Our reference: DOC13/74152-01; EF13/2546
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

DRAYTON SOUTH COAL PROJECT – RESPONSE TO SUBMISSIONS

Reference is made to your email of 18 October 2013 requesting comment from the Environment Protection Authority (EPA) on a document titled *"Drayton South Coal Project Response to Submissions"* ("the Report"). The report was prepared by Hansen Bailey Environmental Consultants and is dated May 2013.

The EPA has previously reviewed the report in response to a request from the Planning Assessment Commission ("the Commission"). Correspondence outlining the results of that review was forwarded to the Commission on 20 November 2013.

A copy of that advice is enclosed for your information.

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

Yours sincerely

MITCHELL BENNETT
Head Regional Operations Unit – Hunter Region
Environment Protection and Regulation

Encl. Copy of the EPA's Correspondence to the Planning Assessment Commission dated 20 November 2013

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NSW EPA

Our reference: DOC13/68145-2
Contact: Mr Anthony Savage

Ms Megan Webb
Commission Secretariat
NSW Planning Assessment Commission
GPO Box 3415
Sydney, NSW 2001

Dear Ms Webb,

Re: Letter: Meeting request – Planning Assessment Commission Review of the Drayton South Coal Mine Proposal, Muswellbrook and Singleton LGAs

I refer to your letter to Mr Buffier, dated 30 September 2013, and the subsequent meeting between the Drayton South Coal Project Planning Assessment Commission and the Environment Protection Authority on 16 October 2013.

As requested at the meeting, EPA has reviewed additional documentation submitted by Anglo Coal for the project, including the project Response to Submissions. EPA's review of the additional information for air quality and noise is attached (Attachment 1- Air and Attachment 2 - Noise respectively).

I trust the information provided addresses the issues raised by the Planning Assessment Commission satisfactorily. If there are any follow-up issues you wish to discuss please contact Mr Anthony Savage – 9995 6085 (Air) or Mr Larry Clark - 9995 5786 (Noise).

Yours sincerely

20/11/13

MARK GIFFORD
Chief Environmental Regulator
Environment Protection Authority

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NSW EPA

Attachment 1: Air

1. Documents reviewed

- Hansen Bailey, May 2013, *Drayton South Coal Project Response to Submissions.*
- Hansen Bailey, August 2013, *Drayton South Coal Project Preferred Project Report.*
- PAEholmes, 25 October 2012, *Final Drayton South Air Quality and Greenhouse Gas Impact Assessment, Appendix F - Drayton South Coal Project Environmental Assessment.*
- Pacific Environment Limited, 9 April 2013, *Drayton South modelling with revised assumptions, Appendix C -. Drayton South Coal Project Response to Submissions.*
- SKM, 4 October 2013, *Review of the Drayton South Coal Project air quality impact assessments.*

2. Summary of results

Based on the available information, 24-hour PM10 is the constraining air quality assessment criteria for the proposal[1]. Table 1 provides a summary and comparison of maximum 24-hour PM10 assessment results from the proposal Environmental Assessment (EA) and Response to Submissions (RTS).

Table 1 – Summary of assessment results

	Exhibited EA – 2012		RTS - 2013	
	Private receptor	Mine owned receptor	Private receptor	Mine owned receptor
Project Increment				
Maximum concentration (ug/m3)	106	101	57	51
Number of days above 50 ug/m3	23	26	3	1
Number of receptors above 50 ug/m3	6	8	2	1
Cumulative				
Maximum concentration (ug/m3)	>150	Not provided	Not provided	Not provided
[1]Number of days above 50 ug/m3	102	92	61	54
[1]Number of receptors above 50 ug/m3	9	4	9	4

1) Cumulative assessment results not available for all receptors.

3. Air quality issues raised by the Planning Assessment Commission

The EPA met with the Planning Assessment Commission on 16 October, 2013 to discuss air quality issues associated with the proposed development. The Planning Assessment Commission requested that the EPA advise:

a) Whether the modelling completed for the project is realistic

b) If the proposed level of emission control is achievable

[1] The criteria exceeded by the greatest magnitude and/or frequency. EPA's impact assessment criteria for 24-hour averaged PM10 is 50 ug/m3.

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c) Whether any errors contained in the air quality assessment are material

3.1. Is the modelling realistic?

The methodologies adopted are generally consistent with the requirements outlined in *the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (EPA, 2005). Additionally, the methodology adopted is consistent with methods employed for the majority of recent coal mine assessments in NSW and the magnitude of the model results appears plausible when compared with other mining projects in the vicinity of the proposal.

There are inherent difficulties associated with assessing large scale extractive industry operations, particularly where existing mining activities occur in the vicinity of the proposal. This issue is aptly raised on page 30 of the RTS, which advises that there is uncertainty associated with predicting 24-hour PM10 impacts from mining operations due to factors such as accurately resolving variability, intensity, duration and location of proposed activities. Additionally, predicting peak 24-hour PM impacts is confounded by variation in weather and background PM concentration, including impacts from existing nearby mines.

On this basis, when advising on recent mining proposals, the EPA has focused its comments on the requirement for best management practice source control. This approach is consistent with the Dust Stop program administered by the EPA for existing open cut coal mines in NSW.

3.2. Is the level of control achievable?

It is not clear if the assessed emission controls, as proposed, will be achieved in practice.

The EPA has implemented the Dust Stop program for all open cut coal mines in NSW. Dust Stop is a staged program aimed at identifying and implementing best management practice source control at NSW coal mines.

