLC Minister for Environment; Disability Services for the reporting year ended 30 June 2018.

IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia, the National Environmental Protection (Used Packaging Materials) Measure (NEPM UPM) is implemented by the Department of Water and Environmental Regulation under the *Protection Council (WA) Act 1996*, the *Environmental Protection Act 1986* and the Environmental Protection (NEPM-UPM) Regulations 2013.

The Australian Packaging Covenant Organisation and 5-year strategic plan was established following the commencement of the revised Australian Packaging Covenant on 1 January 2017. No compliance activity was undertaken during this period of establishment.

ASSESSMENT OF NEPM EFFECTIVENESS

No compliance activity undertaken during the reporting period.

Reporting Year	Number of covenant signatories
2016–17	43
2017–18	40

Recovery Data

No Western Australian based companies have been required to provide records for auditing.

Supporting Data

Not applicable.

Complaints, Investigations and Prosecutions

No complaints were received, or investigated or prosecutions undertaken, during the 2017-18 reporting period.

Statement of Interpretation of the Information

Not applicable

Local Government Data

Local government data will be available at www.dwer.wa.gov.au from June 2019.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for South Australia by the Hon. David Speirs MP, Minister for Environment and Water for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The National Environment Protection (Used Packaging Materials) Measure 2011 is implemented by the *Environment Protection (Used Packaging Materials) Policy 2012* under the *Environment Protection Act 1993*. The Policy provides the regulatory underpinning for the Australian Packaging Covenant and the goal of the Measure.

In 2017 -2018, South Australia continued to advance its relationship with the Australian Packaging Covenant Organisation, industry and other jurisdictions to pursue national consistency in the attainment of the goal of the Measure.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

South Australia is currently working with the Covenant to ensure signatories continue to meet their obligations and requirements under the Policy.

Reporting Year	Number of covenant signatories
2016–17	50
2017–18	48

Recovery Data

One brand owner was required to report during this reporting period. The EPA continues to work with this brand owner to assist them in ensuring compliance with the Policy through the development and implementation of an action plan.

Supporting Data

In April 2018 APCO conducted its first brand owner audit in which it identified 313 South Australian companies that may be liable under the *National Environmental Protection (Used Packaging Materials) Measure 2011*. APCO has written a letter to these companies inviting them to join APCO. Fifty five of these companies have responded to APCO to date and APCO will be contacting the remaining 258 companies with a second letter before referring potential free riders to the Environment Protection Authority. In accordance with the *Environment Protection (Used Packaging Materials) Policy 2012*, referred brand owners who are non-signatories to the Covenant will be required to prepare, maintain and implement an action plan that achieves the goal of the Measure.

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 including via collaboration with industry and other jurisdictions on consistent application of the Covenant and NEPM/Policy requirements.

Local Government Data

Local Government data for the 2017-18 reporting period will be available at [2017-18 NEPC Annual Report – Local Government Data](#) from November 2018.

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Tasmania by the Hon. Elise Archer MP, Minister for the Environment, for the reporting year ended 30 June 2018.

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

In the 2017 to 2018 reporting period Tasmania worked with the Australian Packaging Covenant Organisation (APCO) in development of communications to brand owners detailing obligations under the NEPM.

The Tasmanian Government continues to support the implementation of the *Australian Packaging Covenant* through membership of the Government Officials Group, which is the formal mechanism of engagement between APCO and jurisdictional Governments.

The NEPM has provided a strong incentive for brand owners to join the Covenant. Tasmania has fifteen company signatories and seventeen covenant signatories overall.

Reporting Year	Number of covenant signatories
2016–17	17
2017–18	15

Recovery Data

No recovery data to report under Clause 16 of the NEPM.

Supporting Data

No surveys pursuant to clause 18 were 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

None reported for 2017–18.

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Australian Capital Territory by Mr Mick Gentleman MLA for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The *Waste Management and Resource Recovery Act 2016* (the Waste Act), was passed in August 2016 and replaced the *Waste Minimisation Act 2001*. The new Act came into effect on 1 July 2017.

The Waste Act provides a robust regulatory framework which is being progressively implemented. Under this Act, all waste and recycling facilities will be licensed and waste transporters will be registered, with both required to report the amounts and types of waste handled each quarter. The Waste Act also provides the Government with significant new powers to establish mandatory codes of practice. The ACT Government will use the Waste Act to support the delivery of its waste policy agenda including improving the recovery rates of used packaging. To this end, a new instrument will be drafted to implement the Used Packaging Materials NEPM under the Waste Act.

Also enabled under the Waste Act, the ACT Container Deposit Scheme (CDS) commenced on 30 June 2018. The ACT CDS aims to substantially increase the recovery of beverage container packaging in the ACT and reduce packaging litter.

The *ACT Waste Management Strategy 2011–2025* (the Waste Strategy) sets a clear direction for the management of waste in the ACT with the goal of leading innovation to achieve full resource recovery and a carbon neutral waste sector.

In May 2018 the *ACT Waste Feasibility Study* presented its recommended ‘Roadmap’ towards achieving the strategic goals of the Waste Strategy. The Roadmap is designed to drive increased resource recovery in the ACT, promote circular economy principles and best practice waste management.

Over 2017-18 the ACT Government continued to implement the Waste Strategy and work towards full resource recovery via a suite of measures including education, regulation, operating efficient collection systems, developing and implementing a CDS and planning for new waste infrastructure.

