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NSW GOVERNMENT Health
Hunter New England
Local Health District

24 April 2013

Stephen O'Donoghue
Senior Planner: Mining Project
NSW Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Mr O'Donoghue,

WATERMARK COAL MINE PROJECT

I refer to the Environmental Impact Statement (EIS) exhibited on the NSW Department of Planning & Infrastructure website in relation to the Watermark Coal Mine Project. The development is an open cut coal mine extracting up to 10 million tonnes of coal per annum over 30 years. It is located 35 km south east of Gunnedah and approximately 2 kilometres to the west of the village of Breeza with a population of approximately 130 people.

The EIS report has been reviewed by Hunter New England Population Health with particular attention paid to management of issues such as air quality, noise, water and other issues that may impact on public health.

The following issues should be considered in the approval process for this project:

Noise
The EIS notes that activities associated with construction, operation and maintenance of the project will be carried out up to 24 hours a day, 7 days a week.

Many properties are predicted to experience mild, moderate or significant day and night time noise impacts, including sleep disturbance. One property in particular is predicted to experience noise levels which are 18 dB(A) $L_{Aeq\ 15min}$ above current background noise levels.

It is recommended that the proponent clearly demonstrate that the community residing within the noise impacted area have been consulted, and that the predicted noise levels and proposed mitigation measures are acceptable to them. Furthermore a complaints mechanism for residents should be incorporated into the proposed noise monitoring program that enables both rapid assessment and corrective measures (if required) to be implemented.

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Air Quality

The comments in this section are contingent upon the EPA's confirmation that the assessment complies with their *Approved Methods*.

The air quality modelling suggests that the project alone could result in maximum 24 hour PM_{10} which are between 7 and 122 $\mu g/m^3$ higher than the 24 hour average goal of 50 $\mu g/m^3$.

Paragraph two of page 157 of the main report notes that a number of receptors are predicted to be exposed to levels of PM10 above the 24hr average assessment criterion. Despite this, the proponent argues that "proactive management of operations will result in modifications to operations so that these impacts will not be experienced at suggested receivers." Given the number and magnitude of the predicted exceedances, it is recommended that the proponent provides detailed evidence to support their statement. This might include a quantitative estimate of the effect on 24hr average PM10 of any proposed modifications at the location of the receptors.

There are no predicted exceedances of the annual average PM_{10} of 30 $\mu g/m^3$ at private residences. The cumulative annual average PM_{10} concentration at most residences is between 13 and 20 $\mu g/m^3$ with three residences at 23, 24 and 25 $\mu g/m^3$ respectively. This represents an increase from the current average PM_{10} level of 12 $\mu g/m^3$.

The EIS assumes that PM_{10} level goals will remain static throughout the duration of the 30 year project. Even if regulatory goals do not change, societal expectations of cleaner air will increase. A priority of the National Plan for Clean Air is to develop an exposure reduction framework, which aims to reduce the population's exposure to particulate air pollution, even when it is below current standards. Air quality in the Watermark Coal Mining Project area will likely worsen and in many areas exceed the PM_{10} levels in Sydney.

Figure 9.16 suggests that PM2.5 increases by 13$\mu g/m^3$ at Breeza. The proponent should clarify whether this is a true reflection of the modelling, or because the figure is incorrectly labelled.

The Monte Carlo analysis of cumulative $PM_{2.5}$ levels indicates that these will also exceed the recommended 25 $\mu g/m^3$ for a number of residences at certain times over the life of the project. For example, Figure 9.84 identifies exceedances of the 50 ug/m^3 24 hour goal for PM_{10} levels at some receptors for 15, 37, 41, and 52 days.

The control efficiency for controlling dust from wheels in road haulage is one of the major sources of PM_{10} emissions at open cut coal mines. It is noted that the project assumes a control efficiency of 85% for controlling dust emissions on haul roads (Air Quality and Greenhouse Gas Impact Assessment, Appendix D, page 3). The report *NSW Coal Mining Benchmarking Study: International Best Practice Measures to Prevent and / or Minimise Emissions of Particulate Matter from Coal Mining* prepared by Katestone Environmental Pty Ltd for Office of Environment and Heritage (June 2011) found that most NSW mines only achieved a control factor of 50 to 75% for haul road dust suppression (Table 102, page 204). Given the control efficiency assumed here is substantially higher that that generally achieved by the industry it is recommended that:

a) A sensitivity analysis is performed that uses control efficiency factors that are consistent with current industry practice (ie 50% to 75%)

b) The proponent provides a detailed explanation of how it will achieve and maintain a control efficiency of 85%

No data is provided about air quality impacts at Curlewis Township, 13km to the north west of the project site. It is recommended that an assessment is made of these impacts.

Given the above, it is possible that air quality impacts for the project have been underestimated. Even within current estimates, health impacts are expected as there is no identified threshold below which exposure to particulate air pollution is not associated with health effects. Should the project be approved, it is recommended that the proponent is required to apply best practice measure to ensure particulate emissions from the mine are kept as low as reasonably practicable.

Rainwater Tanks

Possible impacts of the project on drinking water were raised in the community consultation process. The EIS does not provide specific analysis of issues associated with water quality from rainwater tanks at residences without a reticulated water supply. The intention to implement measures to facilitate first flush systems for private rainwater tanks affected by air quality impacts of the project is mentioned as part of the proposed Air Quality Management Plan on page 159 of the EIS main report.

Hunter New England Population Health strongly supports inclusion of measures to address impacts to quality of drinking water from rainwater tanks in the Air Quality Management Plan. The peak reference document in Australia for information in relation to rainwater tanks is enHealth's *Guidance on use of rainwater tanks*, accessible at:
http://www.health.gov.au/internet/main/publishing.nsf/Content/DD676FA1241CDD0DCA25787000076BCD/$File/enhealth-raintank.pdf

It would be appropriate to utilise the above document and apply its recommendations and standards to rainwater tank systems within the vicinity of the mine in a proactive manner. A management system for receiving taking complaints and rectifying issues identified should also be implemented.

Social Impacts

The EIS considers a range of project specific and cumulative social impacts of mining in the area, including the demand for housing, education and health services, and community identity and wellbeing. Potential social impacts were a key concern expressed by community members through the stakeholder engagement program.

It is recommended that the proponent demonstrate community satisfaction with the proposed mitigation measures outlined in Table 74 (pages 259-262) of the EIS. The effectiveness of these measures should be monitored over time as part of the proposed social impact monitoring program, and adjustments made as necessary.

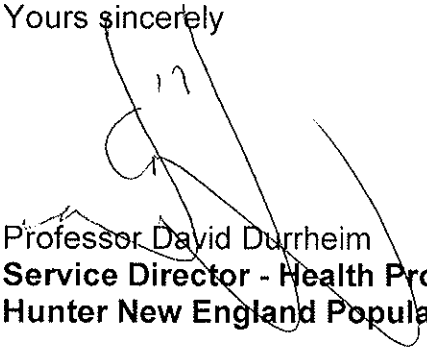
Stakeholder Engagement

A good summary of stakeholder concerns has been provided in Appendix E (Stakeholder Engagement) of the EIS. This summary indicates concerns among community members about the independence and validity of the EIS process, and about the ability of members to engage meaningfully given, for example, the degree of technical language used.

It would be useful to have an independent assessment of community satisfaction with the stakeholder engagement program, to provide reassurance of the applicant's performance in this important area and guidance for future improvement if required.

If you require additional information, please contact Mr Philippe Porigneaux, Environmental Health Manager, on 02 4924 6494.

Yours sincerely



Professor David Durrheim
Service Director - Health Protection
Hunter New England Population Health