NSW EPA

Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001
Attention: David Mooney

Your reference:
Our reference: PART 3A DOC13/6353; DOC13/6173; LIC08/226-02
Contact: Karen Marler (02) 4908 6803

20 MAR 2013

Dear Mr Mooney

**Application No. 05_0136 MOD 3 - Abel Coal Project Mine Plan and Coal Production Modification**

I refer to your email of 21 February 2013 and the document titled *"Abel Upgrade Modification Environmental Assessment"* (the EA) prepared by Resource Strategies and received by the Environment Protection Authority (EPA) on 22 February 2013. The Department of Planning and Infrastructure (DoPI) has requested comments and recommended conditions of approval from the EPA for the project.

The EPA has reviewed the EA, and understands that the proponent is seeking approval for the following:

- Allow continuation of underground mining within the approved area (ML 1618) using a combination of longwall, shortwall and bord and pillar extraction methods.
- An increase in ROM coal production from the Abel mine from 4.5 Mtpa to 6.1Mtpa.
- An increase in coal processing at the Bloomfield mine from 6.5 Mtpa to 8.5 Mtpa and an associated increase in the amount of reject material produced by the Bloomfield mine.
- Modifications and upgrades to the Bloomfield Coal Handling and Preparation Plant (CHPP)
- Installation of a new downcast ventilation shaft to support longwall mining in the lower Donaldson seam

The EPA provides the following comments and advice in relation to the project. Recommended conditions of approval are provided at **Attachment A**. An Environment Protection Licence (EPL 12856) currently authorises operations at the Abel underground mine and the proponent will need to make application to the EPA to increase the scale of coal production authorised by the EPL (production is currently limited to 2 Mtpa) and possibly the licences premises definition.

Air Quality

The air quality impact assessment provided with the EA has been conducted in accordance with the requirements of the Approved Methods for the Modelling and Assessment of Air pollutants in NSW. The main proposed modification which will impact on air quality is an increase in ROM coal production from 4.5 Mtpa to 6.1 Mtpa, and an increase in processing at Bloomfield Coal CHPP from 6.5 Mtpa to 8.5 Mtpa.

The assessment predicts impacts of the proposed modification only, and does not provide a comparison with the existing approved operation. However, impacts from the proposal should increase in the order of 30% or less from existing approved operations in proportion to the increased coal processed at the CHPP.

The assessment predicts all impact should comply with relevant EPA criteria. The existing EPL conditions prescribe conditions for the management of air quality at the premises. No additional recommended conditions of approval are considered necessary.

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Noise Assessment

Based on the predictions made in the Noise Impact Assessment (NIA) provided with the EA, the EPA is able to licence operational noise impacts at all assessed sensitive receivers. The EPA recommends that DoPI include the recommended conditions of approval provided at **Attachment A** in any development consent granted for the project.

The EPA understands that the proponent maintains a Noise Monitoring Program for the premises, and this practice should continue. Additionally, the EPA recommends that the proponent should commit to only using best practise rolling stock (including only locomotives which have been approved by the EPA for operation on the NSW rail network) in rail transport connected with the project.

The EPA also notes that noise impacts resulting from the construction of the new ventilation shaft were assessed against the criteria in the *Interim Construction Noise Guideline* ("ICNG", DECC 2009). This assessment should have been undertaken in accordance with the *New South Wales Industrial Noise Policy* ("INP", EPA 2000) as the ICNG does not apply to mining. However, the EPA is prepared in this case to licence the predicted impacts providing the proponent commits to preparing and implementing a detailed Construction Noise Management Plan (CNMP), prior to commencement of construction activities, that includes but is not necessarily limited to:

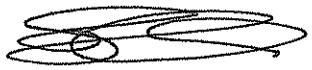
(a) identification of each work area, site compound and access route (both private and public);
(b) identification of the specific activities that will be carried out and associated noise sources at the premises and access routes;
(c) identification of all potentially affected sensitive receivers;
(d) the noise and vibration objectives identified in accordance with the *New South Wales Industrial Noise Policy* and *Assessing Vibration: A Technical Guideline*;
(e) assessment of potential noise and vibration from the proposed construction methods (including noise from construction traffic) against the objectives identified in (d);
(f) where the objectives are predicted to be exceeded an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise impacts;
(g) description of management methods and procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during construction, including the early erection of operational noise control barriers;
(h) procedures for notifying residents of construction activities that are likely to affect their noise and vibration amenity; and
(i) measures to monitor noise performance and respond to complaints.

