



Your reference :  
Our reference : LIC06/333-29; DOC13/25132  
Contact : Ms Sheridan Ledger; (02) 6332 7608

Mr David Kitto  
Director Mining and Industry Projects  
Department of Planning & Infrastructure  
GPO Box 39  
SYDNEY NSW 2011

5 July 2013

Dear Mr Kitto

I refer to the Environmental Assessment (EA) for the Moolarben Coal Project – Stage 1 Optimisation Modification (Mod 9) received by the Environment Protection Authority (EPA) on 29 May 2013 from ENM. I apologise for the delay in providing this response.

In reviewing the EA-Mod 9, the EPA has identified a number of issues which relate to noise, air and water quality management. Each of these matters is addressed in Attachment 1. It is the EPA's expectation that the matters identified will be addressed by the Moolarben Coal Mine (Moolarben).

Further, the EPA is seeking clarification from the Department of Planning & Infrastructure (DP&I) regarding proposed upgrades to Moolarben's Stage 1 water management system. Details regarding this matter are also contained in Attachment 1 and a response is requested as soon as possible, to prevent further delays in the upgrades being undertaken.

Should you have any further enquiries in relation to this matter please contact Ms Sheridan Ledger at the EPA Central West Office (Bathurst) by telephoning (02) 6332 7608.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Matthew Corradin'.

**MATTHEW CORRADIN**  
**A/Head Central West Unit**  
**Environment Protection Authority**

**ATTACHMENT 1**  
**EPA Response to the Environmental Assessment for the Moolarben Coal Project Stage 1**  
**Optimisation Modification (Mod 9)**

**Noise**

The EPA notes that a Noise Impact Assessment (NIA) has been undertaken for Mod 9 utilising a number of modelling scenarios with differing mining operations and meteorological conditions with an assessment undertaken of the potential impact of drainage flow and low frequency noise.

The NIA has determined that after all feasible and reasonable noise mitigation options have been applied, that exceedences of the Project Specific Noise Level (PSNL) of 35  $L_{Aeq(15min)}$  will occur at five (5) residences during adverse weather conditions. The property identification numbers of these properties are 30, 31, 58, 70 and 75. Additionally, exceedences of the PSNL at property number 63 will also occur. It should be noted that the noise limits for this property (as determined during the Stage 1 initial assessment) are 37  $L_{Aeq(15min)}$  day and evening and 38  $L_{Aeq(15min)}$  night.

The NIA provides that each of these properties will be placed in "Noise Management Zone" and that Moolarben will investigate or consider acoustical treatment or negotiated agreements for each of these properties. It does not, however, commit to undertaking such actions.

*EPA Recommendations*

As you would be aware, the established practice between the DP&I and the EPA is to follow the protocols below for setting the intrusive noise criteria for a coal mine project:

- (a) If the predicted noise levels at a receiver are less than the PSNL: Set criteria for the receiver at predicted level with a minimum level of 35 dB(A).
- (b) If the predicted noise levels at a receiver are the same as the PSNL: Set criteria at the PSNL.
- (c) If the predicted noise levels at a receiver are 1-2 dB above the PSNL: Set criteria at the predicted level, provided that we are satisfied that all feasible and reasonable noise mitigation measures have been implemented.
- (d) If the predicted noise levels at a receiver are 3-5 dB(A) above the PSNL: Set criteria at predicted level provided that we are satisfied that all feasible and reasonable noise mitigation measures have been implemented. DP&I may assign architectural treatment rights to the property (the right to obtain noise mitigation treatment to a residence on request).
- (e) If the predicted noise levels at a receiver are greater than 5 dB(A) above the PSNL: EPA notifies DP&I that it will not usually licence to such levels and that the Negotiated Agreement provisions of the NSW Industrial Noise Policy (INP) are available to the proponent. DP&I may assign acquisition rights to the property.

