Mr Ian Follington  
Chief Executive Officer  
Coalpac Pty Ltd  
Invincible Colliery  
Castlereagh Highway  
CULLEN BULLEN NSW 2790  

11 October 2012  

Dear Mr Follington  

Proposed Coalpac Consolidation Project – Castlereagh Highway, Cullen Bullen  

As you are aware, the Commission is currently conducting a Review, under section 23D(1)(b)(ii) and Schedule 3 of the NSW Environmental Planning and Assessment Act 1979, of your Coalpac Consolidation Project Proposal (10_0178) at Cullen Bullen, near Lithgow. The terms of reference are to:

1. Carry out a review of the Coalpac Consolidation Project, and:
   a. Consider the Environmental Assessment of the project, all issues raised in submissions on the project, and any information provided on the project during the course of the review;
   b. Assess the merits of the project as a whole, paying particular attention to the potential:
      • Local health and amenity impacts of the project, particularly dust, noise and blasting impacts noting its proximity to the village;
      • Biodiversity impacts of the project;
      • Water resource impacts of the project; and
   c. Recommend appropriate measures to avoid, minimise and/or offset these impacts.

The Commission met with Coalpac representatives on 18 September 2012 to visit the site and to provide Coalpac with an opportunity to brief the Commission on the proposal. Some issues requiring clarification or further information arose at the meeting and at the public hearings. You will already be aware of most of these and my understanding is that Coalpac is undertaking the necessary work to provide the relevant information on at least some of them. However, for the sake of completeness the issues are set out below along with the Commission’s questions.

(1) At the meeting of 18 September the issue of the potential impacts on native species that utilise either the pagoda or gully habitats exclusively, or to those species (such as the broad-headed snake, brush-tailed rock wallaby and lyrebird) which require access to both habitat types either seasonally, or on some other basis was raised.

The Commission noted that the focus on setback distances in the EA and Response
to Submissions appeared to be on maintaining structural integrity of the pagodas and not on the impacts on the fauna that utilised the pagodas and adjacent slope and gully areas as habitat. The response was that the issue had not been given detailed consideration by Coalpac.

What further consideration has Coalpac given to this issue and what, if any, proposals does Coalpac wish to advance to deal with it?

(2) At the meeting of 18 September Coalpac was unable to provide the differential production figures for the two main mining techniques proposed to be used (open cut and highwall). Coalpac undertook to provide these figures. The Commission considers that the figures should be available by area and by year. Please provide both ROM and product quantities for each.

(3) Submissions were made at the public hearings that the Long Swamp discharge point (LDP001) has caused pollution, including showing photos of red staining on the walls of the collection pond at the discharge point.

(a) Can Coalpac provide the Commission with all available test results for this LDP?

(b) Coalpac state that the LDP has not been used since 2008, but that it is to be retained for ‘flexibility’. The Commission does not consider ‘flexibility’ to be adequate justification for retention. Does Coalpac wish to provide further argument in support of retention?

(4) At the meeting of 18 September, and on multiple occasions during the public hearings, concern was raised that to meet noise and dust criteria in Cullen Bullen and the surrounding areas all the mitigation and management strategies proposed by Coalpac would have to operate with 100% effectiveness.

A proposition that there be no night time operations until such time as:
- all mitigation and management strategies are implemented,
- those strategies are demonstrated to be fully effective, and
- revised modelling has confirmed that 24 hr criteria will be met
was suggested as one way of dealing with this situation.

Can Coalpac advise:

(a) what would be the anticipated period (years) of restricted operations for Coalpac to demonstrate that it could meet the 24 hr criteria when operating 24/7?

(b) Whether such an approach is feasible in the context of the proposed mining operation?

(c) What the impact would be on the viability of the project if Coalpac could not demonstrate compliance and was restricted to day and evening operations for the duration of the project?

(5) Submissions have been made querying the greenhouse gas calculations presented in the EA. The EA estimates the greenhouse gas emissions from the project at 0.0069 Gigatonnes of carbon dioxide equivalent per annum. A claim made is that the EA then compared this to the total CO2 amount in the atmosphere, rather than
against total annual anthropogenic emissions of greenhouse gases, and hence vastly underestimated the project’s proportional generation of global greenhouse gases. The relevant submissions are attached, including advice from academics in the field provided to the Commission at the public hearing.