The EPA also recommends that DoPI note that although the impacts of temperature inversions were predicted in the EA referring to inversion strength as a temperature lapse rate, the EPA proposes requiring the proponent to monitor for the presence of inversion conditions using the sigma-theta method and that limits would accordingly apply up to and including F class inversions rather than the modelled 3°C/100m lapse rate. If this is not acceptable to the proponent, the EPA is willing to consider alternative approaches including direct measurement of temperature lapse rate.

Recommended conditions are provided at **Attachment A.** These conditions do not repeat conditions which already exist in EPL 12856.

Please contact me on (02) 4908 6803 if you require any further information regarding this matter.

Yours sincerely



**KAREN MARLER**
**Head Regional Operations Unit – Hunter**
**Environment Protection Authority**

Enclosure: Recommended conditions of approval – Abel Upgrade Modification Project

**ATTACHMENT A**

## RECOMMENDED CONDITIONS OF APPROVAL – RAVENSWORTH EAST RESOURCE RECOVERY PROJECT

## ADMINISTRATIVE CONDITIONS

**Works to be undertaken in accordance with information supplied**

**A1.** Except as provided by these recommended conditions of approval, the works and activities shall be undertaken in accordance with the proposal contained in:

(a) The development application DA 05_0136 MOD3 submitted to the NSW Department of Planning and Infrastructure;
(b) The document *"Abel Upgrade Modification Environmental Assessment"* prepared by Resource Strategies (undated)

unless otherwise specified in these conditions of approval.

## Proposed Noise and Meteorological Conditions

### Limit Conditions

**L6.1** Noise generated at the premises must not exceed the noise limits in the table below. The locations referred to in the table below are indicated by Figure 2 of the *Abel Upgrade Modification Noise Impact Assessment* (SLR Consulting Australia Pty Ltd November 2012).

| | | NOISE LIMITS dB(A) | | | |
|---|---|---|---|---|---|
| **Locality** | **Location** | **Day** | **Evening** | **Night** | |
| | | $L_{Aeq\ (15\ minute)}$ | $L_{Aeq\ (15\ minute)}$ | $L_{Aeq\ (15\ minute)}$ | $L_{A1\ (1\ minute)}$ |
| *Location L* | *Kilshanny Avenue, Ashtonfield* | 40 | 40 | 40 | 47 |
| *Location K* | *Catholic Diocese* | 37 | 37 | 37 | 45 |
| *Location I* | *Lord Howe Drive, Ashtonfield* | 36 | 36 | 36 | 45 |
| *Location R* | *281 Lings Road, Buttai* | 50[(1)], 35 | 35 | 35 | 45 |
| *Location S* | *189 Lings Road, Buttai* | 43[(1)], 35 | 35 | 35 | 45 |

| | | | | | |
|---|---|---|---|---|---|
| *All other locations* | *Any other residence not owned by the licensee or subject to a private negotiated agreement* | 35 | 35 | 35 | 45 |

(1) During construction of the new downcast ventilation shaft, for a maximum twelve weeks duration from the commencement of construction.

**L6.2** For the purpose of condition L6.1;

- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sunday and Public Holidays.
- Evening is defined as the period 6pm to 10pm.
- Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and Public Holidays.

**L6.3** The noise limits set out in condition L6.1 apply under all meteorological conditions except for the following:

a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or
b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
c) Stability category G temperature inversion conditions.

**L6.4** For the purposes of condition L6.3:

a) Data recorded by the meteorological station identified as EPA Identification Point No. <to be identified in the licence> must be used to determine meteorological conditions ; and
b) Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.

**L6.5** To determine compliance:

a) with the $L_{eq(15\ minute)}$ noise limits in condition L6.1, the noise measurement equipment must be located:
   - approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or
   - within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable
   - within approximately 50 metres of the boundary of a National Park or a Nature Reserve.

b) with the $L_{A1(1\ minute)}$ noise limits in condition L6.1, the noise measurement equipment must be located within 1 metre of a dwelling façade.

c) with the noise limits in condition L6.1, the noise measurement equipment must be located:
   - at the most affected point at a location where there is no dwelling at the location; or
   - at the most affected point within an area at a location prescribed by conditions L6.5(a) or L6.5(b).

