

**REVIEW OF THE NATIONAL ENVIRONMENT PROTECTION
(AMBIENT AIR QUALITY) MEASURE
AIR QUALITY STANDARDS DISCUSSION PAPER**

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The headings below have been extracted from the discussion paper. **Chapter 5: Issues to be considered in evaluation of NEPM standards** (page 140 of *AAQNEPM Review Air Quality Standards Discussion Paper*) provides further discussion on these questions.

ISSUES TO BE CONSIDERED

Q1. Is there sufficient new health evidence to support a revised standard and if so, for which pollutants?

ASBG considers the issue of no health threshold for some substances is consistent with its call for a proportional approach for air pollution sources and is discussed largely in the *Alternative Methods* section of this submission.

Q2. Does the current approach, which allows for a number of exceedences of the standard, meet the requirement for adequate protection or are there alternative methods that could provide more consistency in the level of health protection associated with complying with the NEPM standards?

See section titled *Alternative Methods* covers most of this issue, but the section *The Removal Of ‘Natural’ And ‘Exceptional’ Emissions Exceedences From Consideration In Meeting The Standard* is also relevant.

Q3. Should changes be made to the reporting protocols that would lead to a greater transparency and better understanding of the causes of exceedences in jurisdictions, the potential risk to population health, and management approaches being undertaken to address these exceedences?

This is covered in section : *Why Exceedences have Occurred*.

Q4. Any other issues you wish to raise?

Sections on *Removal Of Exceedences* and *The Removal Of 'Natural' And 'Exceptional' Emissions Exceedences From Consideration In Meeting The Standard* cover other issues which were raised in chapter 5 of the discussion paper.

27 August 2010

Ms Kerry Scott,
Project Manager,
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Dear Kerry

The Australian Sustainable Business Group¹ (ASBG) welcomes the opportunity to comment on the Review of the National Environment Protection (Ambient Air Quality) Measure (AAQ NEPM).

The Australian Sustainable Business Group (ASBG) is a leading environment and energy industry representative body that specializes in providing the latest information, including changes to environmental legislation, regulations and policy that may impact industry, business and other organisations. We operate in NSW and Queensland and have over 150 members comprising of Australia's largest manufacturing companies.

The discussion paper raises a number of issues or considerations which can be summarised as:

- Removal of the permitted number of exceedences of the standard.
- Permitting exceptional and natural exceedences to be excluded from consideration of meeting the NEPM requirements.
- How exceedences should be reported and considered.
- Does the current approach meet the requirement for "adequate protection" or are there alternative methods that could provide more consistency in the level of health protection associated with complying with the NEPM standards?

On the use of exceedences the issue for business and industry is the proposed way in which the Ambient Air Quality (AAQ) NEPM is to be implemented rather than the actual limits or air quality goals that remain relatively unchanged.

REMOVAL OF EXCEEDENCES

Removing the number of permissible exceedences is not supported by ASBG if the current exceedence approach is kept.

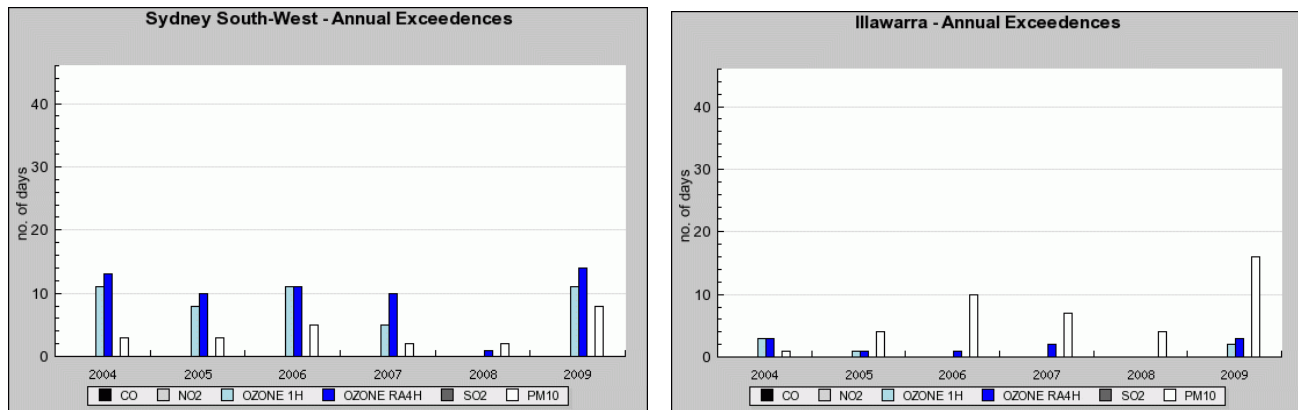
Experimental errors, statistical aberrations and the short exposure times justify the most common single permitted exceedences. Such practice fits into normal practice dealing with large amounts of measurement methods. Hence, the need to act on a single exceedence is considered impractical and can lead to substantial costs for both the Government and the community resulting in questionable outcomes.