The ACT is a signatory to the Australian Packaging Covenant (APC). ACT representatives attend APC meetings on a regular basis and engage with other jurisdictions to work towards reducing packaging waste and achieving the Meeting of Environment Ministers endorsed target of 100% recyclable, reusable and compostable packaging by 2025.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

Reporting Year	Number of covenant signatories
2016–17	4
2017–18	4

Recovery Data

Maximising the recovery and re-use of resources is one of the six objects of the Waste Act. Data concerning the volumes and types of materials recovered will be progressively collected through quarterly reporting under the Waste Act. This data will, in time, and in addition to other data collected under the Waste Act, provide a comprehensive picture of the ACT’s waste sector and the ultimate fate of all materials that comprise it.

Supporting Data

No retailer survey of packaged products was conducted in the ACT in 2017/18.

Complaints, Investigations and Prosecutions

No complaints, investigations, prosecutions or enforcement actions were recorded and no non-compliant signatories were referred to the ACT Government in 2017-18 with respect to this NEPM.

Statement of Interpretation of the Information

Over 2017-18 the ACT worked with the community and industry to encourage waste avoidance and increase recycling rates. The implementation of the CDS is expected to reduce the rate at which beverage containers are disposed of in residual waste collection services.

A 2014 audit of domestic kerbside waste and recycling indicated a recycling capture rate of 66% for households in the ACT (% of all recyclables which are captured in the recycling bin) and a recycling contamination rate of 7.8% (non-recyclable material in the waste bin). Recent data shows a Materials Recovery Facility (MRF) contamination rate of around 11% (non-recyclable items).

In 2017-18 the ACT Government's highly successful Actsmart Business Recycling program continued to support waste reduction and increased recycling by ACT businesses. There are 1004 businesses participating in the program as at 30 June 2018. Accredited businesses have all achieved a reduction of waste to landfill, some by over 90%, with some of the recovered material being packaging waste.

Local Government Data

Data for the ACT is available on the Transport Canberra and City Services Directorate website at:
<https://www.tccs.act.gov.au/recycling-and-waste/about/reports-audits>

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for the Northern Territory by the Hon Eva Lawler, Minister for Environment and Natural Resources for the reporting year ended 30 June 2018.

PART 1 IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Prior to 2017-18 there were no known major brand owners based in the Northern Territory who are likely to have responsibilities under the National Environment Protection (Used Packaging Materials) Measure (UPM NEPM). In May 2018, the Australian Packaging Covenant Organisation (ACPO) advised that its 2018 Brand Audit identified Northern Territory businesses that may be liable under UPM NEPM. The Northern Territory is reviewing provisions within its existing legislative framework, including under the *Waste Management and Pollution Control Act*, to determine the regulatory mechanisms that can be applied legislatively in the event that Northern Territory brand owners with obligations under the NEPM are found to be non-compliant.

The *Environment Protection (Beverage Containers and Plastic Bags) Act* (the Act) established the container deposit scheme (CDS) to reduce beverage container waste and increase resource recovery, reuse and recycling, and to regulate the supply of single use, non-biodegradable plastic bags. The Act established a plastic bag ban from September 2011 that prohibits retailers from providing customers with lightweight polyethylene shopping bags with handles. The CDS commenced in January 2012.

The Northern Territory's environmental grants program encourages community participation in minimising waste and preventing pollution. In 2017-18 the Territory granted more than \$650 000 for projects and activities targeting waste management, minimisation and recycling.

PART 2 ASSESSMENT OF NEPM EFFECTIVENESS

There have been no brand-owners identified in the Northern Territory who would have obligations under the NEPM. No reporting has been required under clause 16 of the NEPM. No surveys of brand owners were conducted in 2017-18 under clause 18. No complaints have been received, investigations undertaken or prosecutions mounted pursuant to this measure. One query was received from a brand owner identified in the 2018 APCO Brand Audit. Of the 17 councils within the Northern Territory, in 2017-18 only two provided kerbside recycling services.

The NEPM is considered a less effective mechanism in the Northern Territory, as major contributors to the waste stream are brand-owners not based in the Northern Territory. 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 materials are available.

Due to the small, dispersed population and distance to markets, kerbside recycling is only considered financially viable in the major population centres of Darwin and Palmerston. Recycling activities in other areas face significant barriers and costs. Voluntary local drop-off recycling schemes are in place in a number of remote communities, but collecting reliable data from these communities is problematic. Where kerbside recycling exists, the NEPM does provide a useful mechanism for obtaining data.

The Northern Territory continues to be committed to the NEPM goal and desired environmental outcomes through its existing programs.

Reporting Year	Number of covenant signatories
2016-17	0
2017-18	0

Recovery Data

A total of 148 572 794 approved beverage containers were sold in the Northern Territory during 2017/18. Of these, 111 277 928 containers, representing 75% of containers sold, were returned, recycled and reused through the CDS, thereby diverted from landfill.

This is a significant increase from previous years and is likely to be attributed to changes in CDS legislation and inconsistencies in reporting between coordinators. Data from 2016-17 is currently being reviewed to ascertain the extent to which this issue may apply. It is likely, based on preliminary findings, that these inconsistencies in reporting has also occurred in 2016-17 resulting in an underreporting of return rate in 2016-17.

Supporting Data

NA

Complaints, Investigations and Prosecutions

Nil

Statement of Interpretation of the Information

NA

Local Government Data

NA



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