The EPA commissioned a review of international best practice particle controls from coal mines, *NSW Coal Mining Benchmarking Study: International Best Practice Measures to Prevent and/or Minimise Emissions of Particulate Matter from Coal Mining* (Katestone Environmental, 2010)[2].

For each control method nominated, Table 2 compares the assessed level of control with documented levels from Katestone (2010).

Table 2 – Summary of assessed emission controls

Source	Method	Assessed control	Katestone (2010)
Haulage on unpaved roads o In pit haul roads o Out of pit haul roads	Application of suppressants[1]	80% 85%	84%
Wind erosion on exposed surfaces o Houston open mine area o Overburden dump and disturbed area	Aerial seeding[2] Watering	70% 50%	Not quantified 50%
Bulldozing topsoil	Water application	50%	50%
Drilling overburden and coal	Water injection[3]	70%	3%-96%

1) Documented results vary to considerably lower levels (Table 66, Katestone Environmental (2010))
2) Aerial seeding has been trialled however the effectiveness was not quantified (Table 71, Katestone Environmental (2010))
3) Considerable variation in documented effectiveness (Table 82, Katestone Environmental (2010)).

As shown in Table 2, the assessed controls represent a blanket percentage reduction in emissions based on the proposal broadly adopting a practice, such as watering. There is currently minimal information on the way each management practice will be implemented for the site, for example the suppressant application rate or frequency required to achieve the assessed level of control.

[2] http://www.epa.nsw.gov.au/resources/air/KE1006953volume1.pdf

To ensure that assumed and assessed controls are achieved in practice, nominated management practices should be measurable and auditable with key performance indicators clearly identified. As a minimum, for each dust generating activity at the site, the proponent should implement following:

1. Key performance indicator(s);
2. Monitoring method(s);
3. Location, frequency and duration of monitoring;
4. Record keeping;
5. Response mechanisms; and
6. Compliance reporting.

In addition to control measures included in the assessment, proposed new or expanding mine projects should achieve the same level of emission control as existing mining operations, at a minimum. EPA has issued existing mines, including Ango Coal's current Drayton Coal Mine, with three pollution reduction programs as part of the Dust Stop program[3].

1. *Wheel Generated Dust* – The Licensee must achieve and maintain a dust control efficiency of 80% or more on all active haul roads.
2. *Disturbing and Handling Overburden Under Adverse Weather Conditions* - The Licensee must alter or cease the use of equipment on overburden and the loading and dumping of overburden during adverse weather conditions to minimise the generation of particulate matter.
3. *Trial of Best Practice Measures for Disturbing and Handling Overburden* - The Licensee must submit a report documenting an investigation and trial of best practice measures for the control of particulate matter from the use of equipment on overburden and the loading and dumping of overburden.

3.3. Are assessment errors material?

SKM (2013) provides a thorough review of the air quality assessment included in the EA and RTS. The SKM review appears technically accurate and EPA agrees with the general recommendations contained within the review.

As noted above, the air quality assessment(s) generally fulfil the EPA's published assessment requirements and the scale of predicted impact appears consistent with similar proposals. However; there are several anomalies that could materially change the results of the assessment(s), including the number of receptors predicted to experience exceedances of the PM impact assessment criteria. A summary list of significant issues is provided below, with more detail provided in SKM (2013):

- Representativeness and applicability of moisture content used in emission estimation equations;
- Representativeness and applicability of silt content used in emission estimation equations;
- Calculation errors in the application of emission estimation equations;
- Confirmation of the total estimated material handled, including assumptions of overburden material density;
- Confirmation of correct prognostic meteorological model (TAPM) setup; and
- Demonstration that assumed and assessed PM emission controls are achievable in practice.

4. Additional matters

4.1. Acquisition

Department of Planning and Infrastructure is progressing the development of an updated acquisition framework. The work is being progressed in collaboration with NSW Health and the EPA. The EPA recommends the Planning Assessment Commission contact the Department of Planning and Infrastructure for additional information on matters relating to acquisition in the first instance. The EPA would be happy to meet with the Planning Assessment Commission, in conjunction with the Department of Planning and Infrastructure to discuss matters relating to acquisition in more detail.

[3] Refer to the EPA public register for additional details, http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33001&SYSUID=1&LICID=1323

NSW EPA

Attachment 2: Noise

The EPA noted in its submission on the exhibited Environmental Assessment that:

1. In the assessment of low frequency noise a correction factor had been applied to the source sound power levels rather than at the receiver. This is at odds with the procedure described in the Industrial Noise Policy (INP; EPA, 2000) and could result in noise levels being underestimated.

   The Response to Submissions provided further information on the approach presented, however not sufficient for EPA to audit and accept. In these situations the EPA usually reiterates in advice to the Department of Planning and Infrastructure that the modifying factors in the INP for annoying characteristics would be included in any EPA noise licence limits, and that it is the responsibility of the proponent to meet the Licence requirements.

2. Sleep disturbance noise contours were presented as a combination of reasonable worst case operation conditions (L_{Aeq}) *plus* maximum noise levels. The Response to Submissions clarified that this approach was adopted because it was considered to provide a more realistic and representative assessment than the use of maximum noise levels alone. EPA accepts this explanation and approach.

The PAC also sought clarification of some issues:

1. The Rail Infrastructure Noise Guideline (RING) was published in May 2013, replacing the Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (IGANRIP). Appendix 3 of the RING sets out criteria for non-network rail lines.

2. An Acquisition Policy, as mentioned in the EPA CEO's letter of October 2012, is being led by the Department of Planning and Infrastructure and has been developed to a draft stage.

For further information or if you have any questions please contact Larry Clark on 9995 5786.

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