



# **Draft Variation to the National Environment Protection (Ambient Air Quality) Measure Impact Statement**

**National Environment Protection Council**

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## About CME

The Chamber of Minerals and Energy of Western Australia (CME) is the peak resources sector representative body in Western Australia (WA) funded by its member companies, which generate 95 per cent of the value of all mineral and energy production and employ 80 per cent of the resources sector workforce in the state.

The WA resources sector is diverse and complex, covering exploration, processing, downstream value adding and refining of over 50 different types of mineral and energy resources.

In 2013-14, the value of WA's mineral and petroleum production was \$121.6 billion, accounting for 91 per cent of the state's total merchandise exports. Furthermore, the value of royalties received by the WA government from the resources sector increased by 33 per cent from the 2012-13 financial year to reach a record \$6.98 billion in 2013-14.

## Recommendations

CME recommend:

- Amending the varied *National Environmental Protection (Ambient Air Quality) Measures* (AAQ NEPM) to make allowance for regional specific environmental conditions, such as naturally elevated background dust levels.

If the National Environment Protection Council (NEPC) determine a need to define 'exceptional events' prior to the implementation of the revised AAQ NEPM standards, it is imperative consultation occur with industry over what is to be included.

- The NEPC clarify the intent of the AAQ NEPM to ensure the application of particular matter standards are used in an appropriate context.
- The NEPC develop clear but non-prescriptive guidance material to assist each participating jurisdiction in the correct application of AAQ NEPM.
- Where states and territories determine regional specific environmental conditions exist, the AAQ NEPM make allowances, on a case by case basis, to address those conditions through specific air quality management strategies.

## Context

### Background

The National Environmental Protection (Ambient Air Quality) Measures (AAQ NEPM) was established in 1998 by the National Environment Protection Council (NEPC) to establish the national framework for ambient air quality standards and for the monitoring and reporting of six common air pollutants – carbon monoxide, lead, nitrogen dioxide, photochemical oxidants (ozone), sulfur dioxide and particulate matter (PM).

The standards and goals of the AAQ NEPM aim to guide policy formulation and allow for the adequate protection of health and wellbeing and are intended to apply specifically to metropolitan areas. Under the current AAQ NEPM, participating jurisdictions (Commonwealth, states and territories) are required to undertake monitoring and public reporting of air pollution and generate data assisting jurisdictions in formulating air quality policies.

The AAQ NEPM does not prescribe sanctions for non-compliance with AAQ standards or goals and the AAQ NEPM itself does not compel or direct air pollution control measures.

A review of the AAQ NEPM was completed in 2011 by NEPC. This resulted in recommendations related to the standards for particles, including revision of the standards to take into account new evidence around the health effects of air pollution. In April 2014, State and Territory Environment Ministers signalled their intent to vary the AAQ NEPM based on these recommendations.

The Draft Variation to the AAQ NEPM Impact Statement (Impact Statement) was released in July 2014. The Impact Statement collates and analyses available information about PM in Australia, including the health impacts. It also considers the feasibility, costs and benefits of amending the standards and goals relating to PM, as currently defined in the AAQ NEPM.

Additionally, the major proposed changes outlined in the Impact Statement include:

- Changing the advisory reporting standards for PM<sub>2.5</sub> to performance standards;
- Introducing an annual average standard for PM<sub>10</sub>;
- More stringent reporting standards for PM<sub>10</sub> and PM<sub>2.5</sub>;
- Introducing an exposure reduction framework to further reduce particle exposure; and
- The handling of natural events and the number of allowable exceedances per year.

CME welcome the opportunity to review and provide comment on the Draft Variation to the National Environment Protection (Ambient Air Quality) Measure Impact Statement. CME support the aim of the AAQ NEPM, however, recommend consideration of several matters outlined below.

In addition to the specific recommendation made here, CME acknowledge and support the submission prepared by the Mineral Council of Australia (MCA) which includes a technical review of the proposed variation to the AAQ NEPM by an external specialist.

## **Airborne PM and AAQ NEPM Implementation in WA**

The air quality environment in Australia is characterised with respect to PM<sub>10</sub> and PM<sub>2.5</sub>. The concentrations related to PM can vary temporally and spatially as a consequence of many different factors. Extreme events (notably natural bush fires and dust storms) are often associated with increased levels of pollution. WA is subject to naturally elevated levels of background dust in many regional and remote areas.

AAQ monitoring undertaken in WA highlight naturally elevated PM<sub>10</sub> levels contribute to exceedances to NEPM standards. These are detailed below.

### ***Ambient Air Quality Monitoring Report to the WA government's Port Hedland Dust Management Taskforce (Port Hedland Industries Council, 2013)***

The Port Hedland Ambient Air Quality Monitoring Report presents the analysis of the 2012-2013 air quality monitoring. This report assesses data against the standards specified in the AAQ NEPM and by the WA government's Port Hedland Dust Management Taskforce (PHDMT).

