



Our reference: DOC13/78542, EF13/2634
Contact: Emma Paull (02) 4908 6828
Electronic correspondence to: hunter.region@epa.nsw.gov.au

NSW Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Mr Matthew Sprott – matthew.sprott@planning.nsw.gov.au

Dear Mr Sprott

BENGALLA MINING COMPANY PTY LTD - BENGALLA OPEN CUT COAL MINE

I refer to your email of 30 August 2013 and the document titled "*Continuation of Bengalla Mine Environmental Impact Statement*" ("the EIS"), prepared by Hansen Bailey Environmental Consultants, and dated September 2013 and requesting assessment and comment from the Environment Protection Authority (EPA).

The EPA has reviewed the EIS, and provides the following comment and recommended conditions (noting comments below that recommended conditions of approval in relation to noise impacts are not able to be provided at this time) at **Attachment A**. Please note that these conditions do not repeat conditions which are already a part of Environment Protection Licence 6538 ("the EPL") issued to Bengalla Mining Company.

The EPA understands that the proposed project includes:

- a westward expansion of the open cut pit to extract an additional 316 million tonnes of run of mine (ROM) coal;
- extension of the life of the Bengalla Coal Mine by 20 years;
- increased maximum annual production from 10.7 million tonnes per annum (Mtpa) to 15 Mtpa of ROM coal;
- an increased operational workforce from 400 to 900 full time equivalent personnel;
- increased blast frequency from 2 to 4 per day and from 4 to 12 per week, and changes to approved blast times;
- modifications of the existing rail loading infrastructure, but no change to maximum approved coal train movements;
- relocation of a 6 km section of the Bengalla Link Road; and
- ancillary changes to mine infrastructure.

PO Box 488G Newcastle NSW 2300
Email: hunter.region@epa.nsw.gov.au
117 Bull Street, Newcastle West NSW 2302
Tel: (02) 4908 6800 Fax: (02) 4908 6810
ABN 43 692 285 758
www.epa.nsw.gov.au

Noise Impact Assessment

The assessment predicts exceedances of the Project Specific Noise Levels ("PSNL") that must be addressed by the proponent in accordance with Chapters 8 and 9 of the Industrial Noise Policy ("the INP"). The EPA will then be in a position to recommend noise limits for all residences predicted to receive noise levels up to and including the PSNL. For any other receivers predicted to receive noise levels above the PSNL, the Department of Planning and Infrastructure ("DPI") is best positioned to weigh the social and economic benefits of the proposal against potential adverse noise impacts and to determine if a higher noise limit is justified. If a higher noise limit is accepted by DPI following this assessment and consent is granted, the EPA will include these limits in the EPL.

The adopted background noise levels in Table 3 of the Acoustic Impact Assessment ("AIA") are generally lower than those in Table 4. It is unclear how the levels in Table 3 have been derived, and there appears to be little relationship to the Table 4 values except to support the assertion that the Table 3 levels are conservative and should be used in the assessment. While the EPA is happy to accept a conservative assessment, further information should be provided on what noise sources are giving rise to the elevated measured background levels in Table 4, given that they are not audibly from Bengalla operations.

Section 4.7 of the AIA states that modifying factors have been applied to the source sound power levels of individual plant and equipment items. This has been done to simplify the assessment of a large number of sources that do not require the same modifying factors. The EPA considers that this approach is contrary to the requirements of Section 4.3 of the INP. This clearly states that 'the modifying factors are to be applied to the noise from the source measured/predicted at the receiver and before comparison with the criteria.' Any modifying factors applied in the AIA should be amended accordingly and the results, outcomes and actions arising from this change should be revised in the AIA.

The EPA notes that the proposed increase in frequency of blasting proposed for the project is significantly higher than the ANZECC blasting guidelines. Any increase in the frequency of blasting beyond that recommended in the guidelines may cause significant community concern.

Air Quality Impact Assessment

The Air Quality Impact Assessment ("the AQIA") has generally been undertaken according to the requirements of the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales, August 2005 (Approved Methods) and has generally addressed the issues previously raised by the EPA.

