Doctors for the Environment Australia
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Submission on the draft DPEMP for the Indicoal Mining Pty Ltd, Langloh Coal Mine

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Submission from
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Introduction

Doctors for the Environment Australia (DEA) is an independent non-government organization of medical doctors in all Australian States and Territories. Our members work across all specialties in community, hospital and private practice. We work to minimize public health impacts and address the diseases – local, national and global – caused by damage to our natural environment.

Although mining is not a new industry to Tasmania, this proposal, which is expected to produce over 8 million tonnes of coal to be burnt at a later stage, would mark Tasmania as yet another contributor to climate change through increasing utilization of fossil fuels.

That this proposal has been put forward at all would seem to transgress the Environmental Protection Authority's goals of 'Clean Air, Clean Water…. [and] Sustainable Use of Resources'.

DEA has a number of concerns that this proposal, if allowed to proceed, would be to the detriment of human health in Tasmania and of global public health.

A new large coal mine such as this will cause a measurable impact in global greenhouse gas emissions through both the mine site's development and activities and its products. Thus, an expansion of fossil fuel production in Tasmania will serve as a major contribution to the dire health, social and environmental impacts of climate change.

Each phase of the lifecycle of coal produced by a mine such as this produces pollutants that affect human health[1] and an associated economic cost that would be borne by those external to the proposal. If these costs were to be paid by the consumers of electricity generated by coal combustion, it is estimated that these health externalities could cause the price of such electricity to rise more than three-fold[2].

Climate change has been labelled by the international medical community as "the greatest threat to global health of the 21st century"[3]. Australia and other parts of the world are already witnessing the impacts of a warming planet, and the EPA allowing a project such as this to proceed would lead to worsening health, social, economic and environmental impacts in coming decades.

[1] Castleden W et al. (2011), The mining and burning of coal: effects on health and the environment. *Medical Journal of Australia*; 195:333-335

[2] Epistein P et al. (2011), Full cost accounting for the life cycle of coal. *Annals of the New York Academy of Science*; 1219:73-98

[3] Costello et al. (2009), Managing the health impacts of climate change. *The Lancet*; 373:1693-1733

We note that the Draft Guidelines fail to use the words Health Impact Assessment (HIA) and although some components of HIA are included in the draft it is important to recognize that in Australia, states operate the EIA process under Health Impact Assessment (HIA) Guidelines - September 2001 www.commcarelink.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-publicat-document-metadata-env_impact.htm.

In the Guidelines it is recognised that Health is determined by many factors including genetics, age, a person's social and economic circumstances, lifestyle and access to services, as well as environmental health factors such as air and water quality, housing, etc. A HIA seeks to ensure both the positive and negative impacts on health (as viewed from a wider perspective than just physical illness or injury) are effectively considered during the assessment. The proponent's role is to prepare a Health Impact Statement (generally, as part of a broader impact assessment) that addresses the issues identified during scoping, and which specifically addresses:

1. Assessment of the likely risks and benefits to health from the development, and

2. Management of these risks.

It is important therefore that these requirements are defined for all proponents of such proposals. This is particularly important for this proposal in view of the increasing evidence throughout the world that coal mining and combustion has widespread adverse impacts on health and longevity.

Potential impacts and their management – DEA's concerns about the Draft DPEMP Guidelines

Section 6.1 Air Quality

Although the Draft DPEMP Guidelines call for a description of sources of "fugitive emissions" including dust, there needs to be more stringent requirements on the proponent to specify contributions to airborne pollution.

Any proponent of such a proposal should be required to specify the relative fractions and absolute amounts of particular types of dust particulate emissions, falling in to the broad categories of >PM_{10}, PM_{10},

$PM_{2.5}$ and $PM_{0.1}$ fractions (noting that the smallest particles are the most damaging to human health[4]).

The DPEMP Draft Guidelines has set a three km's radius as the required zone for the proponent to study air quality impacts, as well as looking at air quality in the township of Hamilton and along transport routes related to the project. In lieu, evidence that this three km's radius is based upon scientific data about minimizing health impacts, an approach following a precautionary principle should call for this zone to be expanded to five km's or more. Furthermore, the very variable wind and temperature conditions prevalent in Tasmania should ensure that modelling is conducted using figures over several years.

The use of the word 'fugitive' in the document is confusing. In some studies in relation to coal mining the word fugitive refers to methane and its carriage of other chemical contaminants. Thus, arrangements for the measurement of fugitive (methane) emissions from the mine must be detailed. In Australia methane emissions from coal mines are rising and are part of Scope 3 emissions and therefore must be assessed under national regulations.

Recommendations:

- That the proponent be required to specify the relative fractions and absolute amounts of types of dust particulate emissions, as discussed above.
- That the proponent be required to evaluate the potential for emissions to cause environmental harm and nuisance and health effects within a five km or greater radius as well as in Hamilton and along transport routes.
- That estimates of fugitive emissions be made and arrangements developed for their minimisation.

Sections 6.2 and 6.3 Water

These assessments are of particular importance because of potential impacts on Tasmania's high reputation for agricultural and seafood products. Emphasis should therefore be given to water consumption under all predicted circumstances. This should include water management in light of the expected increase in extreme weather events for southern Tasmania, and in particular the proposed management of mine flooding events that may lead to discharge of contaminants into waterways.