Justice Preston found in the recent Bulga – Warkworth appeal (*Bulga Milbrodale Progress Association Inc v Minister for Planning and Infrastructure and Warkworth Mining Limited* [2013] NSWLEC 48) that the established practice outlined above is not consistent with the approach recommended by the INP. Specifically, that the acceptability of the residual noise impact needs to be evaluated, taking into account the matters in Section 8.2.1 of the INP.

Section 8.2.1 states that "it is important that, as far as possible, the noise assessment quantifies any remaining or residual impacts that exceed the PSNL, after applying feasible and reasonable mitigation strategies". Where this is the case, the acceptability of the residual noise impacts are to be evaluated taking into consideration the factors listed in Section 8.2.1 of the INP.

In light of the recent Bulga-Warkworth appeal and as the EA-Mod 9 indicates that the PSNL will be exceeded at six (6) residences, the EPA requires Moolarben undertake the evaluation required by Section 8.2.1 of the INP. Further, until such time as this evaluation is undertaken, the EPA will not provide DP&I with recommendations regarding PSNL's for Mod 9.

While the EPA is aware that it is, at the current time, required to provide comment on only the EA for Mod 9, consideration must be given to the potential cumulative issues with Moolarben Stage 2 (Stage 2) and commitments made for Stage 2 to reduce noise levels from Open Cut 2 (OC2) and Open Cut 3 (OC3). The EA-Mod 9 indicates that the cumulative noise assessment includes noise from Stage 2, as well as neighboring mines. When the EPA considers the cumulative assessment for Stage 2 against Mod 9, the predicted cumulative noise levels are lower than those predicted for Stage 2. Clarification should be provided as to how the cumulative noise levels were determined for Mod 9 and whether (if approved) the cumulative noise levels predicted for Stage 2 will alter if Stage 1 is operated as per Mod 9 (all mining activities to be undertaken 24 hours, 7 days per week).

The EPA understands that an undertaking was made by Moolarben, in relation to Stage 2, to restrict coal extraction and haulage operations in OC2 and OC3 to the day time period, with overburden stripping activities to be conducted during evening and night periods to reduce noise impacts on residences located in the direction of the prevailing meteorological conditions (ENE winds). The EPA notes that such an undertaking has not been made in Mod 9. The EPA is concerned that when prevailing meteorological conditions occur, noise levels above those predicted may occur from operations in the Open Cut 1 (OC1) extension area in the years 6-11, during the period in time that the environmental bund is not in place. As Moolarben has considered a restriction to operations in OC2 and OC3 is warranted for Stage 2, the EPA considers it appropriate for Moolarben to justify why a similar restriction has not been recommended as a feasible and reasonable mitigation measure to eliminate the PSNL exceedences at the six (6) residences.

### Air Quality

The EPA notes that an Air Quality Impact Assessment (AQIA) has been undertaken to determine Annual TSP and PM<sub>10</sub> and PM<sub>10</sub> 24 hour emissions from Moolarben. Further, that there are no predicted exceedences of the criteria at any privately owned assessment location, aside from commercial location 46B.

It should be noted however that during year 2 and year 6 operations, the 24 hour PM<sub>10</sub> maximum 24-hour average concentrations will exceed 40 µg/m<sup>3</sup> at four (4) and six (6) privately owned residences in the Ulan village, respectively. Additionally, the 24 hour PM<sub>10</sub> maximum 24-hour average concentrations will exceed 40 µg/m<sup>3</sup> in year 16 at residences 70 and 63 (24 hour PM<sub>10</sub> maximum 24-hour average concentration prediction of 49.4 µg/m<sup>3</sup>).

It is the EPA's experience that PM<sub>10</sub> maximum 24-hour average concentrations above 30 µg/m<sup>3</sup> generally trigger dust complaints in the Ulan area. So while there are no predicted exceedences, the predicted dust levels, are likely to trigger concern by the Ulan area community.

