

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?

YES

CO - absence of threshold; clear evidence from Australian studies of health effects (e.g. increases in mortality and hospital admissions for cardiovascular disease, CO levels in Sydney linked with SGA) at ambient levels below the current Australian standards in the AAQ NEPM.

NO2 - Australian multicity studies have shown current ambient levels of NO2 are associated with increases in mortality and hospital admissions for all cause, respiratory and cardiovascular causes .

O3 - "Exposure to ozone in Australian cities varies and, given the pattern of ozone peaks, a set of standards covering 1-hour, 4-hour and 8-hour exposure times is appropriate for Australia" (Discussion Paper p. 66) so, at a minimum, change is required to establish an 8 hour standard. However international and Australian epidemiological studies show that "there are still significant health effects observed at levels below the current one hour and 4 hour standards" (ibid) therfore the one hour and four hour standards also need to be revised.

Further, there is no evidence of threshold and ozone associated with risk of preterm birth in Sydney and Brisbane.

SO2 - may be no threshold for the health effects in sensitive subgroups of the population;

results of studies post-1998 show adverse health outcomes below the current standards and Australia has a very large susceptible group. (Discussion Paper p. 73)

Lead - Ambient lead levels in our major cities have declined markedly with the near universal spread of unleaded petrol. Nevertheless, given the evidence of the lack of threshold, the non-linear nature of adverse effects, the links with fine particle pollution and the downward movement of acceptable blood lead levels, the standard should be revised.

Particles - signifcant additional evidence of both long and short term effects of PM10 and PM2.5 since establishment of AAQ NEPM; effects observed at current ambient levels in Australian cities; no evidence of threshold; linear dose response.

Benzene - standard should be set as part of revised AAQ NEPM; known carcinogen; no evidence of threshold.

PAHs - linked to a range of cancers and to mortality from ischaemic heart disease. Should move to esablish a standard and include this in a AAQ NEPM. Need to review whether current MIL for BaP would provide adequate level of protection.

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?

Of the various alternatives discussed on page 142 of the Discussion Paper, my preference is for having "a 'not to be exceeded' standard based on health protection and requiring reporting of cause of exceedences, progress toward meeting the standards and actions taken". Considerable care needs to be taken if exceedences due "natural" events are to be excluded from consideration when assessing compliance with a standard. A suitably tight definiton of "natural" would need to be applied.

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?

YES

Q4. Any other issues you wish to raise?

Not at this stage.

Natiew of the National Environment Protection (Ambient Air Quality) Measure – Air Quality Standards Discussion Paper