

The Coordinator-General
c/- EIS Project Manager—Carmichael Coal Mine and Rail Project
Significant Projects Coordination
Department of Infrastructure and Planning
PO Box 15009 City East Qld 4002
Australia

25.3.2011

Dear Coordinator General,

Carmichael Coal Mine and Rail Project Draft TOR for an EIS

It is noted that “all comments must relate to the draft TOR and not assess the merits of a project nor argue a position on particular impacts”. However this is inappropriate to health considerations for the reasons stated below.

The grounds for this submission from Doctors for the Environment Australia are therefore that the TOR does not allow the health impacts of the project to be properly considered. We advise in broad terms on some of the major health impacts and suggest revision of the TOR to allow these to be included. We give examples of potential health impacts for which there is no EIS section and we have not used the submission form.

We suggest strongly that the format of the TOR will not allow for adequate consideration of the health impacts at the EIS stage and the issues should be dealt with under a Health Impact Assessment process.

About Doctors for the Environment Australia

Doctors for the Environment Australia is a voluntary organisation of medical doctors in all Australian states and territories. We work to address the diseases – local, national and global – caused by damage to the earth’s environment. The medical profession has a proud record of service to the community. This record not only includes personal clinical care, but also involvement in global issues that threaten the future wellbeing of humanity. We aim to use our scientific and medical skills to educate governments and industry, the public and our colleagues to highlight the medical importance of our natural environment. To our patients we try to provide a role model in the care of the environment for this is part of a preventative health ethos.

Doctors for the Environment Australia is a branch of the International Society of Doctors for the Environment (ISDE), based in Switzerland, which is a global network of concerned medical professionals. There are now branches in 35 other countries. ISDE has significant achievements in Europe and has established strong links to and influence in the European Community.

Environmental Impact and Health Impact

It is the duty of an Environmental Impact Statement to detail all human health impacts of the development for the subsequent consideration by the State and Federal Ministers. Over many years the medical profession has prosecuted the need for Health Impact Assessment (HIA) for major

projects. In the early 1990's a National Framework for Health Impact Assessment within Environmental Impact Assessment was developed under the National Better Health Program. In 1993 a Draft National Framework was published. It was apparent that the HIA was a major task and medial opinion was that it should be prosecuted as process separate to an EIS. In general separation has not been pursued by governments most likely for financial reasons. In 2001 Health Impact Assessment Guidelines were issued and it is expected that these shall be incorporated into all EIS processes.

“To promote and enhance the incorporation of Health Impact Assessment (HIA) into environmental and planning impact assessment generally, thereby improving the consideration of health issues”

The responsibilities of the proponent are defined within these guidelines (3.3.1), these include “this process should include the need to explicitly address potential impacts on human health.” The responsibilities of the Public health authority are also presented in detail.

From analysis of the document “Draft terms of reference for the environmental impact statement” it is apparent to Doctors for the Environment Australia that neither the proponent nor the Public Health Authority has fulfilled its obligations. This submission will define these inadequacies and will recommend that major changes be made.

Alternatively there is a strong case for initiating a HIA on this project, for it would provide a benchmark for many other proposed mines and mine expansions. This case is strengthened by the recognition that in contrast to an EIS where independent experts prepare the case, health is delegated to state departments of health which do not have extensive expertise, particularly in global health and may not have full independence from government influence. Carmichael being the largest coal mine proposed for Australia and the one with potentially major health impacts, is an appropriate case to start the process of HIA.

Apart from health and safety considerations; the potential health impacts relate to those caused by greenhouse gas emissions, those due to particulate pollution and those due to an increase in the burden of mercury. The draft terms of reference fails to provide guidance to their proper assessment. The impacts are detailed in the following reviews <http://www.psr.org/resources/coal-assault-on-human-health.html> and <http://onlinelibrary.wiley.com/doi/10.1111/j.1749-6632.2010.05890.x/full>

Greenhouse gas emissions

These will have both global and local impacts.

In 2005 coal was responsible for 41% (10.98 Gt CO₂) of worldwide emissions. On present trajectory total worldwide emissions are expected to double. In Australia and China coal is used for 80% of electricity generation, India 60% and the US 50%.

Projections from the IPCC, the scientific academies and others indicate that if this trajectory of worldwide emissions continues on a business as usual scenario the rise in world temperature will render large regions of the planet uninhabitable.

The worldwide existing medical impacts of climate change caused by rising CO₂ emissions are detailed in the PSR review. These impacts will be added to by each new coal mine including Carmichael whether the coal is burned in Australia or in the importing country.

At peak production the Carmichael mine is planned to mine 60 Mtpa of thermal coal. On combustion this will release more than 180 MtCO₂ eq pa. In its proposed 150 year lifetime this mine on its own could be cumulatively responsible for the equivalent of six months of current global greenhouse gas emissions.

