AngloAmerican

METALLURGICAL COAL

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RE: Statement from Mark Heaton to the Queensland Flood Commission of Inquiry

6th September 2011

Dear Sir/Madam

Please find below responses to questions raised by the Queensland Flood Commission of Inquiry (QFCoI) following Anglo American Metallurgical Coal Pty Ltd's (AAMC) original submission dated the 1st April 2011.

1. **List of coal mines operated by Anglo American and water and tailings storage and discharge procedures at those mines.**
   - Callide (being divested);
   - Capcoal mining project (underground and open cut);
   - Dawson mining project;
   - Drayton (NSW);
   - Foxleigh; and
   - Moranbah North Coal.

AAMC's Queensland coal mines have a range of water and tailings storages that are listed in their Environmental Authorities (EAs). The EAs also outline the conditions under which each of the mines are able to discharge water.

2. **Details of the difference in approach pre- and post-2008 in terms of licensing of water discharges from Anglo American mines.**

All of AAMC's coal mines had their EAs amended prior to 1 January 2010 to include the new Fitzroy model conditions. In all cases, these new conditions were far more prohibitive in relation to the release of water and effectively represented a zero discharge scenario as evidenced by the 2010/11 releases under EA conditions and the requirements by nearly all coal mines in the Bowen Basin for Transitional Environmental Programs (TEPs).

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3. **Anglo American's role and details of activities in the negotiations about the model conditions in the lead up to the 2010/2011 wet season.**

Throughout 2010, the Queensland Resources Council facilitated a number of meetings between the industry and the Department of Environment and Resource Management (DERM). The industry insisted that in the event of large to extreme rainfall, the new release conditions would force coal mines to accumulate large volumes of water. Industry predictions and warnings proved accurate.

4. **Particulars of the 'strict and ... unrealistic criteria' imposed on Anglo American mines by transitional environmental programs approved by DERM, including details of why Anglo American was unable to comply with those criteria.**

There were a range of requirements contained in TEPs that significantly influenced the amount of resources required to meet conditions and the ability of sites to release water:

- Requests for information relating to downstream environmental values that were contained in reports already submitted to DERM (e.g. REMP) or could not be collected due to flooding.
- Requirements for daily, weekly, monthly and end of TEP reporting. This was followed by numerous requests from DERM for data that has already been supplied.
- Significant delays in the approval of TEPs that lead to decreased flows and lost opportunities to release.
- The position of release points within catchments were not considered meaning that ephemeral streams were not necessarily flowing at the rate required by the TEP even though the major rivers were in flood.

5. **Details of why amendments to transitional environmental programs were required and were still being applied for in April 2011, including by reference to particular mines as examples.**

The TEP for Dawson North (an operation within the Dawson mining project) is still being negotiated today as the granted TEP did not allow release of a significant volume of water and 4.5 GL of water still remains in the pit that was planned to be mined in May 2011.

6. **Elaboration of the statement 'TEPs appear to put the impact on the environment ahead of impacts on safety', including by reference to particular examples.**

The TEPs greatly restricted the volumes of water that could be released to the environment, as they imposed constraints on both water quality and receiving environment flow rates. As a consequence, water that could not be released to the environment had to be kept on site, despite water stores being close to their design storage allowance. At the Capcoal mining project, one storage held water 6 m above its normal operating level, creating a risk of water infiltration into the underground Grasstree coal mine. The Grasstree coal mine experienced groundwater inflows in excess of what is normally measured. We attribute some of this water to the fact that the over-saturation of the catchment forced aquifers to leak into underground mines (this is a complex technical area and we have commissioned specific studies to determine with more accuracy the sources of water into the mine). Dewatering of the Grasstree coal mine was essential to maintain the safety of the workforce. However, it also raised the potential for non-compliant discharge and an environmental assessment had to be made before dewatering proceeded. The safety of workers should always take precedence over environmental considerations.