In relation to the proposed management and monitoring strategies, the EPA concurs with the establishment of an additional TEOM to the south-west of Moolarben. The EPA considers though that it may be beneficial to establish this monitor in the near future, rather than in the mid to late lifetime of the Mine, to establish background data in the area.

Further, Moolarben has committed to continuing to implement best practice dust management and mitigation measures as outlined in the document *NSW Coal mining Benchmarking Study: International Best Practice Measures To Prevent and/or Minimise Emissions of Particulate Matter from Coal Mining*

(Katestone 2010). It should be noted that the EPA has recently required (through a Pollution Reduction Program) Moolarben to assess whether it is controlling 80% of dust emissions from its haul roads. The EPA considers that while Moolarben may be achieving such a control efficiency for haul roads, it is premature to suggest that it will continue to implement this level of control.

### **Surface Water**

The EPA notes that a Surface Water Impact Assessment (SWIA) has been undertaken for Mod 9. Of particular interest to the EPA is section 6.5.7 which discusses the sizing of sediment dams. The SWIA provides that sediment dam volumes have been based on a settling zone volume based on 90<sup>th</sup> percentile 5-day duration rainfall (35.6mm) where the settling zone equals 50% of the sediment storage volume.

The EPA considers that the sediment dam volumes should be sized with a conservative approach, that is, the sediment dams will only overflow during extreme rainfall events, at most 1-2 spills/year. As such, the EPA is of the opinion that the sediment dam volumes should be based on a 95<sup>th</sup> percentile 5-day rainfall duration. At the current time, the Environment Protection Licence (EPL) utilises this approach and Moolarben will be required to ensure that its sediment dams are adequately sized to ensure compliance with the requirements of the EPL.

The EPA has been discussing the upgrade of Stage 1 of Moolarben's water management system with the Mine. Moolarben has been required to complete a number of Pollution Reduction Programs (PRP) to review the current system and determine the upgrades which are required to improve the system and reduce the potential for sediment laden discharges. The upgrades are discussed in detail in the document *"Moolarben Coal Operations Pty Ltd Stage 1 Open Cut & CHPP Water Management Assessment and Upgrade"* prepared by Arkhill Engineers October 2012. In summary, the upgrades include, but are not necessarily limited to:

- Increase the capacity of the CHPP area sediment dams to contain runoff from a 50 year-24 hour duration rainfall event, where required;
- Desilt and increase the capacity of dam SD10;
- Installation of new dams SD10(B) and SD12(B);
- Increase capacity of "Cockies dam" including upstream clean water diversion upgrades;
- The removal of the unsuitable stockpiles in the CHPP area and the remediation of the disturbance area;
- Installation of clean water diversions around the unsuitable stockpile area and SD14;
- Remediation of the rail loop batters; and
- Increase the capacity of open cut sediment dam OC1-6.

The EPA and Moolarben came to agreement on the above upgrades in late 2012 and the EPA drafted a further PRP requiring Moolarben to complete them by 18 December 2015. Subsequently DP&I advised Moolarben the upgrades would require assessment under the Environmental Planning & Assessment Act 1979 (EP&A Act) and recommended they be included and assessed as part of the EA-Mod 9. It should be noted the EPA considers the upgrades to be generally consistent with the Stage 1 approval and as such, assessment is not required. The EPA notes that there is no reference in the EA-Mod 9 to the upgrades.

The EPA considers that the upgrades are necessary and is disappointed that significant delays have occurred. Should DP&I require the upgrades to be assessed under the EP&A Act, this should form part of Mod 9. It is the EPA's intention to include a PRP on Moolarben's EPL requiring the upgrade to be conducted. As such, the EPA requests that DP&I provide clarification to both Moolarben and the EPA regarding assessment requirements for the upgrades. Where DP&I considers that assessment is required under the EP&A Act, the EPA recommends that this assessment form part of Mod 9 to prevent further delays.