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Dear Rapunzel

**Proposed Amendments to the National Environmental Standards for Air Quality**

Thank-you for the opportunity to provide comment on the 'Proposed Amendments to the National Environmental Standards for Air Quality'.

Please note: this is a private submission does not necessarily represent the view of as an organisation.

There are three main issues I wish to make comment on:

- Number of exceedances
- Mandatory offsets
- Extended deadline for compliance

Number of exceedances is identified as one of the problems that needed to be addressed. While I agree that exceptional events should not be counted as exceedances (noting that appropriate guidance around what constitutes an exceedance needs to be provided), number of exceedances is potentially a misleading concept with regards to protection of human health. For example, in the cost-benefit analysis the health effects associated with air pollution are based on annual average concentrations. Two airsheds could have similar annual-average concentrations, but a different number of exceedances - for example as a result of concentrations being just below a particular standard in one airshed, while the another airshed has more variable concentrations resulting in several exceedances of the standard.

The management implications for those two airsheds could be quite different with no action required in airshed 1, while some form of management, potentially mandatory offsets, is required in airshed 2. The relative cost-benefits of air quality management in these two air-sheds would be quite different.

A further argument against number of exceedances as a compliance measure is that once the acceptable number of exceedances has been met, there is no further incentive

for continual improvement of air quality. Given that there is considered to be no threshold of effect to PM10, this also means that there is no continual gain in health benefits associated with improved air quality.

An alternative approach is the exposure-reduction framework used by a number of international agencies, mentioned in the TAG discussion document. As stated in the TAG discussion document this approach is aimed at driving continuous improvement in air quality, and is considered to deliver greater health benefits compared to a standards-based approach. While it is not appropriate to adopt wholesale an approach used internationally, there is merit in considering how such an approach could feasibly be applied in New Zealand. Such a framework could also remove the current tension between placing restrictions on industrial discharges in non-complying (based on number of exceedances) airsheds, when these emissions primarily come from domestic sources.

However, it is recognised that further work is required before an exposure-reduction framework could be used in New Zealand, which is not feasible to be undertaken in the current timeframe for proposed amendments. Nonetheless, this work could be commissioned shortly, and feed into a later review on the progress on amended NES. In the interim, the proposed changes to the number of exceedances (excluding exceptional events, increasing number of exceedances) are reasonable in providing greater flexibility in achieving compliance.

*Decision sought:* The number of exceedances as a compliance tool be considered as an interim measure and that the Ministry commission review and/or further consider the feasibility of adopting an exposure-reduction approach as the basis for managing air quality. This report back could coincide with another review of progress towards meeting the NES prior to the current proposed 2018 deadline.

Mandatory offsets – in the NES all PM is treated as equal from the perspective of offsets. However, from a toxicological perspective not all PM is equal, and allowing PM emissions from one [more toxic] source to be offset with PM emissions from another [less toxic] source will not yield the health benefits expected to arise from the use of offsets. Further research is required to better understand the health implications of using offsets.

*Decision sought:* If mandatory offsets are to be used, the nature (e.g. toxicity) of the PM emissions needs to be considered.

Extended deadline for compliance – It is unclear why no significance appears to be given to the marked reduction in the absolute value of the [health] benefits associated with extending the deadline for compliance from 2013 to 2020 (Noting that the information on costs and benefits associated with proposed deadline of 2018 does not appear to be available). The focus is on the cost-benefit ratio which is considered to change little between a deadline of 2013 versus 2020, but in terms of absolute values the benefits reduce from \$1289M to \$232M with a greater relative drop for the benefits (5.5-fold vs 4.5-fold reduction). While the logic behind focussing on the cost-benefit ratio is understandable from a policy perspective, it is concerning that we seem prepared to accept a marked reduction in health benefits for comparatively smaller reduction in costs.

*Decision sought:* Explicitly justify the acceptance of the marked reduction in absolute value of the [health] benefits for a comparatively smaller reduction in costs as a consequence of extending the compliance deadline.

Of the proposed options, option 4b would be my preferred option, noting the issues raised above, and that in lieu of mandatory offsets for industry, consideration is given to other approaches for ensuring that industry is pro-active in adopting cleaner-technologies.

Regards

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