7. **Elaboration of Anglo American's concerns regarding the timeframes for approval of transitional environmental programs, including:**
   a. **dates of application and approval/refusal for all transitional environmental programs granted or refused in relation to an Anglo American coal mine, and**
   b. **particulars of problems caused by the length of time taken for transitional environmental programs to be approved.**

Applying for a TEP required coal mines to:

- submit an initial request;
- DERM to provide comments on the initial proposition;
- coal mines to provide additional information;
- coal mines to provide a final request; and
- DERM to approve the final request.

In some cases, three iterations of submission and comments were required. We have summarised below the timeframes experienced at each site.

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Dawson North TEP

Date	TEP	Outcome	Conditions
04/01/2011	Application for Dawson South	TEP MAN11500 granted	$2,896 paid
04/01/2011	Application for Dawson North	Delay in response from DERM	Ultimately rejected
14/01/2011	Re-apply for TEP Dawson North pit	Delay in response from DERM	
27/01/2011	Re-Submitted TEP for Dawson North	Delay in response from DERM	
31/01/2011	Meeting with DERM officers		
07/02/2011	Application for TEP	$10,317 fee paid	Stop releasing 13/05/2011
16/02/2011	Teleconference with DERM, AAMC	DERM approved a TEP with unworkable conditions contrary to discussions held on the 31st January	
17/02/2011		TEP MAN11600 granted with current conditions	
06/04/2011	DERM Officers visit site	Ed Donohue & Terry Farley on site to inspect the concerns. The result was positive discussions about release conditions	
19/04/2011	Application for TEP 11500 &11600	Revised release conditions following site visit	Passive releases of clean water should have already been occurring as any retention of clean water from the catchments would/could affect the total permissible downstream water allocations due to the reduced watershed to the rivers.
12/05/2011		Application for TEP 11500 &11600 refused	
23/05/2011	DERM request further information		Justification for release
02/06/2011	Application for TEP to pump fresh water from Elliott's Dam	Request for more information from DERM	Further justifications

06/06/2011	Long list of further information requested by DERM to support the Elliott's Dam release	Application failed	
10/06/2011	Application to extend TEP's	Application granted 11th June for an extension but pumping must stop on 1st July	Water conditions did not allow significant quantities to be pumped as the Dawson river was slowing (we needed 50m3/sec in the river to release 3,000 EC) No progressive release possible
17/06/2011	Meeting at Rockhampton with DERM (Ed Donohue, Terry Farley, Carl Grant, Brian Barry & Larry Hantler)	Invitation to submit a TEP application with progressive release rates to maintain 450 EC in the Dawson river measured at Bindaree	
20/06/2011	Application was made following the June 17th meeting		
29/06/2011		Application refused	
01/07/2011	All pumping stopped including fresh water from Elliott's Dam		

The delay in approval of the Dawson North TEP in particular meant that flows in the Dawson River had decreased and EC had increased. This significantly impacted on the ability to release water.

8. **Elaboration of the statement 'potential for environmental harm from the TEP release does not appear to be placed in the context of the environmental harm associated with a catastrophic failure of water storage structures', including by reference to particular examples.**

TEPs preventing the release of water represents a significant risk because they lead to mines accumulating large volumes of low quality water. The water quality gradually deteriorates so that if and when a failure occurs, mines release extremely large volumes of water of a quality poorer than it would have been if the coal mines had been allowed to release it during the large event. The resulting environmental impact of extremely large releases of poor quality water is

much worse than what could have been achieved with controlled smaller releases of mine water of better quality.

9. **Elaboration of the statement 'the ephemeral nature of many of the waterways adjacent to Anglo American operations was not considered in the first round of TEPs meaning that required conditions for flow could rarely be met even though the catchment was in flood', including by reference to particular examples.**

For coal mines located in the upper part of their catchment, it is near impossible to meet both the concentration limits and the flow constraints imposed in TEPs, When these sites receive a lot of rain, there is potential for the mine water to be diluted to a concentration that meets the release conditions. By the time this dilution has occurred, the flow rate in the receiving creek would have reduced considerably and the flow constraint would not be met.

