

Submission
no:

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

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Dear Ms Scott

Kalgoorlie Consolidated Gold Mines Submission on the Review of the National Environment Protection (Ambient Air Quality) Measure

Kalgoorlie Consolidated Gold Mines (KCGM) is pleased to provide comment into the review of the National Environment Protection (Ambient Air Quality) Measure (AAQ NEPM) report entitled "Discussion Paper Air Quality Standards" released by the National Environment Protection Council (NEPC) in July 2010.

1 Response to Key Issues

This response has focussed on the key issues outlined in the Feedback Form that was provided at the Discussion Paper Workshops/Presentation. It should be noted that KCGM has not attempted to review the accuracy or completeness of the information presented in the Discussion Paper in relation to the health impacts resulting from exposure to the pollutants.

Is there enough evidence to recommend revising the current standards?

Based on the evidence of the health effects of criteria pollutants presented in the Discussion Paper, there appears to be sufficient evidence to consider revising the current standards for the current AAQ NEPM pollutants. However, it is noted that this evidence has not yet considered the cost benefit analysis of such decreases which we understand will be undertaken as part of the Impact Statement which would be prepared should the NEPC decide to review the AAQ NEPM standards. KCGM understands that the Impact Statement would also have a public review period where consultation will be undertaken and submissions sought. The economic consequences of reducing the AAQ NEPM standards are a key consideration for KCGM.

KCGM does not believe that there is sufficient information provided in the Discussion Paper to make an assessment as to whether benzene and PAHs should be included into the AAQ NEPM. The information presented in the Discussion Paper for these pollutants primarily focuses on industrial exposure to benzene and PAHs. It provides no information with regards to the ambient concentrations of these pollutants throughout Australia and the potential health implications of exposure to these existing concentrations. On this basis, if it

is considered desirable to shift these pollutants from the Air Toxics NEPM to the AAQ NEPM to increase the focus on ambient exposures, it may be warranted to include these as "Advisory Standards" as was done for PM_{2.5} while additional information is gathered.

Time allowed to achieve compliance with standards

From an Industry perspective if changes are made to the AAQ NEPM standards or their form, sufficient time needs to be allowed to enable industry to achieve compliance as was done when the AAQ NEPM was originally released where a ten year compliance goal was set.

Application of AAQ NEPM standards to general population of a region (or sub-region) and not at individual sensitive receptors

The AAQ NEPM standards were designed to be measured at nominated performance monitoring stations that were located to give a representation of general air quality and of the population exposure to the pollutants of concern. The AAQ NEPM monitoring protocol does not apply to monitoring and controlling areas where peak concentrations from major emission sources occur as these are outside the scope of the AAQ NEPM.

However, many jurisdictions in Australia apply the AAQ NEPM standards at individual sensitive receptors, including peak exposure areas which was clearly not the intention of the NEPC when the AAQ NEPM standards were defined.

For example, within Western Australia, the Environmental Protection Authority has released a Draft State Environmental (Ambient Air) Policy for Western Australia (2009) (Draft State Air EP). This Policy proposes the application of the AAQ NEPM standards across the whole State with a few exclusions which included gazetted buffer zones and roads. The proposed Draft State Air EP represents a far more stringent application of the AAQ NEPM standards than was intended by the NEPC during the formulation of the AAQ NEPM. This application of the AAQ NEPM standards beyond the scope that was intended is of significant concern to Industry due to potential compliance costs. It is also somewhat counter to the objectives of the NEPC, particularly in respect of maintaining a 'level playing field' between jurisdictions in terms of regulation of major industry. To address potential inconsistencies that may arise between jurisdictions, clear national guidance in respect to the application of the AAQ NEPM standards for the regulation of major industrial sources should be developed.

Does the current approach, which allows for a number of exceedances of the standard, meet the requirement for adequate protection, or do you support an alternative method?

KCGM believes that the current approach that provides an allowable number of exceedances of the short term (1-hour to 24-hour) AAQ NEPM standards provides adequate protection for the population. Ambient air quality impacts associated with emissions from industrial sources can exhibit high temporal and spatial variability due to a range of factors including the variability in meteorological conditions influencing pollutant dispersion and infrequent operational factors that may result in higher emissions for very short periods of time (upset conditions). An allowable number of exceedances provide a degree of flexibility in the management of the impacts arising from industrial emissions. It also takes into account that 'worst-case' meteorological conditions tend to occur very infrequently, and therefore there is a significant cost-benefit advantage in allowing even a very small number of exceedances.

The introduction of a 'not to be exceeded' approach would represent a significant tightening of the standards, and has the potential to significantly increase compliance costs for industry, yet provides limited public health benefits compared to the current 'allowable exceedances' approach in terms of both the size of the population exposed to industrial emissions, and the frequency of exposure.