Specifically, the AQIA has been amended to address the issues raised at the adequacy review stage by including further details of:

- the method used to determine cumulative 24-hour average PM10 (particulate matter with an aerodynamic diameter of less than 10 microns) and actual 24-hour average PM10 impacts;
- 1-hour average nitrogen dioxide (NO₂) impacts;
- current and proposed dust mitigation strategies;
- predicted impacts at all impacted receptors including mine owned receptors; and
- cumulative impacts when including new or recent mining proposals surrounding the Bengalla mine.

Air impacts are predicted to exceed EPA assessment criteria for 24-hour and annual average PM10, total suspended particulates (TSP), deposited dust (DD) and NO₂ despite the incorporation of best practice management measures

Dispersion modelling predicts air quality impacts may exceed EPA assessment criteria at:

- 16 privately owned residence for 24-hour average PM10, based on Project only (incremental) impacts;
- 17 privately owned residence for annual average PM10;
- 4 privately owned residence for annual average TSP;
- one privately owned residence for deposited dust;
- one privately owned residence for 1-hour average NO₂, due to diesel emissions; and
- a number of privately owned receptors for 1-hour average NO₂, due to blast emissions.

A commitment to the following measures to reduce the risk of impacts exceeding EPA criteria at affected receptors has been included:

- best practice dust management measures;
- improvements to the current air quality monitoring network; and
- updating the existing dust and blast management systems with a real time air quality management system combined with predicted meteorological forecasting.

The EPA has significant concerns with the predictions of NO₂ included in Appendix H "*Isopleth Diagrams – Blast emissions*" of Appendix G of the EIS.

Several of these predictions indicate impacts of blast fume at sensitive receptors above appropriate standards. The EPA also noted that modelled results are based on 1 hour averages and, as the inherent nature of blasts result in short term impacts, actual results may be higher.

The EPA recommends that prior to the determination of this project that DPI consult with the Department of Health to determine appropriate standards for post blast gases including, but not limited to, NO₂, NO, SO₂ and CO. The proponent should then be required to prepare a Blast Management Plan that appropriately demonstrates how compliance with the identified standards will be achieved.

If you require any further information regarding this matter please contact Emma Paull on 4908 6828.

Yours sincerely

 1.11.13

BILL GEORGE
A/Head Regional Operations Unit – Hunter
Environment Protection Authority

ATTACHMENT A
RECOMMENDED CONDITIONS OF APPROVAL – BENGALLA OPEN CUT MINE

Air Conditions

1. Air Quality Management Plan

1. 1 The Proponent must develop, implement and maintain air quality emission control measures for all air pollutant generating activities. The air quality emission control measures must be consistent with best available technology and best environmental practice for emission control.
1. 2 The Proponent must document details of all proposed air quality emission control measures. The information must include:
 - explicit linkage of proposed emission controls to the site specific best practice determination assessment;
 - timeframe for implementation of all identified emission controls;
 - key performance indicator(s) for emission controls;
 - monitoring method(s) including location, frequency and duration;
 - response mechanisms;
 - responsibilities for demonstrating and reporting achievement of key performance indicator(s);
 - record keeping and complaints response register; and
 - compliance reporting.
1. 3 Prior to commencement of operations, the Proponent must appoint a recognised air quality specialist to review and approve the air quality emission control measures. The review of the air quality emission control measures must include a review against each of the mitigation measures and management practices recommended and described in the documents submitted to support the Project development application.
1. 4 The air quality emission control measures must be implemented prior to the commencement of any dust generating activities associated with the Project.

2. Operating Conditions – Dust and other air pollution

- 2.1 All areas in or on the premises must be maintained in a condition that prevents or minimises the emissions of dust to air;
- 2.2 Any activity carried out in or on the premises must be carried out by such practicable means to prevent or minimise the emissions of dust to air;
- 2.3 Any plant operated in or on the premises must be operated by such practicable means to prevent or minimise dust or other air pollutant; and
- 2.4 All blasting activities in or on the premises must not cause or permit an impact from gases, smoke, fume or mist caused by a blast or blasts to any person not on the premises.

Definition of “impact from gases, smoke, fume or mist caused by a blast or blasts” includes by reason of the strength, nature, duration, character or quality of the gases, smoke, fume or mist:

- (i) any impact that is harmful to (or likely to be harmful to) a person; or
- (ii) any impact that interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person.