Cobbora Mine issues:

1. Evans & Peck '*Review of Potential Water Impacts'*

Summary

Water Sources

Piv The discussion of water security for the Cudgegong Valley is based on median rainfall years. The security concerns of the community and local government are based on low rainfall years. During the millennium drought the Macquarie-Cudgegong Water Sharing Plan was suspended in 2007 and high security water licences in the Cudgegong were set at 80%.

There seems to be no reference to this in discussion of water availability in low rainfall years.

There is an indication that the full entitlement of the high security licence for 3,311 ML from the Cudgegong River may be called on more frequently than the water balance analysis suggests.

Conclusions

P ix The issue of assessment of the transfer of Cobbora high security water licences from below Burrendong Dam into the Cudgegong using the new drought of record model is unresolved.

The report states that this reassessment has been commenced by NOW and State Water. This raises the question of the modeling that was supplied to the consultants to Mid-Western Regional Council to confirm the NOW assessment.

4.4 Licenced Water Sources

4.4.1 Groundwater – the issue of implementing the water sharing rules for the Lower Talbragar River water source to manage the incidental 'take' of base flows though aquifer interference has not been clearly identified.

The Hunter unregulated water sharing plan has been amended to exempt mining operations from these rules. However, in the Murray Darling Basin the rules to protect base flows have been calculated in the assessment of the Sustainable Diversion Limit. Any amendment to the *Water Sharing Plan for the Macquarie Bogan Unregulated and Alluvial Water Sources 2012* that covers the Lower Talbragar water source will have implications on the Basin Plan.

4.4.2 Cudgegong River

The development of a new reserve level in Windamere Dam for the new drought of record is still under negotiation. This will impact the availability of bulk water transfers to Burrendong Dam.

The assessment of the transfer of Cobbora high security licences into the Cudgegong River occurred before the decision around bulk water transfer availability has been finalized. The report also raises the issue of bulk water transfers in section 8.1.

4.4.3 Lower Talbragar River Water Source

The lack of clarity around water use and licencing requirements has important implications on water access for the environment, basic rights users and other licence holders at times of low flow in this unregulated system.

6.3 Flow in Talbragar River

Reference is made to cumulative impacts of mining on flow in the Talbragar River in relation to approved interceptions to base flows by Ulan Mine upstream.

Reference is also made to Ulan Mine proposal to offset losses to base flow by discharge of treated surplus mine water.

Ulan is still in negotiation with NSW Office of Water in regard to groundwater systems that are connected to the Murray Darling Basin and those connected to coastal systems. Ulan is also reconsidering the proposal to pipe treated mine water to the Talbragar.

The cumulative impacts of mining on flow in the Talbragar River cannot be assessed until issues relating to the Ulan mine are resolved. This is particularly significant in times of low flow.

Access to water for the environment, basic rights and stock and domestic users on the Talbragar River under the rules of the *Water Sharing Plan for the Macquarie Bogan Unregulated and Alluvial Water Sources 2012* have not been adequately considered.

8.1 Cudgegong River

The proposed Extraction Strategy Agreement with State Water would involve the 'mop-up' of excess flows in the Cudgegong before they enter Burrendong Dam. This would appear to have the effect of subsequently requiring additional bulk transfer of water from Windamere Dam, the utility of this operational strategy appears questionable.

There is major concern that issues relating to water management in the Cudgegong River are yet to be resolved in relation to the new drought to f record.

8.2 Talbragar River

The loss of 62% of base flow in a 10^{th} percentile low flow year is of particular concern in relation to Sandy Creek and Laheys Creek.

There is a significant lack of information in relation to loss of base flows, surface runoff and proposed offsets for the Cobbora mine proposal.

Potential additional costs to mine operations:

Summary/Water Demands

P iii The proponent has indicated that chemical dust suppressants could be used to supplement water in the event of a shortage. There is no clear comparison of costs.

Summary/Water Quality Impacts

Pviii Recommended change in operating strategy so that all water that exceeded the adopted discharge criteria be transferred to a mine water dam. This would require facilities to allow transfer of water from sediment dams to mine water dams in the event of non compliance with discharge criteria

5.4.3 Groundwater Availability for Mine Operations

Proposals to improve access to groundwater include in-pit or out-of-pit dewatering bores, horizontal and inclined seepage holes drilled into the pit face or dewatering galleries.

These are likely to add to the total cost of the project.

5.5 Limitations of Water Balance Modelling

Local experience with inaccurate water balance modeling for the Wilpinjong, Moolarben and Ulan Mines in the Mudgee region has led to a number of costly solutions including the installation of reverse osmosis plants to treat mine water for discharge into the environment. The EPA also had to turn off current pollution licence conditions to allow raw mine water to be discharged into the environment because of excessive water inflows into the three mines in December 2010.

This is unacceptable and should not be an outcome of the approvals process for the Cobbora Mine.

The cost of a reverse osmosis plant should be included in the final mine plan.

Conversely, the proposal to purchase 'temporary trade' water from the Cudgegong River in times of severe water shortage is also an additional cost to the project.

The proposal to implement mechanical dewatering of tailings has the potential to reduce make up water requirements but is estimated to cost an additional $2 per tonne.

The true cost of water management for the proposal must be costed into the project development.