¹ Formally known as the Australian Environment Business Network of NSW

For example, on ozone, Sydney over the last 10 years regularly exceeded the AAQ NEPM at around 10-15 per annum on average. It consistently failed to meet the target of one exceedence per annum. As a consequence, the NSW Department of Environment Climate Change and Water (DECCW) has tight controls on oxides of nitrogen (NO_x), an ozone precursor.

The Illawarra region also exceeds the NEPM targets, but by far fewer exceedences than Sydney. In most cases the Illawarra cites [2 ozone exceedences](#) every second year, and falls below the NEPM target on

Charts 1 & 2: Difference in exceedences between Sydney South West and the Illawarra Region



Despite the large difference in the number of exceedences both air sheds are treated in a similar manner for NO_x emissions. Under the POEO (General) Regulation 2009, both air sheds have the same “pollutant weighting” at 7 for NO_x. Members also point out the stringent controls on NO_x from cogeneration plants is also applied identically to both air sheds.

In contrast, Newcastle consistently meets the NEPM standard, but occasionally exceeds the ozone threshold. As a consequence, Newcastle has a lower “pollutant weighting” of 2. Also DECCW’s [Interim NO_x Policy for Cogeneration in Sydney and the Illawarra](#), by its title, does not apply to the Newcastle region. This is an example of the off/on approach to air shed management which is supported by the meet/not meet the NEPM standard.

Now if no exceedences were permitted then the DECCW would be required to act and similar tighter measure to those applied in the Sydney and Illawarra regions would be expected. This would have significant cost imposts on certain industrial activities such as electricity generation in the Newcastle-Hunter region.

Another example considers Sydney’s 2008 ozone performance levels². Only one measurement station, Prospect recorded a 1-hour ozone exceedence at 0.107 ppm which was the maximum level recorded. However, the 99 percentile was at 0.085 ppm well below the 0.1 ppm target. This demonstrates that some Level of clear evidence clear of measurement error or exceptional readings is required before any action is justified.

The jurisdictions environmental agencies tend to have limited regulatory control which largely focusing on stationary sources. As a result if tightening is justified by exceeding the NEPM standard, stationary emission sources, especially industrial sources are the main focus of local jurisdictional action. However in many cases especially for NO_x industrial sources make up a small minority of the emission. Motor vehicles are responsible for between 70 to over 80% of NO_x emissions in urban areas. This is a costly approach which does not cost effectively solve the problem.

² AAQ NEPM NSW Annual Compliance Report 2008

Permitting threshold exceedences is also tied with ASBG's objection to the permitted 'natural' and 'exceptional' exceedences. Having some form of a buffer, before action is required, provides certainty for action in those affected air sheds. Also this buffer should be applied to all exceedence sources.

ASBG later argues for a proportional approach to be used for air quality, which means discarding the exceedence approach altogether. Nevertheless, should the exceedence method be retained then the above applies.

THE REMOVAL OF 'NATURAL' AND 'EXCEPTIONAL' EMISSIONS EXCEEDENCES FROM CONSIDERATION IN MEETING THE STANDARD.

Excluding 'natural' and 'exceptional' exceedences from consideration to the standard is not supported by ASBG.

The outcome of the AAQ NEPM is to improve health. Ignoring 'natural' and 'exceptional' exceedences and the health impacts which they cause contradicts the NEPM's primary outcome stating:

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

The paper justifies removing such exceedences from the standard by the paper because they '*are not easily managed*'. This appears to be a contractor to the NEPM's outcome. Just because some exceedence sources are difficult to manage should not be excluded as this would not provide *adequate protection of human health and well-being*.