10. **Explanation of the monitoring requirements of transitional environmental programs granted to Anglo American and how these requirements were onerous.**

As outlined above, reporting was required at the start and end of releases as well as daily during release. Reports were required weekly, monthly and at the end of the TEP. Monitoring involved some parameters that can be immediately measured (e.g. pH, EC), but many that need to be sent away and analysed at labs. This was often a limitation due to significant restrictions on access to sites and also getting samples to labs.

11. **Specific examples of data that was requested to support an application for a transitional environmental program, but was both non-existent and impossible to obtain.**

The requests for modifications of the TEP focused on very specific details that did not make any difference to the assessment of environmental harm, such as exact location of release points and elaboration of the method used to estimate stream flows. For example:

- "Page 2 of the TEP states that water will be pumped into Kaui Creek from W South Pit and Pit V simultaneously. Table 2 lists 1 release location. It is unclear whether the water is to be released from one point with mixing occurring 'in pipe' or if water is to be released from two points with mixing occurring in Kaui Creek. This needs to be clarified within the document and if two points used, detailed within the TEP." Whether one or

two release points were used made no difference to the end results, namely that water was going to be released into Kaiu Creek.

- "Table 6 states that the gauging station is a 'Manual Estimation'. Foxleigh Coal Mine maintains gauging stations on Roper Creek at Easting 671,504, Northing 7,469,164. Is there any way this gauging station cannot be utilised to determine stream flow? Alternatively, some sort of calculation based on understood data from the point nominated could be used – i.e. calculations based on the height of the water. The department cannot quantify the statement 'Manual Estimation'." The manual estimation referred to the calculation method based on an estimate of the height of water. Given the weather conditions, accurate height predictions were difficult. This shows an example of DERM not taking into account the practical reality of dealing with extreme events.

12. A description of the specific extra resources the Department of Environment and Resource Management made available to review transitional environmental programs at the height of the flood, to Anglo American's knowledge.

AAMC understands that extra staff were recruited and many DERM staff worked long hours.

13. Elaboration of the description of the transitional environmental program process as 'bureaucratic'.

The TEP was bureaucratic because of the lead times involved for approval, delays in approval based on administrative matters, onerous reporting requirements and ongoing requests for data that did not exist or could not be collected.

14. A description of the recovery and de-watering of Anglo American mines, including:

a. time taken for particular mines to de-water and become operational.

The Dawson and Capcoal mining projects are still not dewatered. Approximately 18 GL of water need to be removed to have adequate Design Storage Allowance for another above average wet season. AAMC has committed close to $100M to construct a desalination plant at Capcoal, install over 100 km of pipes and 30 pumps, upgrade roads and investigate techniques to enhance evaporation. This represents a significant capital investment to address water management issues.

b. impediments to a faster de-watering and recovery.

Delays in approval of a workable TEP for Dawson North. Availability of pumps and pipes and long lead times required for desalination plants and equipment to enhance evaporation.

c. specific provisions of transitional environmental programs which impeded the de-watering and recovery processes.

Specification of downstream EC values without reference to elevated upstream EC values for the Dawson North TEP. Required flow rates in ephemeral and perennial streams. Unrealistically low EC levels given flow levels in large rivers.

15. **Elaboration of Anglo American's suggestion that provisions for emergency response during floods and cyclones should be included in a coal mine's EA, including:**

    a. **what type of provisions Anglo American envisages**

Conditions in each sites EA that specifically relate to flood events. These would be less stringent than those normally required to avoid accumulation of water.

    b. **what would trigger the application of those provisions.**

Definition of an extraordinary or extreme event within the mine sites EA.

    c. **what completion mechanism would be used.**

When the requirements of the definition of an extraordinary or extreme event could no longer be met, conditions would revert back to those defined in the EA.

    d. **how those provisions would assist in an efficient business recovery for mine operators.**

This would prevent delays in obtaining approvals and missed opportunities for release. It would prevent accumulation of water in pits that deteriorates rapidly over time with effectively no possibility of environmental harm.

Please do not hesitate to contact our Regional Environment Manager, Carl Grant, on [redacted] if you have any further queries.

Yours sincerely

[redacted]

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