Thus Carmichael will contribute considerably to the international morbidity and mortality. As an example, WHO figures for the year 2000 indicate there were 155,000 deaths per year (from 4 selected, climate-sensitive causes: malnutrition, diarrhoea, malaria and floods) attributable to existing climate change. Conservatively we can increase this number to 200,000, for the total population has increased, more health impacts are recognised and are occurring with greater frequency. Then 200,000 deaths equate to the 9Gt carbon (33Gt carbon dioxide) added to the atmosphere each year from human based activity, one death = 45,000 tons of carbon or 165,000 tons CO₂. From the supplied information it is possible to calculate the number of deaths this mine is responsible for; it will make uncomfortable reading.

Carmichael will contribute to morbidity and mortality in Australia because of the increasing effects of climate change. Whilst any one adverse climate event cannot be attributed, collectively it is now accepted that climate change is causing an overall increase in intensity of these events. For example there is little doubt that the Adelaide and Melbourne heat waves had a climate change component and contributed to an excess of deaths. Australia will suffer from more deaths and injury due to bushfire, storm and flood as well as an increase in some infectious diseases e.g. salmonellosis and regional nutritional problems. It is an irony that the profit to Queensland results in dangers to the health and well being of its citizens.

Emissions and the Draft Terms of Reference

The draft terms of reference require modification and expansion to take account of these needs. It is noted that the terms of reference ask the question “what are the implications if the project does not go ahead?” The HIA will indicate the medical and related environmental impacts **if it does go ahead** and thereby help provide a balanced study of its value not just in money terms but in health and well being.

The public and the Ministers are entitled to have this information to decide whether the receipt of annual royalties of \$xxx which might be used judiciously to improve health services is more important than the morbidity and mortality conferred nationally and internationally (the same argument applies to harm to the Barrier Reef and other environmental consequences which will no doubt be documented by others). The public and Ministers are also entitled to consider jobs in this balance for there is little doubt from many independent studies that more jobs would be created by using the Carmichael finance for the establishment of rural renewable projects in Queensland.

In revising the draft terms of reference it will be evident therefore that projected yearly outputs of coal are needed, as are the details of the constituents of that coal so that combustion emissions can be calculated using the combustion techniques in the importing countries. The terms of reference should provide the instruments for the proponent to calculate the impacts using existing WHO and Australian health data using standard techniques.

Particulate emissions

These will have local impact from dust and transport, and internationally from combustion.

The dangers of particulates are increasingly recognised and as with many other spheres of medical science there are no safe levels.

Exposure to particulates from coal mining and combustion contributes to the development of cardiac and respiratory disease, including chronic obstructive pulmonary disease, pneumonia and ischaemic heart disease. Exposure also contributes to sudden infant death syndrome some neurological diseases including stroke. Particulates are estimated to be responsible for millions of premature deaths. The scientific data on this topic is secure.

Particulate Pollution and the Draft Terms of Reference

With regard to local pollution, the draft terms of reference cover the essentials and clearly there has been input from the Queensland department of health with its experience from the Gladstone project and other projects. However PM 2.5 must be measured instead of the PM 10 listed and the data collection points and durations must be listed together with more detail on methodology. This requires additional input from respiratory experts.

With regard to international air pollution, it might seem that this responsibility resides solely with the purchaser of the coal. However in an interdependent world where we accept collective responsibilities for rules of trade etc the culture of responsibility is gradually changing. Those making decisions in Australia will become aware, if they are not already, of the perception that Australia is the most wealthy per capita country profiting from selling coal which has considerable health cost externalities. In a just world, poor countries would have more justification to sell coal than Australia and this may come to pass with the inevitable contraction of coal mining in order to save the world's climate. A health impact assessment must look at these issues.

Other health impacts including mercury

We have read through the document. It is fair to say that although the mining project will have significant national and international health impacts, there is a paucity of health issues in the draft. There are numerous sections where health impacts are possible yet they remain unmentioned. We recommend a review by both national and global health experts. Doctors for the Environment Australia has the expertise, but not the time to do this when its members are employed in full time delivery of health care.

Such a review would rectify many omissions. For example all coal combustion contributes to the increasing burden of mercury in the environment despite the use of methods to trap mercury after combustion. This is leading to serious health impacts in many regions of the world. For example the mercury content of fish has already resulted in recommendations that pregnant women stop eating fish. An international mercury treaty for the strict control of mercury emissions is being developed and will have some impact on the coal industry. In a HIA it would be expected that data be given on the mercury content of coal, its behaviour in combustion and the expected release in the importing country. The rationale has been detailed above. Interestingly the word 'mercury' is not included in the entire document. 'Hg' is listed once in relation to water.

Public health is no longer just a national issue, it is a global issue. A narrow economic focus is insufficient for decision making about sustainable health and well being. After all, what good is short-term profit if we damage human and environmental health in the process?



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The following are members of our Scientific Committee and support the work of
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