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Department of Planning, Industry and Environment
Returned via the Major Projects Portal

Attention: Ms Lauren Evans

1 October 2019

Dear Ms Evans

Environmental Impact Statement Exhibition
Maxwell Underground Coal Mine Project (SSD 9526)

I refer to the email from the Department of Planning, Industry and Environment (DPIE) to the Environment Protection Authority (EPA) dated 7 August 2019 seeking the EPA's advice in relation to the adequacy of the proponent's Environmental Impact Statement (EIS) for the Maxwell Underground Coal Mine Project (SSD 9526). The EPA was given an extension until 1 October 2019 to provide its advice in relation to the EIS.

The proponent, Maxwell Ventures (Management) Pty Ltd, a wholly-owned subsidiary of Malabar Coal Limited, is proposing a new underground coal mine in the Upper Hunter Valley near Muswellbrook and Denman to extract high quality coal from four seams in the Wittingham Coal Measure, predominately for the steel making industry, over an approximate 26-year period. The new underground coal mine would utilise some of the infrastructure associated with the existing Maxwell Infrastructure Project.

The EPA has reviewed the EIS and accompanying specialist assessments and has determined that it requires additional information to properly assess the proposal. The EPA's additional information requirements are provided at **Attachment A** to this letter.

If you have any questions about this matter, please contact Matthew Corradin on 02 4908 6830 or by email to hunter.region@epa.nsw.gov.au

Yours sincerely

MITCHELL BENNETT
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Encl:
Attachment A – EPA additional information requirements

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ATTACHMENT A – EPA additional information requirements

Noise

- A table quantifying noise during year 1 construction activities assessed against relevant criteria from the Interim Construction Noise Guidelines (ICNG), instead of the statement that noise will be “inaudible” at the nominated receiver locations;

- A quantitative assessment of the combined times during which construction and operational activities will occur concurrently assessed against relevant criteria from the ICNG and the Noise Policy for Industry (NPfI) and derived Project Noise Trigger Levels (PNTLs). Where exceedances are predicted, an evaluation of feasible and reasonable mitigations measures must be undertaken and reported on;

- A justification as to why construction activities at the northernmost end of the transport and services corridor were excluded in the assessment of operational noise;

- Quantitative data showing predicted low frequency noise level curves (down to 10Hz) at all receiver locations and a comparison with the relevant low frequency criteria contained within the NPfI. Furthermore, more detail explanation of the normalising process in relation to low frequency noise correction must be included, as well as the method for combining noise levels from the Bulga Coal Mine into a single curve; and

- Noise levels both with and without mitigation at all receivers. The NIA appears to selectively present predictions with mitigated and non-mitigated results at Table 5-10 (as indicated by Note 2). This does not provide a stand-alone representation of operational noise levels from the mine. Global scenarios both with and without mitigation included are preferred and readily facilitate the process of recommending conditions.

Air

- A transparent justification of the assumed and adopted input variables used to calculate/model assessed emissions as addressed at points a) to g) below. The Air Quality Impact Assessment (AQIA) does not adequately justify the emissions for the modelled scenarios presented in sections 7.4.1 and Appendix C. Some assumptions and input data used in the emission estimation calculations have not been adequately justified, including:
  a) Peak daily emissions -It is unclear in the AQIA whether peak daily emissions were modelled for each scenario. The proponent must confirm if peak daily emissions were modelled and provide details and calculations for the throughput assumed for each scenario. Where this has not been done, the AQIA must be revised as appropriate.
  b) Dozer emissions - Based on the information provided in the AQIA, emissions from dozer activities are the largest source of emissions for all three modelling scenarios. The emissions inventory does not include expected emissions from dozers on stockpile activities at the Maxwell Infrastructure Project for scenarios 1 and 2 but it does for scenario 3. Given the presence of stockpiles, the proximity of the Maxwell Infrastructure Project to sensitive receptors and the interconnectivity of the proposal and the Maxwell Infrastructure Project, a detailed justification must be provided for not including dozer on stockpile activities for these two scenarios.
  c) Ventilation emissions - Based on the information provided in the AQIA, emissions from ventilation shafts will be one of the main emission sources (second largest source when the mine is fully operational) yet there is no detailed explanation as to how the emission factors were derived or how representative they are of the expected operations.

d) Watering of haul roads - The AQIA has assumed an 85% emission control for watering of trafficked areas including haul roads. The National Pollution Inventory (NPI) notes that 75% emission control is Level 2 watering, equivalent to greater than 2 L/m^2/h. It is unclear whether the dispersion model assumes watering of haul routes for all hours and if the proponent proposes to undertake this level of watering during activities onsite. The AQIA must be revised so that controls are only modelled etc when watering is proposed to be undertaken.

