DOCUMENTS TO BE TENDERED – First Statement of Mark Heaton (Anglo American)

| Doc | Document ID | Date | Exhibit no. |
|-----|--|----------|-------------|
| 1 | First Statement of Mark Heaton (Anglo American) | 06.09.11 | |

QFCI Jm 22 09 11 Date: 606 Exhibit Number:





METALLURGICAL COAL

Anglo American Metallurgical Coal Pty Ltd

Level 11 201 Charlotte Street Brisbane 4000 Australia GPO Box 1410 Brisbane 4001 Australia

Qld Flood Commission of Inquiry 400 George St GPO Box 1738 Brisbane 4001

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).



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.



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 if you have any further queries.

Yours sincerely



Mark Heaton General Manager – Open Cut Operations

T: _____

www.angloamerican.com.au



METALLURGICAL COAL

Anglo American Metallurgical Coal Pty Ltd

Level 11 201 Charlotte Street Brisbane 4000 Australia GPO Box 1410 Brisbane 4001 Australia

Qld Flood Commission of Inquiry 400 George St GPO Box 1738 Brisbane 4001

15th September 2011

RE: Responses to Further Questions Raised by the Queensland Flood Commission of Inquiry

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 responses dated the 6th September 2011.

1. Flood preparedness activities undertaken in advance of the 2010/2011 wet season. Throughout 2010, the Queensland Resources Council (QRC) 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.

When the Bureau of Meteorology issued a wet season forecast in late August indicating that the conditions were predicted to be worse that had been observed since 1974, the Capcoal environmental team undertook a pre-wet season review which identified some risks and required infrastructure upgrades (these could not be installed on time). Most actions arising from the review were implemented but they focused on addressing the risk of non-compliance with release conditions. A water management committee was also created to compile, communicate and address other potential water-related issues arising from high rainfall. They purchased two additional pumps (MF385HP multi-flow diesel pumps). They also re-assigned the tasks of the water management contractor.

The early start to the wet season in 2010 (August/September) and the 3 month prediction window for the Southern Oscillation Index meant that there was not sufficient time for engineering solutions to water issues relating to an extreme wet season to be implemented. The 2010/11 wet season exceeded all conservative design parameters for water management structures (it was a 1:>100 year wet season).

2. Particular issues regarding the environmental authority at those mines, including concerns about its negotiation and drafting, inability to comply or risks to safety or the environment.

The predictions for the 2010/11 very clearly indicated that it was going to be well above average. AAMC participated in QRC forums requesting that their EA's be reviewed prior to the wet season.

Anglo American Metallurgical Coal Pty Ltd



- 3. Particular issues regarding any transitional environmental program or emergency direction granted or considered during the period 1 October 2010 to 30 July 2011, including:
 - a. Reason for the TEP or ED, and whether it was effective in resolving the problem.

Moranbah North requested and received and Emergency Direction (ED) on 20 December 2010. Significant amounts of rain had been received in prior weeks and overnight an additional >80mm fell creating an situation with the potential for dam failures and uncontrolled releases unless additional ability to discharge water was provided. The limitation was a flow of 39m3/sec in the river which only provided an additional maximum discharge capacity of 100l/sec to 39,000l/sec of flow to dilute. A TEP superseding the ED allowing additional discharge points was granted on 24 December. The response in granting these authorities in an emergency situation was rapid and appreciated.

A total of 13 TEP's were granted across four sites (Callide, Capcoal, Dawson and Foxleigh). A total of approximately 4,000 ML of water was released (excluding passive overflow from Bundoora Dam at Capcoal) but more than 50,000 ML still remains on site and a further 25,290 ML needs to be released prior to the next wet season to ensure sufficient capacity to contain water from another above average wet season. Therefore, while the TEP's assisted in releasing some water, they were not successful in releasing sufficient water to ensure that mines have sufficient storage capacity by the 1st November for another above average wet season.

b. Concerns arising from the terms of the TEP or ED, including inability to comply or risks to safety or the environment.

This question has been answered in our initial and subsequent submission (particularly the answer to question 6).

c. Any adverse effects downstream of any discharges, including to the environment, drinking water or public health.

Monitoring and observations undertaken by AAMC staff across our operations would indicate no environmental harm to existing values as a result of the release of water through TEP's. In fact, our estimates indicate that significantly more water could have been released during high flow conditions with no potential to cause environmental harm.

4. Concerns about the process of obtaining a TEP or ED including as to transparency, speed, considerations taken into account, reasons given or consultation.

This question has been answered in our initial and subsequent submission (see answer to question 7).

5. To Anglo American's knowledge, effects on the environment, drinking water or public health of discharges from the mine site during the period 1 October 2010 to 30 July 2011.

This question has been answered above in question 3c.



6. Details of the process of negotiating the new Fitzroy Model Conditions with DERM in 2011, and any concerns arising.

The process of developing the new Fitzroy Model Conditions has involved two workshops attended by DERM and industry and significant consultation. AAMC acknowledge the effort that DERM has gone to with this collaborative project. While some issues still remain with the water model conditions, they are an enormous improvement on the existing conditions and, if implemented appropriately over the next few months, will allow mines to release significantly more water under their Environmental Authorities (EA's) than they were able to do in 2010/11. It should be noted that the regulated dam conditions are still being reviewed and these will have a significant interaction with model water EA conditions. The regulated dams review process has not been particularly collaborative to date but recent indications from DERM are that they will endeavor to compromise to obtain mutually acceptable outcomes.

7. Whether the new terms are advantageous or disadvantageous to Anglo American in its management of water at those mines.

As outlined above (see response to question 6), the new model water conditions are a significant improvement over the existing conditions and will allow more release of water if appropriately implemented prior to the 1st November. It should still be noted, however, that AAMC still has some issues that were not resolved to our satisfaction (e.g. requirements within Water Management Plans and Receiving Environment Monitoring Programs).

Please do not hesitate to contact our Regional Environment Manager, Carl Grant, on

if you have any further queries.

Yours sincerely

Mark Heaton General Manager – Open Cut Operations

www.angloamerican.com.au