The AAQ NEPM does not limit the magnitude of exceedances as is done in Western Australia with both the Goldfield's Environmental Protection Policy (EPP) and the Kwinana EPP for short-term exposures. The NEPC could include consideration to such limit as done from the Western Australian EPPs or through a 'margin of tolerance' approach as per the EU Directive 2008/50/EC. For example under the EU Directive, the 24-hour PM₁₀ limit value is specified as 50 µg/m³, with a 50% margin of tolerance. This means that exceedances, when they occur, should not exceed 75 µg/m³.

KCGM does not believe that AAQ NEPM standards that apply to annual averaging periods need the same degree of flexibility and 'not to be exceeded' annual standards are appropriate.

Do you support allowing 'natural' or 'exceptional' events to be excluded from the assessment of whether the air quality in a region is in compliance with the standards or not?

KCGM supports the exclusion of "Natural" and "Exceptional" events from data for the purposes of assessing compliance with the AAQ NEPM standards. Within Australia, "Natural" and "Exceptional" events can have a significant impact on the measured ambient concentrations, particularly for PM₁₀ and PM_{2.5}.

However, a clear framework for defining these 'natural' and 'exceptional' events needs to be developed. The USEPA (2007), in its Final Rule for the Treatment of Data Influenced by Exceptional Events defined an event as "an exceptional event if the event affects air quality; is an event that is not reasonably controllable or preventable; is an event caused by human activity that is unlikely to recur at a particular location or a natural event; and is determined by EPA to be an exceptional event." Natural events can include high winds that create local and/or regional dust storms.

The main benefit of excluding 'natural' and 'exceptional' events is that it recognizes that there are circumstances that can adversely affect air quality that are not reasonably controllable or preventable, and that the cost associated with attempting to mitigate the impacts of such 'natural' and 'exceptional' events can be far greater than the air quality benefits of attempting to do so. Therefore inappropriate and potentially ineffective expenditure are reduced which should enhance the prospect of more efficient use of resources for the management of air quality.

The process used to determine whether an event is deemed to be a 'natural' or 'exceptional' event need to be transparent and open to public review. Data associated with such events should not be excluded from the ambient monitoring datasets, or from publicly reported monitoring results as such exclusions would undermine the veracity of the ambient air quality monitoring data. All valid ambient monitoring data should be reported and any 'natural' or 'exceptional' events are identified and documented as part of the reporting.

2 Additional Comments

Monitoring Locations

Options outlined in the 2007 Discussion Paper included substantial changes to the AAQ NEPM framework within which air quality standards are to be implemented. Notably, possible alteration or expansion of ambient monitoring to cover urban, rural, background, traffic, and industrial area to obtain more data for exposure assessment in line with international practice have been suggested. Uncertainties regarding the application of the AAQ NEPM framework within which standards are to be implemented hinder the effective evaluation of suitable air quality standards during the current stage of the review. It is important that further stakeholder consultation is undertaken when potential ambient monitoring options are more defined and coherently proposed (including framework; monitoring protocols; air quality standards) prior to options being selected for detailed cost-benefit analysis and impact assessment. Related to this is the consistent application of the AAQ NEPM standards by all jurisdictions as was intended by the NEPC (as outlined above).

Consistent Data Collection and Treatment Methodology

There appears to be significant variations in how jurisdictions across Australia manage monitoring data, particularly the treatment of short-term negative concentrations recorded by BAM and TEOM particulate monitors. In these cases valid (based on the equipment manufacturer's assessment) negative data are often invalidated by the jurisdictions which has an impact on the medium (24-hour) and longer (annual) term averages derived from the short-term (sub-hourly) monitoring data. Further, the value beyond which the negative data are considered to be invalid varies between jurisdictions. The AAQ NEPM monitoring protocols need to mandate specific methods to deal with all aspects of data collection including data exclusions (invalidation), recommended minimum sampling intervals, and data averaging to ensure that data can be compared like for like across jurisdictions.

Thank you for the opportunity to make a submission on the review of the AAQ NEPM. We would be pleased to respond to any questions arising from our submission, and look forward to being involved in the next phase of the consultation.

Yours faithfully,
Kalgoorlie Consolidated Gold Mines

A handwritten signature in black ink, appearing to read 'S. Wakeman'.

Sian Wakeman
Acting - Environment, Health and Safety Manager

3 References

Government of Western Australia (2009). State Environmental (Ambient Air) Policy 2009: Draft policy for public and stakeholder comment. June 2009.

NEPC (2005). Issues Scoping Paper: Review of the National Environment Protection (Ambient Air Quality) Measure. October 2005.

NEPC (2007) Discussion Paper: Review of the National Environment Protection (Ambient Air Quality) Measure. June 2007.

NEPC (2010). Review of the National Environment Protection (Ambient Air Quality) Measure, Discussion Paper, Air Quality Standards. July 2010.

USEPA (2007). Federal Register Part II Environmental Protection Agency 40 CFR Parts 50 and 51 Treatment of Data Influenced by Exceptional Events; Final Rule. 22 March, 2007.