**L6.6** A non-compliance of condition L6.1 will still occur where noise generated from the premises in excess of the appropriate limit is measured:

- at a location other than an area prescribed by conditions L6.5(a) and L6.5(b); and/or
- at a point other than the most affected point at a location.

**L6.7** For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

**L7.1** The airblast overpressure level from blasting operations at the premises must not exceed 120dB (Lin Peak) at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

**L7.2** The airblast overpressure level from blasting operations at the premises must not exceed 115dB (Lin Peak) at any noise sensitive locations for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

**L7.3** Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10mm/sec at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

**L7.4** Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5mm/sec at any noise sensitive locations for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

**L7.5** Blasting at the premises may only take place between 9:00am-5:00pm Monday to Friday. Blasting is not permitted on public holidays.

**L7.6** Blasting outside of the hours specified in L7.5 can only take place with the written approval of the EPA.

**L7.7** The airblast overpressure and ground vibration levels in conditions L7.1 to L7.4 do not apply at noise sensitive locations that are owned by the licensee or subject to a private agreement, relating to airblast overpressure and ground vibration levels, between the licensee and land owner.

## Monitoring Conditions

**M7.1** The meteorological weather station must be maintained so as to be capable of continuously monitoring the parameters specified in condition M7.2.

**M7.2** For each monitoring point specified in the table below the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns.

**Point <to be identified in the licence>**

| Parameter | Units of Measure | Frequency | Averaging Period | Sampling Method |
|---|---|---|---|---|
| Air temperature | °C | Continuous | 1 hour | AM-4 |
| Wind direction | ° | Continuous | 15 minute | AM-2 & AM-4 |
| Wind speed | m/s | Continuous | 15 minute | AM-2 & AM-4 |
| Sigma theta | ° | Continuous | 15 minute | AM-2 & AM-4 |
| Rainfall | mm | Continuous | 15 minute | AM-4 |
| Relative humidity | % | Continuous | 1 hour | AM-4 |

**M8 Requirement to Monitor Noise**

**M8.1** To assess compliance with Condition L6.1, attended noise monitoring must be undertaken in accordance with Conditions L6.5 and:

a) at each one of the locations listed in Condition L6.1;
b) occur quarterly in a reporting period;
c) occur during each day, evening and night period as defined in the NSW Industrial Noise Policy for a minimum of:

- 1.5 hours during the day;
- 30 minutes during the evening; and
- 1 hour during the night.

d) occur for three consecutive operating days.

**M9 Blast Monitoring**

**M9.1** To determine compliance with condition(s) L7.1, L7.2, L7.3 and L7.4 :

a) Airblast overpressure and ground vibration levels experienced at the following noise sensitive locations must be measured and recorded for all blasts carried out on the premises;

- Licensee to provide exact location details for all blast monitoring locations with the licence variation application >.

b) Instrumentation used to measure and record the airblast overpressure and ground vibration levels must meet the requirements of Australian Standard AS 2187.2-2006.

**NOTE:** A breach of the licence will still occur where airblast overpressure or ground vibration levels from the blasting operations at the premises exceeds the limit specified in conditions L7.1 to L7.4 at any "noise sensitive locations" other than the locations identified in the above condition.

**Reporting Conditions**

**R4 Noise Monitoring Report**

A noise compliance assessment report must be submitted to the EPA with the Annual Return. The assessment must be prepared by a suitably qualified and experienced acoustical consultant and include:

a) an assessment of compliance with noise limits presented in Condition L6.1; and
b) an outline of any management actions taken within the monitoring period to address any exceedences of the limits contained in Condition L6.1.

**Additions to Definition of Terms of the licence**

- NSW Industrial Noise Policy - the document entitled "New South Wales Industrial Noise Policy published by the Environment Protection Authority in January 2000."

- Noise - sound pressure levels' for the purposes of conditions L6.1 to L6.7.

- "Noise sensitive locations" includes buildings used as a residence, hospital, school, child care centre, places of public worship and nursing homes. A noise sensitive location includes the land within 30 metres of the building.