[4] Australian Air Quality Group. Particles. AAQG: Armidale, 25 Apr 2010. http:..aaqg.3sc.net/air-pollution-and-health/particles (accessed Aug 2011)

Recommendations

- That the proponent be required to detail predicted water consumption of the development throughout its lifecycle.
- That the proponent documents the risk of mine flooding events and describes a management plan for these.

Section 6.4 Noise emissions

While DEA notes that the Draft DPEMP Guidelines have specific requirements for monitoring and modelling of noise emissions near the site, we find the description of requirements with regards to noise along transport corridors inadequate.

In our experience, noise at night from mines and along related transport corridors has been of major concern to residents in close proximity to these zones. There is increasing evidence that night noise has serious health effects. Epidemiological evidence shows physiological effects from noise at 40 dB and health effects from night noise in the range 40 to 55 dB, as shown in Table 3 from World Health Organization (WHO) Night Noise guideline[5]. The DPEMP must ensure that WHO guidelines are adhered to. Furthermore, it is important that land users and residents have access to data on noise emissions both before and after such a development.

Recommendations:

- That the proponent be required to consider and describe the potential for transport of mine products to cause nuisance for land users and residents along transport routes within Tasmania, regardless of their proximity to the mine itself.
- The proponent's evaluation should specify mapping noise sensitive areas along proposed transport corridors and should include measurement of pre-existing ambient noise in sensitive locations, with this information being provided to residents in these areas.

Section 6.9 Greenhouse gases and ozone depleting substances

As discussed above, global warming due to greenhouse gas emissions is already causing severe health problems to Australians and people in many other parts of the world.

[5] Hurtley (2009), Night noise guidelines for Europe, World Health Organization Europe, Regional office for Europe

DEA notes that the Draft DPEMP Guidelines require proponents to address direct and indirect effects of their proposal on greenhouse gas production, and requires a competent assessment for 'whole of life' greenhouse gas emissions. However, there is room to strengthen this guideline by requiring the proponent to specifically address the global health, social and environmental impacts that burning 8 million tonnes of coal will have. This should be in addition to the significant emissions associated with planning, design, construction, procurement, maintenance, use and disposals relating to the development. (Scope I and 2 emissions)

If the EPA is seeking to truly pursue sustainable use of Tasmania's resources, any proponent must be further required to detail how they will offset greenhouse gas emissions and climate change impacts.

The assessment of "fugitive emissions" was discussed above with particular relation to methane. However, the DPEMP guidelines must specify exactly what is meant by fugitive emissions, and should include all greenhouse gas or other pollutants that could realistically be expected to be released by the development.

Recommendations:

- That the proponent be required to address the health, social and environmental impacts caused by the lifecycle of the coal produced in their mine, in addition to the emissions associated with establishing and running the mine itself.
- That the Draft DPEMP Guidelines outline that if the proposal goes ahead, the proponent will be required to fully offset greenhouse gas emissions generated as above, and will be required to detail a plan to do so in their Environmental Management Plan.

Section 6.13 Social and economic issues

The economic aspects of the proposal require a comprehensive assessment because the introduction of a polluting industry is likely to influence the perceptions of Tasmania as a clean and attractive environment. The DPEMP process is intended to provide government and community with a report with a detailed analysis of both positive and negative outcomes on the environment and through the HIA process on health. A comprehensive view must include a cost benefit analysis so that all potential externalities are accounted for. Furthermore, the assessment should include potential impacts on the tourism and food export industries. Thus cost benefit analysis is essential to answer the question posed by section 3 "*The rationale and need for the proposal must be described, including the consequences of the proposal not proceeding".*

The point being that there might indeed be advantage in the proposal not proceeding.

DEA notes with interest that mining activities in other parts of rural and regional Australia have been highly dependent on a fly-in-fly-out (FIFO) and drive-in-drive-out (DIDO) workforce, which has been strongly associated with negative health and social consequences for rural communities. Earlier this year the Federal House of Representatives Standing Committee on Regional Australia labelled this sort of work practice as "the cancer of the bush", and detailed numerous reports from residents, community organisations and health services in rural and regional communities that had been severely affected by the social and economic upheavals created by new mines[6].

DEA applauds that the Draft DPEMP Guidelines do already state requirements for the proponent to discuss social impacts of the proposal including changes to community demographics and local economies. However, the guidelines must require the proponent to go further to ensure that the Hamilton community and other residents of southern Tasmania are also made aware of these possible impacts and changes.

<u>Recommendations:</u>

- That a comprehensive cost benefit analysis be conducted into the value of this proposal in both the short and the long term. This should be identified as a key issue on page 13.
- That the proponent be required to provide details on the possible use of FIFO and DIDO workers.
- That the proponent be required to perform assessments of land and housing values before any development goes ahead and provides these to local residents and services.
- That the proponent must include details of their plans to discuss any possible use of FIFO and DIDO workers with residents, community organisations, services and local governments in the vicinity of the mine, including but not limited to those based in or around Hamilton.

[6] House of Representatives Standing Committee on Regional Australia (2013), Cancer of the bush or salvation for our cities? Fly-in, fly-out and drive-in, drive-out workforce practices in regional Australia. http://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=ra/fifodido/report.htm . (accessed Nov 2013).