The PHDMT has specified an interim guideline of 70 µg/m<sup>3</sup> for PM<sub>10</sub> (24-hour average) with 10 exceedances per year. This interim guideline recognises the unique environmental conditions that exist in and surrounding Port Hedland.

Following the first year of monitoring, there were 17 days where the 24-hour average concentration of PM<sub>10</sub> exceeded the interim guideline of 70 µg/m<sup>3</sup>. Analysis of the data shows most exceedances were caused by elevated natural background dust levels, not industry.

As such, the enforcement of the current AAQ NEPM standard of 50 µg/m<sup>3</sup> is not practical in this setting and reducing the standard to 40 µg/m<sup>3</sup> (as proposed by the varied AAQ NEPM) will significantly increase the number of exceedances. Unless the AAQ NEPM standards acknowledge flexibility in regard to the local environmental conditions that apply in regional areas such as Port Hedland, the new standards will be impracticable.

### ***Air Quality Monitoring for Particulate Matter in Collie, 2004-2007 (DEC, 2008)***

Air quality monitoring has also been conducted by the Department of Environment Regulation (DER) (formerly the Department of Environment and Conservation). The monitoring was conducted in Collie during 2004-2007 and showed the 24-hour average concentration of PM<sub>10</sub> exceeded the current AAQ NEPM standard on an average of four days per year. In 2006, the daily average exceeded the AAQ NEPM standard on nine days.

The monitoring report determined the periods of high PM<sub>10</sub>, when the NEPM is exceeded, is almost always due to the existence of specific environmental conditions. That is, emissions from fuel reduction burning aimed at the protection of community values from the impact of severe bushfires, domestic wood heating and other fires were identified as the major casual factor in the exceedances.

CME acknowledge the 'preferred values of PM standards' (as listed in the Impact Statement) include options to exclude 'exceptional events' which are yet to be defined by NEPC. While fuel reduction burning and bushfires could be considered 'exceptional events', CME do not consider regional specific environmental conditions, such as natural background dust levels, as an 'exceptional event' and therefore cannot be categorised as such.

**CME recommend amending the varied AAQ NEPM to make allowance for regional specific environmental conditions, such as naturally elevated background dust levels.**

**If the NEPC determine a need to define ‘exceptional events’ prior to the implementation of the revised AAQ NEPM standards, it is imperative consultation occur with industry over what is to be included.**

### ***Application of standards in regional areas***

The Impact Statement acknowledges the AAQ NEPM standards were established in relation to broad air quality within airsheds, and are applicable at urban locations away from hot spots. The original intent of the AAQ NEPM was to avoid monitoring near localised point sources of pollution and at peak sites (e.g. industrial sites and busy roads), as these would not represent general population exposure. However, this is not always the case and the Impact Statement states “*the AAQ NEPM standards are often used in a variety of locations and contexts, some of which are inconsistent with the intention of the AAQ NEPM*”.

While CME consider the use of the AAQ NEPM to be appropriate in large metropolitan areas, its application outside of this is not. Further, the *intent* of the AAQ NEPM is not clear which has resulted in the inappropriate application of the standards by participating jurisdictions. Examples of this are provided in Appendix A.

**CME recommend the NEPC clarify the *intent* of the AAQ NEPM to ensure the application of particular matter standards are used in an appropriate context.**

### ***Approvals under Environmental Protection Act 1986***

In WA, Part IV of the *Environmental Protection Act 1986* (EP Act) provides for the referral and environment impact assessment (EIA) of proposals likely to have a significant effect on the environment. The EP Act requires the WA EPA to provide, in its report to the Minister for Environment (WA), what it considers to be the key environmental factors identified in the course of an assessment. The WA EPA uses environmental factors and associated objectives as a basis for assessment whether a proposals effect on the environment is acceptable as outlined in the Environmental Assessment Guideline 8 (EAG 8). *Air Quality* is an environmental factor outlined in EAG 8, with the objective:

*“To maintain air quality for the protection of the environment and human health and amenity”*

Air quality assessments are completed by proponents to support referral documentation where proponents consider their project may have a significant effect on air quality. CME has received feedback indicating, in the absence of any other air quality standards, current NEPM standards are being applied to all air quality assessments despite the intent of these standards being for application in metropolitan areas only.

**CME recommend the NEPC develop clear but non-prescriptive guidance material to assist each participating jurisdiction in the correct application of AAQ NEPM.**

Part V of the EP Act requires operators to obtain a licence or registration for the operation of facilities with significant potential to cause emissions and discharges to air, land or water. These facilities are defined as ‘prescribed premises’ and are listed in Schedule 1 of the *Environmental Protection Regulations 1987*. This includes but is not limited to, the processing or beneficiation of non-metallic ore, mineral sands mining or processing, coal mining and oil or gas production.