e) Watering/fogging of conveyors, hoppers and transfer points - The AQIA has assumed an 85% emission control for the use of enclosures and fogging sprays for unloading ROM coal to the hopper at the CHPP and a 70% emissions control factor for sprays on the conveyor transfer points. The proponent has not provided detail on whether this will occur continuously during operations or if it will be triggered by particular meteorological conditions. The AQIA must be revised so that controls are only modelled etc when watering/fogging etc is proposed to be undertaken.

f) Exposed surfaces wind erosion other than coal stockpiles not assessed in scenario 3 - Whilst emissions from exposed areas were calculated for scenarios 1 and 2, it is not clear which areas and locations were included for this estimation. Furthermore, no justification was provided not to include emissions from exposed areas for scenario 3. The AQIA should confirm the assumed measures to address potential wind erosion emissions from exposed areas.

g) The ratio of product coal to ROM coal is not consistent across scenarios - A screening review of the emission inventory presented in the AQIA shows discrepancies regarding the product and ROM coal ratios for all three scenarios (results vary between 0.65 and 0.75). In addition, a comparison between annual ROM extraction rates and the addition of product coal loaded to trains and rejects results in a difference that cannot be accounted for.

	Scenario 1	Scenario 2	Scenario 3
Product coal loaded to trains	308,000	1,440,000	5,920,000
Pumped Rejects	207,000	755,000	2,730,000
Total ROM	515,000	2,195,000	8,650,000
Extracted ROM (As per EIS)	467,000	2,010,000	7,970,000
Difference	- 48,000	- 185,000	- 680,000

- Segregated results for the cumulative impact assessment of the short- and long-term averaging periods, including, as a minimum:
  - Project (only) increment,
  - Other modelled sources,
  - Monitored background and/or 'residual dust level', and
  - Cumulative (total) impact.

  The AQIA predicts no additional air quality exceedances due to the proposal but does not clearly present the information used at Sections 7.4.2 and 7.5 to prepare the cumulative impact assessment for expected concentrations for short (24 hour) and long-term (annual) averaging periods.
  The AQIA appears to model Total Solid Particle emissions from neighbouring mines and subtracts the results from annual average monitoring results to calculate 'residual dust levels.' This shows background dust levels from sources in the wider area. However, it is not clear how these contributions were incorporated to assess expected cumulative impacts.
  Whilst results presented in section 8 and Appendix D include "total impact", it is unclear what concentrations have been included in this "total impact". For instance, results presented in Appendix F include a "Total Cumulative Concentration", which appears to be based on unadjusted measured background levels and predicted increments (project only contribution), though this is not entirely clear in the AQIA;

- Tabulated incremental and cumulative impact assessment results for the most impacted receptors for all particle size fractions and averaging periods. Whilst the AQIA presents

results for locations which represent the closest and most likely impacted receptors, it does not include the cumulative 24-hour results for the receptor at which the highest increments are expected (Receptor 389); and

- Additional details on what meteorological triggers, such as wind speed, direction and temperature, will be used in the reactive air quality management system and how this will feed into any Trigger Action Response Plan (TARP).

Water

- Detail of the 'local field data' used for the selection of derived site-specific trigger values which deviate from the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* guideline values;

- A detailed assessment of any discharges from the reverse osmosis plant to waters (Saddlers Creek) and any discharges from any other water management structures/dams, including the Mine Entry Dam, Treated Water Dam, Savoy Dam, Rail Loop Dam, Access Road Dam. This should include an assessment of mixing zones, and an evaluation of mitigation measures;

- A detailed assessment of potential impacts to water resources as a result of fracture propagation in the overlying strata, including from methane degassing and an evaluation of mitigation measures. This assessment must include cumulative impacts to shallower coal seams that are not the target of mining operations which are located above the fracture propagation zones; and

- Further details regarding the management and fate of anticipated groundwater inflows to the underground workings. Dewatering of the coal seams is required to manage groundwater inflows entering the mine voids. The water encountered is likely to be saline, with possible elevated concentrations of other water quality analytes. Inflows will be pumped from void sumps to the surface, but no details were provided regarding where that water will be stored, how it will be stored, and how it will be used or treated.

Waste

- Further detail in relation to brine management is required to address the following:
    - Ensuring that the Brine Dam and Brine Waste Disposal Cell will be designed and constructed in accordance with the EPA's Environmental Guidelines: Solid waste landfills for cell construction hydraulic conductivity and leachate collection,
    - Ensuring leachate or decant from the Brine Waste Disposal Cell is collected and returned to the Brine Dam for evaporation, including contingency measures such as during rainfall periods, and
    - Ensuring leachate, decant and overflows from the Brine Water Management System are managed separately from the mines other water management systems, including contingency measures such as during rainfall periods.