ASBG has concerns in relation to this approach as it means:

- Jurisdictions are not required to act on these 'exceptional' or 'natural' events. The result of which will lead to an increased emphasis on direct regulatory instruments the jurisdiction has, which largely targets industrial and stationary sources. However, other air pollution sources can be ignored and air quality and health issues will only be in part addressed.
- Removal of contextual data, in terms of numbers of exceedences, on what are 'natural' peaks and comparison with other exceedence sources.
- The selection of what is a 'natural' or 'exceptional' exceedences sources are considered by the paper to be fires or dust, while cited as *not easily managed*, however, will end up not being managed at all.
- That climate change, dust and fire emissions are outside the control of the NEPM, where in fact if they were purposely included then the NEPM process would support appropriate, even innovative controls and measures on these *not easily managed* sources.

This proposal appears air branch environmental agency centric. Emissions from fires and dust storms can be influenced by Government actions. But this may require a whole of government approach where multiple departments and multiple jurisdictions are involved. For example, reduced particulates from prescribed burns could be achieved by better management of such burns or use of other fuel reduction methods. Better public transport should also reduce urban air pollutants from transport sources. Improved water management can reduce the incidents of dust storms.

Australia's processes in dealing with climate change are an example that some of the above measures are already being acted upon. In this context the AAQ NEPM could provide further support to act on climate

change, which results in increased dust, ozone and other local emission which are affecting ambient air quality.

Prescribed burns are a real double edged sword for Governments. The Victorian Royal Commission on last year's blazes recommended 5% of bush land be back-burned. However, such action creates substantial particulate emissions, but large bushfires generate far larger pollution issues than prescribed burns. Prescribed burns and bushfires are already cited as a cause of exceedences and are a major source of air pollution for urban populations. Governments are caught; irresponsible if they don't undertake prescribed burns, because more dangerous and more highly polluting bush fires will result. Undertaking prescribed burns means the government is the direct cause of considerable air pollution and health impacts. The issue here is link the air quality issues resulting from bush fires and prescribed burns to being under the control of government. Such fires will occur, but can be managed to minimize air pollution. Further research into actions for minimising prescribed burn and bushfire pollution is recommended.

Ignoring the health issues from such sources just because they are *not easily managed* is clearly against the purpose of the AAQ NEPM. Climate change impacts are cited in the paper as an example of difficult to manage air quality issues and should be included as 'natural' exceedences.

Clearly the AAQ NEPM has an obligation to identify the main air quality issues, which should then lead to appropriate, consistent and proportional government actions. By not including 'natural' and 'exceptional' exceedences in the meeting of the standard will simply send the wrong message and ignore the overall purpose and outcome of the NEPM.

Further investigation and discussion is needed in dealing with prescribed burns and other 'natural' and 'exceptional' exceedences with the aim of minimising the air quality impact from such. ASBG looks forward to the EPHC leading the way forward in developing new management approaches to these *not easily managed* sources.

REPORTING WHY EXCEEDENCES OCCURRED

ASBG supports the explanations of exceedences along with appropriate action being undertaken to address the exceedences and include appropriate contextual information.

Short explanations are already included in the Annual Compliance Reports. Here, tables listing each exceedence are supported by a few words of explanation of what caused the exceedence. ASBG considers further guidance should be provided on the types of explanations in more detailed commentary. This could use reference to explaining the common types of exceedences, why they occur and its sources. In addition, to improve jurisdictional response, listing of actions on how the jurisdiction is dealing with such emissions would provide valuable feedback to the public and provide guidance to other jurisdictions on tackling such issues.

ALTERNATIVE METHODS

ASBG recommends reviewing the approach for dealing with air quality using a proportional approach, multi agency involvement, a more consistent set of controls actions and instruments.

ASBG believes there is scope for alternative approaches to dealing with ambient air quality. Use of the exceedence approach tends to permit jurisdictions with an on or off approach to managing air quality in various air sheds³. As demonstrated in this submission this has resulted in application of air pollution controls to vary greatly from no action at all to stringent controls on certain pollutants from certain sources.

³ See *Removal of Exceedences* section.