Can Coalpac advise the Commission whether it continues to support the calculations in the EA in the face of these criticisms?

(6) As set out in the Acoustic Impact Assessment (EA Appendix H by Bridges Acoustics from Section 4.4) a number of best-practice noise control measures, including specific machinery noise attenuation works, are required to achieve compliance with the Potential Specific Noise Criteria (PSNC). Without these proposed mitigation measures Bridges Acoustics advises that the project would be unacceptable from both social-economic and environmental perspectives. In section 4.5.7 of the Response to Submissions, there are conflicting statements as to whether ‘no’ receivers within Cullen Bullen would receive noise levels above the PSNC, or whether there would be ‘no significant exceedences’ of the PSNC. Can Coalpac clarify its noise impacts in relation to Cullen Bullen village residential receivers and the Cullen Bullen public school against the PSNC?

Responses to these issues, or any other information Coalpac may wish to provide following the meetings, would need to be provided to the Commission by close of business 2 November 2012. However, it would assist the Commission if completed responses to individual issues could be forwarded as soon as they are available, rather than waiting for the whole package of responses to be assembled.

Other issues on which the Commission may wish to obtain Coalpac’s views may arise during the rest of the Review. The Commission recognises that the timeframes for response on such issues will, of necessity, be short. The Commission will therefore keep such requests to a minimum.

Ms Sera Taschner (Commission Secretariat) can assist with any enquiries concerning the Commission’s requests on (02) 9383 2117 or email sera.taschner@planning.nsw.gov.au.

Yours sincerely

Dr Neil Shepherd AM
Chair, Coalpac Commission
Comments on the Coalpac EA
Dr Haydn Washington, Visiting Fellow Institute of Environmental Studies, UNSW; and Hon., Sec. Colo Committee
Climate science mistakes

• Coalpac EA states on p. x Exec. Summ. that: ‘estimated current global emissions of 3000 gigatonnes of carbon dioxide equivalent per annum’.
• Repeated on p. 119 main report
• Human anthropogenic emissions are in fact c. 28.9 Gt CO₂/yr, as noted by their consultant, PAE Holmes, on p. 110 of Appendix G
• Coalpac is using the figure for the total atmospheric reservoir of CO₂, not human emissions. By so doing they seek to reduce the % this project increases human emissions.
• 7 Mt CO₂/yr is 0.007 Gt and this is 0.02% of world emissions not 0.0003 % as repeatedly stated in the Coalpac EA.
• This mistake was pointed out in submissions and yet Coalpac continues in its ‘Response to Submissions’ to seek to deny their basic mistake in climate science.
Climate science mistakes - 2

• Confusion over scope 1, 2, and 3
• P. 55 Coalpac response says Australia’s carbon footprint already includes emissions of scope 2 and 3, yet clearly they don’t include emissions for a mine that is not yet built.
• It also states ‘any coal bound for export markets (currently accounted for within the Project’s Scope 3 emissions) will comprise part of Australia’s annual GHG emissions’
• This is incorrect. The Australian National Accounts data does not include exported coal. The CO₂ in exported coal amounts to 520 Mt/yr and is clearly not part of the total footprint of 546 Mt/yr
• The proposed increase of 7 Mt CO₂ is thus significant and does in fact represent 1.3% of the current Australian carbon footprint. It is misleading to refer only to scope 1 emissions (fuel use on site) in regard to a coal mine. Its greenhouse impact occurs when the coal is burnt.
Hi Hayden,

Sorry for the delay in replying. Feel free to use my response to assist your actions.

The Executive Summary p. x of the Coalpac project Environmental Assessment (EA) states "Greenhouse gas emissions from the Project (including the mining, transportation and final use of the product) are estimated to be 0.0069 Gigatonnes of carbon dioxide equivalent per annum compared to the estimated current global emissions of 3,000 Gigatonnes of carbon dioxide equivalent per annum."

