

Submission on the Warkworth Continuation Project and the Mt Thorley Continuation Project

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Healthy planet, healthy people.

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Doctors for the Environment Australia (DEA) is an independent, self-funded, nongovernment organisation of medical doctors in all Australian States and Territories. Our members work across all specialties in community, hospital and private practices. We work to prevent and address the diseases – local, national and global – caused by damage to our natural environment.

We are a public health voice in the sphere of environmental health with a primary focus on the health harms from pollution and climate change. Our submissions, including this one are prepared by highly qualified public health experts.

This submission of June 2015 updates and should be read in conjunction with our prior submissions, which are available at http://dea.org.au/images/uploads/submissions/Mount_Thorley_Continuation_Project_Submission_08-14.pdf and http://dea.org.au/images/uploads/submissions/Warkworth_Continuation_Project_Submission_08-14.pdf.

In addition to the written submissions by Doctors for the Environment Australia, and expert evidence presented by Dr Ben Ewald at the Singleton hearings, we have identified significant errors and weaknesses in the PAC recommendations.

Recommendation 17 and table 5

This recommendation lists the assessment criteria for particulate air pollution in the PM₁₀ class is an annual average of 30µg/m³ however this is likely to be soon out of date. The science of the health effects of air pollution has advanced since that criteria standard was written.

The conditions should be written to comply with the criterion standard as specified in the National Environmental Protection Measure as updated from time to time. The mine approval is for 21 years, by which time the air quality standards may be very out of date unless the mine conditions include updating the criterion to modern values.

By comparison at condition 52 the mine is required to comply with a standard that may be updated over time. This is a very reasonable approach given the extremely long time frame of this approval. "Ensure that all external lighting associated with the development complies with Australian Standard AS4282 – control of intrusive effects of outdoor lighting, OR ITS LATEST VERSION"

New air quality and health research

Since the PAC hearings in December 2014 new research on the health effects of air pollution on the lung growth of children was published in March 2015 (Gauderman, Association of improved air quality with lung development in children. *New England Journal of Medicine*, 2015; 372:905-13). It showed that improvements in air quality in Southern California were reflected by improved lung function in cohorts of children followed over time. Lung growth over 4 years as measured by FEV1 was 65.5 mls better for each $8.7\mu\text{g}/\text{m}^3$ decline in annual average PM_{10} exposure. $8.7\mu\text{g}/\text{m}^3$ was chosen as this was the median decline in pollution over the study period.

This research included adjustment for tobacco smoke exposure, socioeconomic factors, asthma, and indoor exposures, so the observed differences are highly likely to be caused by the improved ambient air quality. The policy implications from this research are to strengthen the evidence base for the introduction of an annual criterion standard for PM_{10} , at a level of $20\mu\text{g}/\text{m}^3$.

The recommended conditions do not provide adequate protection for the respiratory health of children living in Bulga, and should be revised to include the updated exposure standard.

Condition 18, Mine owned land

The current conditions for residences on mine owned land include that they may be exposed to air quality worse than the standards, but tenants have to be informed. This will lead to the likely event that children will be exposed to unsafe particulate pollution, by parents who are attracted by cheap rent. We do not believe it is fair to young children to offer them accommodation in areas with air quality that will permanently impair their lung growth, and put them at increased risk of respiratory disease as adults. This undermines the logic of having air quality standards. If the exposure was asbestos, would it be reasonable to offer the house for rent as long as a written warning was given?

Condition 20

The requirement for an air quality management plan is weak and vague. It could contain anything or nothing.

Blast plumes not addressed

Neither the assessment report nor the consent conditions address the problem of blast plumes. These toxic plumes result from incomplete reactions in Ammonium Nitrate and Fuel Oil (ANFO) blasts and can contain high levels of nitrogen dioxide which is acutely toxic, causing respiratory irritation, pulmonary oedema and even death within a few hours of exposure. As described at the Singleton hearings, blast plumes sometimes travel rather than dispersing, and in recent years a number of workers at Mt Thorley were hospitalised after a plume travelled 3km from the Warkworth mine. A similar blast plume asphyxiated miners in QLD after travelling 6km from the blast site. This problem remains a public safety hazard, and has not been addressed. The movement of blast plumes is unpredictable, and allowing ANFO blasting within 2km of a residential area shows reckless disregard for public safety.

Summary

We believe that approval of this mine is inconsistent with the protection of the health of people living in Bulga due to increased exposure to particulates in the PM₁₀ class, and the risks from blast plumes. Given the shrinking size of the benefits from mining, the health problems are sufficient that the mine should not be approved.