ASBG believes the best health outcomes can be achieved by a proportional approach that considers all sources of air contaminants. The exposure reduction approach used by the EU⁴ is a good example of this policy.

Currently, most of the problem air pollutants in major urban areas come from motor vehicles. Control of these emissions is undertaken by the National Transport Commission. As a consequence, many jurisdictions abrogate the control of vehicle emissions to this body, and by default focus, in cases, rather heavily, on the sources which the environmental agency controls. However, this approach misses the other jurisdictional actions which can lead to decreased emissions and improved air quality.

For example, improved public transport, better town planning, support for active transport (e.g. cycling), variable job start times and even public advisory services can improve air quality. Also metrological associated exceedences may be addressed by adaptive methods. Examples of adaptive action for forecast poor air quality days — [Smog alert](#), [Ozone alert](#) — can include:

- Health warnings for asthmatics and others to stay indoors during high dust days
- Leave the car at home — catch public transport as a public requests to leave your car at home on forecast high pollution days, can assist in improving air quality.

The issue with implementing these types of measures requires a whole of government approach utilising multiple government agencies to cooperate. In practice, air pollution management appears to be environmental agency centric among the jurisdictions.

Another issue with motor vehicle emissions is their broad application applies across the entire vehicle fleet. Perhaps more local controls of vehicle emissions may lead to better air quality. No doubt such changes are already being considered via climate change driven policy. Examples include congestion taxes, registration fees based on fuel consumption or more directly on air shed impacts.

Further abrogation of responsibility on *not easily managed* air pollution sources, such as prescribed burns, are well entrenched within the jurisdictions. As discussed above, there are many actions which jurisdictions can undertake on these sources, though many of these are unexplored or ignored to the detriment of our health.

Overall ASBG considers that a more consistent multi jurisdictional and multi departmental involvement in the management range of emission sources. Indeed the AAQ NEPM supports this stating:

The objectives of NEPMs are to ensure:...

- *that decisions by businesses are not distorted and markets not fragmented by variations between jurisdictions in relation to the adoption or implementation of major environment protection measures.*

The need for more consistent environmental regulation and its implementation is also reflected in the EPHC's Review of Harmonisation of Environmental Regulation.

Having a more consistent approach to dealing with the types of actions and the inter-jurisdictional approaches to these actions requires some form of leadership. An outcome is foreseen where nationally consistent approaches to a range of AAQ issues, especially the more difficult to manage issues, are provided at the Federal level, will be supported by Federal resources to be implemented at the State and Territory level.

Good management of the sources of pollution needs to be proportional. The level of action, cost imposts and controls should be proportional to the scale of the health issue a particular exceedence source

⁴ See pages 123-124 of the AAQ NEPM Review document

contributes. There are many examples where a jurisdiction will focus on single source (large pipe) emitters and ignore other sources. As such cost effective controls requiring federal or partisan support from the jurisdictions miss the lower cost means to improve air quality. Setting increasingly tighter controls on large pipes and industry alone will not address the real problem effectively and result in higher costs.

Overall, there is scope for considerable improvement in the way in which jurisdictions implement air quality controls and protection measures.

CONCLUSION

Changes to the way in which the AAQ NEPM standards are acted upon rather than changes to the limits, can deliver better outdoor air quality across Australia.

Keeping a permitted number of exceedences will ensure that cost effective actions are taken in relation to ambient air quality.

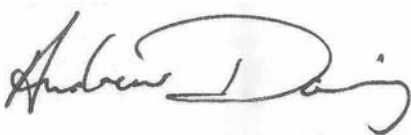
Inclusion of all exceedences above the permitted levels will ensure that appropriate action is developed and implemented, even on the not easy to manage emissions. Application of action and resources should be cost effective and be proportional to the scale of the health impact to the source/s responsible. This will mean taking action on a variety of pollution sources not currently addressed, such as prescribed burns, which are not easily managed, will be addressed in direct and adaptive approaches.

ASBG also looks forward to a more consistent approach to actions to achieve the AAQ NEPM standards which are proportional to the sources of exceedences identified.

Inclusion of a whole of government approach using multi-departmental and multi-jurisdictional involvement to manage air quality issues will provide the basis for such action rather than the current process of only relying on jurisdictional environmental agencies.

Should you wish further clarification on the above submission please contact me on (02) 9453 3348.

Yours sincerely



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