Construction Material Processors Association Inc.

CMPA

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The Executive Officer
National Environment Protection Council
Department of the Environment
GPO Box 787
CANBERRA ACT 2601

email: NEPC@environment.gov.au

Dear Sir/Madam

CMPA submission to NEPC on: *Proposed variation to the National Environment Protection (Ambient Air Quality) Measure in relation to the standards for particles.*

About CMPA

The Construction Materials Processing Association (CMPA) represents a broad spectrum of those involved in construction material processing businesses engaged in the extracting, processing or otherwise working in hard rock, gravel, sand, masonry, clay, lime, soil, gypsum or recycling including industry consultants, industry suppliers and any industry workers in Victoria.

Amongst our members are many small to medium sized quarries and recycling facilities. These facilities create dust during crushing and screening of materials.

As such, any reduction to the fine particle (PM_{10}, $PM_{2.5}$) standards will have a direct, and potentially significant, impact on our member's compliance requirements.

Appropriate standards

The CMPA fully supports clear unambiguous standards that protect both the health of our workforce and the communities that surround our operations. As such, we support any review that has, as its aim, these objectives.

However, we recognise that, in relation to fine particles, no definitive criteria (i.e. measured in $\mu g/m^3$ over 1 hour, 24 hours, 1 month, 1 year, 1 lifespan) exists that will provide total protection for all. By default, any specified standard needs to be a compromise between health and environmental outcomes, the economic considerations of industries impacted, and even anthropogenic realities.

In particular, it is recognised the existing standard is a compromise between environmental and economic considerations and any reduction will simply be an exaggerated outcome of that which

presently exists; the standard specified for fine particles may not be a proven safe threshold, simply a standard that society accepts as fair and reasonable.

Our Concerns

1. The financial impact on our industry (primarily small to medium sized quarries) has not been satisfactory quantified in the proposal to reduce the standard.

Considering that the environmental and economic considerations on an appropriate fine particle standard are interconnected, we remain concerned that NEPC has not undertaken an industry impact assessment of the proposed reduced criteria within the small to medium extractive industries sector.

A reduction in the standard almost certainly will impact the ability of most new or extended (by variation) quarries to be approved, even with best practice dust control.

Environmental requirements[1] are enforced on new or sizable expansion quarry development as part of the approval process. This frequently requires atmospheric dispersion modelling to assess for fine dust compliance against standards; including the ambient air standard.

Any reduction to the NEMP PM_{10} and $PM_{2.5}$ standard will logically need to be adopted by State regulatory agencies (e.g. included within Victoria's State Environment Protection (Ambient Air) Policy). Reduced standards will realistically be enforceable within a short period following release of the NEPM.

We live in a time of changing meteorological conditions. Historically rural lands dried out over summer months. It was only the summer period where elevated background particle levels prevailed; during wind storms and bushfires. However, recent drought years have seen dry spells extend into spring and autumn months. Climate change models indicate dry conditions are likely to represent 'the norm'. Dry land devoid of vegetation, unsealed local roads and bush fires (including back burning) all contribute to conditions commensurate with elevated background particles. Background concentrations of fine dust can remain elevated through most of the year.

To illustrate the potential impact that elevated background conditions represent to our quarrying industry, one example of a recent quarry development is provided below. Under the current Victorian quarry PM_{10} criteria[1] of 60µg/m^3, predicted PM_{10} excursions over the standard are rare through-out the year. In all cases bar one event, excursions were associated with the quarry dust atop a high background fine particle signal; the prominent peak being smoke from bushfires. A reduction of the standard to 40µg/m^3 increases excursion to being 'regular' (i.e. >20 events over the year).

This demonstrates the impact of a reduction of the PM_{10} standard against the site's ability to comply.

[1] Protocol for Environmental Management, Extractive Industries, EPA Victoria.

The concern our Association holds is not whether our quarries can implement best practice measures to control dust, but whether following best practice control implementation, conformance against the reduced standard proposed under NEPM can realistically be achieved.

Fine dust from quarry operations in isolation generally represents a relatively small but manageable percentage of total PM_{10} concentrations within the ambient air beyond site boundaries. When the background dust profile is added to a quarry dust signal, using computer dispersion modelling techniques, exceedances against the PM_{10} standard arise. A reduction of the standard to 40µg/m3 (24 hour mean) can result in a 8x increase in non-compliance events at one location (i.e. 3x excursions over the year to 25x exceedances relating to who knows what; a substantial change with significant compliance consequences).

2. Combined sources warrant considerations in Regulation

Fine particle standards represent total ambient conditions, of which our member quarry sites contribute within a number of rural areas. Our member's sites can be located in an industry cluster, where 2, 3 or more dust producing facilities are operated. Planning scheme zoning often forces the co-existence of similar activities into the same area.

There are many other facilities where activities, e.g. the stripping of top soils, on-site crushing and subdivision earthworks and trenching, are often not subject to the same State regulatory controls (e.g. EPA, DEPI) as extractive industries (quarry) sites. This often results in a disproportionate burden of compliance monitoring and control resting with a CMPA member small to medium business (SME).

Other fine particle sources that consistently contribute more than a quarry site, include well patronised local unsealed or dirt roads, wood fired heaters in rural areas, back burning prior to fire seasons and farmers preparing their fields. Minimal controls are enforced on these significant background sources, even though they may be directly influencing modelling excursions.

We remain unconvinced as to why these background sources are not acknowledged and controlled with the same rigor as that applied to extractive industries (quarry) operations. Quarries appear to be unduly singled out and bear more than their fair share of the 'source' burden.

3. Compliance monitoring needs to be simplified

Monitoring for fine particles is an expensive and technically challenging process. If conducted in accordance with Australian Standard requirements it requires high volume samplers that in the main require a 240V power supply. Remote operation is a difficult process that requires considerable resources to operate, analyse and interpret. Background equipment is often warranted, running at the same time as a compliance monitor.

Depending upon a small to medium sized quarry's specific regulatory conditions, compliance

monitoring can represent a significant and unjustifiable financial burden exceeding any test for 'reasonableness'.

Recommendations

The crux of our submission therefore centres on the ability of CMPA members to demonstrate compliance and in particular:

1. Any reduction in fine particle standard needs to clearly consider the economic impact on extractive and material handling industries as the standard must represent a balance between environmental and economic considerations;

   In particular, NEPC conducts an economic impact statement (EIS) of any reduced standards effect on the extractive industries sector including medium to large sized quarries (10,000 tonne/ annum – and above).

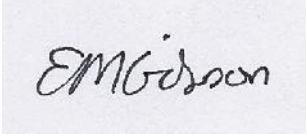
2. Should standards be reduced, NEPC work with all State Regulators to specify a realistic and cost effective means to monitor against the standard using cost effective techniques as opposed to expensive, resource intensive high volume sampling techniques units currently specified in the Australian Standard, or reliance on models that require extensive meteorological data sets, which require a series of assumptions and have intrinsic accuracy variations. This would provide cost effective real time information to better manage off-site discharges.

3. Should the standard be reduced, guidance be specified as to how assessments are to be made and conformance requirements met where it is established multiple sources and multiple sites contribute to fine background particle levels.

4. Should the standard be reduced, there needs to be a transition period for inclusion into State Policy so that industry (especially the extractive industries) can evaluate and contribute to an appropriate regulatory regime. We suggest specifying a five year period would be appropriate.

Please contact me if you would like to discuss this further.

Yours Sincerely



Dr Elizabeth Gibson
General Manager