There is a significant error in this statement. The current global emissions are exaggerated in this statement by a factor of about 100. Global anthropogenic emissions of carbon dioxide equivalent were 49 Gigatonnes of CO2-e per year in 2004 (IPCC Fourth Assessment Synthesis report, page 36). Global anthropogenic emissions of CO2 alone were 38 Gigatonnes per year in 2004.

It appears that the Coalpac EA has used an estimate of the total CO2 amount in the atmosphere, which is approximately 3000 Gigatonnes, rather than the total annual anthropogenic emissions of greenhouse gases into the atmosphere.

As a result, the fractional contribution of the Coalpac project to total global anthropogenic emissions is underestimated by a large factor of about 60.

This error should be acknowledged and corrected.

In the response to submissions, EA compares the annual greenhouse gas emissions from the project to the total atmospheric load of carbon dioxide, which is an inappropriate and irrelevant comparison.

Best wishes, David

Prof David Karoly
School of Earth Sciences
University of Melbourne, VIC 3010, AUSTRALIA
ph: +61 3 8344 4698
fax: +61 3 8344 7761
email: dkaroly@unimelb.edu.au

Hi David,

Just resending this to make sure it came through? The Commission of Inquiry on Coalpac is on Wed 19th, so was hoping to have a statement from you pointing out the difference between human emissions and the atmospheric carbon reservoir? It would be good to stop mining companies getting away from twisting climate science!

Regards, Haydn
Statement regarding human CO$_2$ emissions and the atmospheric CO$_2$ reservoir

I have been approached by environmental scientist Dr Haydn Washington, a Visiting Fellow at the Institute of Environmental Studies at UNSW, for comment in regard to statements made in the Coalpac Environmental Assessment. These are:

The quoted figure on p. x of the Exec Summary of the EA refers to:

‘estimated current global emissions of 3000 gigatonnes of carbon dioxide equivalent per annum’.

In section 4.4.8 (p. 45) of the ‘Coalpac Response to Submissions’ it states:

The submissions regarding a ‘hundred-fold error’ in calculating the percentage of GHG emissions from the Project in terms of the world’s current carbon dioxide load (3,000 Gt of CO$_2$-e) is incorrect. The calculation is as follows:

\[
\frac{7 \text{ Mt}}{1,000,000,000} = 0.007 \text{ Gt} 
\]

That is, 0.007 Gt (Project’s estimated contribution)/3,000 Gt (world’s current carbon dioxide load) * 100 = 0.00023% (rounded to 0.0003% in the AQIA for conservatism).

Assuming these are correct, my comment is purely in regard to the climate science involved. There appears to be a confusion in these statements between human emissions of CO$_2$ and the reservoir of CO$_2$ in the atmosphere. In fact, global anthropogenic emissions are 7.7 Gt of C or 7.7 x 3.67 = 28.2 Gt CO$_2$ (see: http://www.nasa.gov/images/content/544800main_globe-CarbonCycle-hi.jpg) or possibly an upper limit of 36.8 Gt CO$_2$ (http://co2now.org/Current-CO2/CO2-Now/global-carbon-emissions.html). Data on anthropogenic emissions are available from the Carbon Dioxide Information and Analysis Centre (http://cdiac.ornl.gov/ftp/ndp030/global.1751_2008.ems).

The reservoir of CO$_2$ in the atmosphere is of course much larger at around 750 Gt carbon or 2752 Gt CO$_2$ (http://www.nasa.gov/images/content/544800main_globe-CarbonCycle-hi.jpg) or 720 Gt C and 2642 Gt CO$_2$ (Falkowski et al, 2000). The Appendix G to the Coalpac report lists the atmospheric reservoir (unreferenced) as 3,000 Gt.

Human CO$_2$ emissions are not the same as the CO$_2$ reservoir in the atmosphere. The former can be rounded off to around 30 Gt CO$_2$/yr while the atmospheric reservoir is around 3000 Gt – a hundred times larger. It is important not to confuse these two separate aspects of climate science. For an overview of some common misconceptions regarding the carbon cycle, see Cawley (2011).

Yours faithfully,

Gavin Cawley, Senior Lecturer, University of East Anglia, email: G.Cawley@uea.ac.uk
Reference
