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Dear David

The Australian Sustainable Business Group (ASBG) wishes to raise concerns on the use and application of the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (Approved Methods).

ASBG members have raised a number of issues in relation to the use an application of the Approved Methods, which can be classified in to the following areas:

- Application to existing sites holding Environment Protection Licences (EPL)
- Grandfathering of limits
- Recognition that air modelling is an estimate of ground level concentrations and that other actual measurements of concentrations should dominate
- Nearest Receptor and its interpretation
- Use of Cumulative Impacts

## 1 Application to Existing Sites

Over the last year or two a number of ASBG members have been required to undertake air assessments based on various triggers such as complaints, NPI data or other reasons. In many cases the EPA's conditions require application of the Approved Methods air modelling methods subject to set up conditions and criteria as directed by the EPA. Often these set up conditions choose a worst case scenario and enforced under a Pollution Reduction Program. Results from this modelling are then compared to Approved Methods' assessment criteria. If hypothetical exceedances are identified the site is generally required to undertake immediate action to minimise emissions so the assessment criteria are not exceeded under the model used.

EPA action using Approved Methods is increasing in number applied to existing sites, yet there has been no public policy direction from the EPA signaling that the Approved Methods, with its own set of assessment criteria, will be used in this way. ASBG notes if Approved Methods assessment criteria are to be used on existing EPL sites as a target, limit or goal, this should be formally communicated to all EPLs across sites in NSW.

**R1 ASBG requests the EPA to clarify if Approved Methods will be continued to be used on existing sites and if so how.**

If the answer is yes, then ASBG considers the Approved Methods will become a new regulatory document, and as such should be subject to public consultation as new environmental standard for existing sites.

## 2 Grandfathering of limits

A general principle used internationally and by the NSW EPA is grandfathering provisions. This is enshrined in the [POEO \(Clean Air\) Regulation 2010](#). While grandfathering has limitations, such as the phase out of Group 1 and 2 limits, sites that are subject to discontinuation of grandfathering under the Clean Air Regulation were given many years warning of such change. Grandfathering provisions for air emissions remains a key principle of air pollution management in NSW.

However, when Approved Methods are applied to existing sites it is often the 2005 version and its assessment criteria, which is applied as a default limit to the site. This approach goes against grandfathering provisions. As there are three editions of Approved Methods; 2001, 2005 and 2016 (release date 20 January 2017) it seems only the 2016 version is recognised as having some form of grandfathering. The EPA website states:

The [Approved methods for the modelling and assessment of air pollutants in NSW \(2016\) \(PDF 1MB\)](#) replaces the previous version dated August 2005.

- The EPA refers to the 2016 version when evaluating air quality impact assessments submitted as part of any planning application **on or after 20 January 2017**.
- The EPA refers to the [Approved Methods for the Modelling and Assessment of Air Pollutants in NSW \(2005\) \(repealed\) \(PDF 402KB\)](#) when assessing air quality impact assessments submitted as part of any planning application **before 20 January 2017**.

Few sites holding EPLs have new air pollution equipment installed post 2000, and very few from 2005. So application of the 2001 version of Approved Methods is considered contrary to the general principle of grandfathering for most EPL sites. Yet in practice the Approved Methods (2005) assessment criteria is used as a default limit and if exceeded triggers the EPA to require additional improvements, regulatory action and in cases tightened of EPL conditions.

**R2 ASBG requests the EPA clarify how grandfathering will apply to existing sites if the EPA uses Approved Methods as its basis of environmental performance. In addition, if grandfathering is to apply, will the use of Approved Methods not be applied for sites with air pollution control equipment installed prior to the 2001 date of release of this document?**

## 3 Recognition of Other Ground Level Measurements

On many existing EPL sites, with the potential for emission of air pollutants especially principle toxic air pollutants, measurement of ground level and exposure level concentrations must be routinely undertaken for safety requirements. Requirements under NSW's Work Health and Safety legislation<sup>1</sup> require health and exposure checks of workers on site. Results of such measurement are in most cases real airborne contaminant concentrations and in others indirect, such as blood analysis. From a scientific perspective even the indirect measurements provide an indication of the typical emissions at ground level over time and in many cases are more accurate than modelling.

Approved Methods uses air modelling, a theoretical method for estimating potential maximum ground level concentrations. In many cases the models produce estimated ground level concentrations higher than actual ground level measurements. Member's report that the hypothetical results from air modelling is taken by the EPA as default real ground level concentration, and actual measurements undertaken under WHS requirements are often ignored.

There are a number of cases where the exceedances of the air modelling assessment criteria lead the EPA to obligate environmental improvement programs, impose notices and take other regulatory action. Also there is an

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<sup>1</sup> For example Work Health and Safety Regulation 2017 Part 3.2 Divisions 7 & 8, Part 7.1 Hazardous Chemicals, Div 6 Health Monitoring, Part 7.2 Lead Div 4, Part 8.4 Asbestos Div 1

example of where Approved Methods assessment criteria have been used as EPL limit conditions, contrary to its own s7.

