From: Paul.Torre
Sent: Friday, 27 August 2010 4:50 PM
To: Kerry Scott
Cc: Catherine Wilson; 'Jacinda Shen'; 'Jack Chiodo'; 'Joe foti'; 'John Todd'; Mark Hibberd; 'Peter Manins'; Geoff White; Peter Phaedonos; Lyn Denison; Alison_Radford
Subject: Submission for NEPM(AAQ) review

Dear Kerry,

On behalf the CASANZ Victorian/Tasmania Branch committee, I submit the following submission for the NEPM(AAQ) review from the committee.

Kind Regards

Paul Torre
President CASANZ Victorian/Tasmania Branch

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

Based on limited benzene air quality data that can be accessed particularly the campaign monitoring in Victoria (near potential hotspots) and the longer trend data from one site in Queensland annual average benzene levels are generally below one third of the Air Toxics NEPM's monitoring investigation levels. Given these levels and the paucity of health studies examining non occupationally exposed there does not appear to be sufficient justification for including benzene as an Air NEPM pollutant at this time.

The limited available data of ambient PAH's levels where BaP is used as the marker (5 campaign hotspots in Victoria) shows annual levels are below the monitoring investigation level of 0.3ng/m3. In addition there is at this stage limited evidence of health effects on non occupationally exposed. There does not appear to be sufficient justification for including PAHs as an Air NEPM pollutant at this time.

The evidence of health effects from short term exposure to oxides of nitrogen provides justification for lowering the 1 hour NO2 standard.

The evidence of health effects from short term exposure to ozone provides justification for lowering the ozone standards.

While 8 hour rolling averages of CO in Australian cities have been consistently below the current Air NEPM standard the health evidence, from here and overseas, which does not show a threshold for effects, provides sufficient support for lowering the standard (with little or no cost implications likely)

A preliminary assessment should be made by the SSWG (Standards Setting Working Group) to evaluate whether the new knowledge would be likely to change the outcomes of the risk assessment and cost/benefit analysis done as part of a Variation Process.

Although the AAQ NEPM does not apply to indoor air quality, the air indoors affects people's exposure and should be taken into account in modelling population exposure to air pollution and the NEPC Act amended and an indoor Air NEPM developed that is based on developing and implementing standards for materials and equipment used in houses and particularly places such as childcare centres and hospitals where sensitive people are exposed.

Further health evidence is required to guide and inform future revision/assessment of PM standards. However there is sufficient health evidence and exceedences for assessing/revising PM10 standard in particular consideration of an annual average standard. There is sufficient health evidence for $PM_{2.5}$ to be moved from an advisory reporting standard to a 'normal' Air NEPM standard.

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?

While a protocol for reporting exceedences would obviate the need to have allowances for exceedences to further improve transparency and strengthen the Air NEPM it is suggested that the goal be altered to zero exceedences from man made causes.

The NEPM needs to clarify the reasons for including allowable exceedences of the standard. Are they to allow for exceedences due to:
a) "natural" causes, which can't be controlled or managed such as wind-blown dust or bushfires
b) exceptional events due to anthropogenic emissions in unusual meteorological conditions
c) a combination of both?
Even for "natural" causes, it'd be important to distinguish between potentially controllable dust, such as that from mining or agricultural land and that from deserts. Similarly smoke from controlled burns or bushfires might be considered to be controllable at some level.

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?

While currently there is annual reporting of the causes of exceedences by jurisdictions developing a protocol would enhance transparency. Reporting on the reasons for exceedences would be a useful step in assisting to design better management strategies for air quality.

With compliance against the AAQ NEPM only assessed at performance stations (representative air quality likely to be experienced by the general population), there are already a significant number of people exposed to exceedences of the standards. Rather than focussing solely on the number of exceedences at performance stations, better health outcomes might be achieved by broadening the application of the standards. For example, most but not all new industrial/mining projects require compliance with the NEPM for all affected population.

Q4. Any other issues you wish to raise?

While health studies would support lowering the SO2 Air NEPM standard, with the exception of ambient levels found near major industrial sources such as Mt Isa, ambient levels are well below the standard. This would support the inclusion of SO2 in the Air Toxics NEPM rather than the Air NEPM. Similarly a strong case exists for lead to be moved to the Air Toxics NEPM as levels in urban environments without a major industrial source are now so low that it is no longer monitored by jurisdictions.

As indicated by the air quality data, where available, there is a need for jurisdictions to make a greater effort focus in monitoring particles in regional population centres and better meet the object of the NEPC Act of equivalent protection to all Australians.

Advisory standards and air toxics investigation levels play an important role in the design of new industry emissions. Their impact on improving ambient air quality into the future should not be underestimated.

The potential effects of the new range of nanoparticles being introduced into the environment should be considered for future research and assessment.

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