DER is responsible for developing Part V licences and undertaking a detailed impact assessment of emissions to air, water, land and fugitive emissions. Following this assessment, appropriate licence conditions are developed and imposed on the licensee. The occupier must manage, operate, monitor, report and undertake any relevant actions in accordance with the conditions of this licence.

CME is concerned the current AAQ NEPM standards have been inappropriately applied to Part V licence conditions in regional and remote areas. Examples are detailed in Appendix A.


If the proposed AAQ NEPM standards are introduced, and clarity over the intent of its application not provided, unnecessary compliance costs will be incurred by companies to respond to exceedances which result from circumstances relating to regional specific environmental conditions or exceptional events outside of their control.

**CME recommend where states and territories determine regional specific environmental conditions exist, the AAQ NEPM make allowances, on a case by case basis, to address those conditions through specific air quality management strategies.**

## Conclusion

CME welcome the opportunity to review and provide comment on the Draft Variation to the National Environment Protection (Ambient Air Quality) Measure Impact Statement and supports the aim of the AAQ NEPM. However, further amendment is required as outlined in both this submission and the one prepared by the Mineral Council of Australia.

If you have any further queries regarding the above matters, please contact Kirrillie L'Estrange, Policy Adviser – Environment on (08) 9220 8507 or [k.lestrange@cmewa.com](mailto:k.lestrange@cmewa.com).

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## Appendix A –

### Incorrect Application of AAQ NEPM standards to Part V Licences

Despite the intent of the AAQ NEPM to apply only to metropolitan areas, state governments are applying the standard in regional areas, resulting in increased compliance costs to companies operating there.

These examples show DER has applied the current AAQ NEPM standard of 50 µg/m<sup>3</sup> for PM<sup>10</sup> (24-hour average) as licence targets, thereby requiring investigation and reporting relating to a standard which is not intended to apply in regional areas.

#### Example 1 – Esperance Port Authority Part V Licence

The following licence conditions are an excerpt of a Part V Licence which has been obtained for the purpose of bulk material loading or unloading at the Esperance Port and demonstrate the incorrect application of current AAQ NEPM standards in regional areas.

Condition 4: *“The licensee shall, upon becoming aware that emissions from the premises and beyond the premises boundary have exceeded an ambient concentration target in column 2 of Table 1 for an emission detailed in column 1 of Table 1, undertake the target exceedances response required by condition 5.*

**Table 1: Emission Concentration Target**

Column 1	Column 2
<b>Emission</b>	<b>24 hour Ambient Concentration Target</b>
Dust as PM <sub>10</sub>	50µg/m <sup>3</sup>

Condition 5: *“The licensee shall conduct a full investigation into any exceedances of any target criteria in condition 4 and provide a written report to the Director within seven working days of becoming aware of the exceedances. The written report shall include, but not be limited to:*

- a) *The date, time and reason for the exceedances;*
- b) *The period over which the exceedances occurred; and*
- c) *The corrective action taken or planned to prevent a recurrence of the exceedances, if appropriate, including a timeline for implementation.”*

#### Example 2 – Anderson Point Materials Handling Facility (Port Hedland) Part V Licence

This following example shows an excerpt of a Part V licence under the new REFIRE format which has been obtained for the purpose of bulk material loading or unloading at the Anderson Point Materials Handling Facility in Port Hedland.

Condition 3.8.1: *“The Licensee shall undertake the monitoring in Table 3.8.1 according to the specifications in that table and record and investigate results that do not meet any target specified.*



**Table 3.8.1: Monitoring of ambient air quality**

Monitoring point reference and location	Parameter	Target	Units	Averaging period	Frequency	Method
BAM-1 (Wedgefield)	PM <sub>10</sub>	50 with <10 exceedances per year	µg/m <sup>3</sup>	24 hours	Continuous	AS3508.9.11

Condition 5.2.4: *“The Licensee shall submit the information in Table 5.2.4 to the Director according to the specifications in that table.”*

**Table 5.2.4: Non-annual reporting requirements**

Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
Table 3.8.1	Target exceedances that are attributable to emissions from the Prescribed Premises	Monthly	Fourth Friday of every month	ET1

The ET1 form referred to in Table 5.2.4 is the target exceedances form where the licensee is required to provide an analysis of:

- a) *The emission point;*
- b) *The root cause analysis for the exceedances;*
- c) *Any common or contributory factors including but not limited to fuel, mass emissions, gas flow rates, inlet & exit temperature, abatement status;*
- d) *A description of remedial measures taken or planned to be taken, including those taken to prevent recurrence of the exceedances;*
- e) *Complaints received that may have been caused by the exceedances; and*
- f) *For those exceedances that may have cause complaints, meteorological details: temperature, wind speed and wind direction, humidity.*