ASBG considers results from air modelling should be considered only as indicators of a potential issue, requiring additional investigation, not regulatory action. Additionally, the refusal to accept other scientifically relevant data, such as required under WHS legislation in such investigations, places air modelling above many real measurements, which is considered poor science.

**R3 ASBG requests the EPA explain how will use air modelling results on existing sites and identify the steps it may take to investigate and manage exceedances against assessment criteria in the appropriate version of Approved Methods.**

## 4 Sensitive receptor and its interpretation

Use of the term “*sensitive receptor*” in Approved Methods has largely applied to *the nearest resident, school, hospital, office or public recreational area*. Members report that the definition’s phrase “*A location where people are likely to work or reside...*” is being reinterpreted as to recently also include industrial sites, even industrial neighbours in a creeping redefinition of this term.

ASBG notes that the Approved Methods is a main pathway NSW uses to enforces the [Ambient Air Quality NEPM](#). However, the NEPM does not use the term *sensitive receptors*, but measures ambient air quality subject to s14(1):

Subject to subclauses (2) and (3) below, the number of performance monitoring stations for a region with a population of 25,000 people or more must be the next whole number above the number calculated in accordance with the formula:

$$1.5P + 0.5$$

where *P* is the population of the region (in millions).

Hence, using the nearest *sensitive receptor* even being the nearest resident is itself a tightening of the NEPM criteria, as one resident boundary fence air quality does not represent an average air quality received by 25,000 in the area. Including industrial sites as *sensitive receptors* misuses the land zoning for industry, which is meant to be of a lower quality than in other zones, such as reflected in contaminated land assessment criteria. Also industrial sites have strict worker safety requirements to manage internal to their site air quality. Due to the WHS legislative oversight of industrial sites they should be removed from the NEPM criteria as they are certainly not reflective of ambient air quality and such workplaces are not representative of the general population, especially the weak, frail and young are unlikely to be at an industrial site. If air quality from a neighboring site was impacting on site safety there are many legal and regulatory means to deal with such. Also if a neighbour was a source of air pollution, it would be quite apparent to the receiver this was the case.

**R4 ASBG requests the EPA more clearly clarify that a sensitive receptor should not include industrial sites to avoid creeping redefinitions of such terms.**

## 5 Use of Cumulative Impacts

ASBG members are concerned of the use of cumulative impacts in setting limits on EPLs or other regulatory actions.

It is ASBG’ cumulative impacts should only apply at the planning stage and not to any existing sites.

Parts of western Sydney are already at PM<sub>2.5</sub> levels of 7.8 and 7.9 µg/m<sup>3</sup> and some rural towns already exceed PM<sub>2.5</sub> level approaching 10 µg/m<sup>3</sup>. The majority of sources for this are diffuse, led by wood heaters and motor vehicles.

As there is forecast increased traffic for the region, and poor management of wood heaters, the average annual background PM<sub>10</sub> and PM<sub>2.5</sub> will likely exceed the AAQ NEPM criteria in the near future.

The main issue is the application of cumulative impacts for PM<sub>10</sub> and PM<sub>2.5</sub>. Here the EPA interprets the NEPM criteria as a hard line. Hence, new developments are considered additions to the background concentrations and are subsequently not permitted to additional emissions if the Approved Methods' 2016 criteria at 25 µg/m<sup>3</sup> average annual PM<sub>10</sub> and 8 µg/m<sup>3</sup> PM<sub>2.5</sub> is exceeded. There is concern that as the background level creep over the criteria large areas of the Sydney Basin and many rural town areas will not permit new sites requiring Environment Protection Licenses to emit any PM<sub>2.5</sub> or are set very difficult to reach limits such as 0.1 µg/m<sup>3</sup> or lower.

#### **R5 ASBG requests the EPA:**


- **Clearly state that cumulative impacts will not be applied to existing sites.**
- **Explain how new industrial facilities requiring EPLs can be sited in areas where the background concentration exceeds the Approved methods table 7.1 criteria especially on PM.**

Without clear communication of how environmental criteria are to apply to holders of EPLs, are forced to second guess the regulator. It appears creeping variations in the interpretation and use of existing regulatory instruments and policies have changed the criteria required, but with no public discussion and in most case no warnings of the "new criteria" for this environmental performance.

Good governance must be based on a clearly defined set of rules and as a consequence, ASBG looks forward to the EPA's clarifications above in the application of Approved Methods.

Should you require further information, clarification or details on the submission please contact me on 02 9453 3348.

**Yours Sincerely**



**Andrew Doig**

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