OUT18/6053

Ms Mandana Mazaheri
Resource and Energy Assessments
NSW Department of Planning and Environment

By email: mandana.mazaheri@planning.nsw.gov.au

Dear Ms Mazaheri

Cowal Gold Mine Modification 14 (DA 14/98 MOD 14)
Comment on the Environmental Assessment

I refer to the email of 12 April 2018 to the Department of Industry in respect to the above matter. Comment has been sought from relevant branches of Lands & Water and Department of Primary Industries. Any further referrals to Department of Industry can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

The department provides the following recommendations for consideration in assessment of the proposal. Detailed comments are provided at **Attachment A**.

Recommendation prior to project approval

- The proponent provides additional information regarding the transport and storage of contaminants sourced from seepage from the proposed Integrated Waste Landform in the short, medium and long term (ie until hydrologic equilibrium is re-established post mining).

Recommendation post project approval

- The current measure implemented by the proponent to maintain the Bland Creek Paleochannel Borefield above established trigger levels set out in the current Water Management Plan (WMP) should continue. It is recommended this measure which includes sourcing additional external or internal water supplies be included as a management strategy within the WMP.
- The proponent updates the existing Water Management Plan in consultation with Lands and Water. This is to include a revised monitoring network/program and corresponding mitigation and contingency measures. It is also recommended a strategy be developed to address the water supply shortfalls simulated in the modelling.
- Consider options for the final landform to include minimising the ongoing runoff from clean areas into the void. This will enable diversion back into the natural surface water system and reduce the potential for water licensing requirements.
- The final landform will be required to develop a stabilised surface water management system. This should be consistent with the Guidelines for Controlled Activities on Waterfront Land (DPI Water).

Yours sincerely

Alison Collaros
A/Manager, Assessment Advice

16 May 2018

ATTACHMENT A

Cowal Gold Mine Modification 14 (DA 14/98 MOD 14)
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Water resources

- The conclusions in relation to seepage quality and migration are not considered adequately justified in the EA. Whilst the seepage may remain within the groundwater between the Integrated Waste Landform (IWL) and the final void in the short term no justification has been provided that this will continue once the water in the pit has re-established equilibrium in the long term.
- The water balance modelling used an average demand from the Paleochannel borefield of 5.47ML/d. This exceeds the 4.4ML/d modelled to be sustainable in the groundwater modelling. The current approach to rely on alternate water supply sources (e.g. Lachlan River) rather than exceeding groundwater trigger levels and implementing contingencies is supported.
- The modification proposes an increase in the maximum annual groundwater inflows to the pit. This is to change from a current predicted volume of 159ML/annum (10% from the alluvial water source and 90% from the fractured rock groundwater Source) to an annual maximum when the lake is full of 268ML and 222ML when the lake is dry. The long term groundwater inflow rate post mining once equilibrium is reached is predicted at 44ML/yr from the fractured rock groundwater source. The drawdown impacts associated with this increase are within the approved extent of impacts.
- The proponent has adequate entitlement within the relevant groundwater sources to account for the predicted maximum groundwater take both during operations and post mining.
- The proponent intends to continue the approach of relying on temporary trading of entitlement on the regulated Lachlan River to obtain regulated surface water. The proponent has indicated sufficient entitlement has been available on the temporary trading market in previous years to meet the water demands. The ongoing availability and access to temporary entitlement remains a commercial risk decision for the proponent.
- The water balance modelling simulated shortfalls of water of more than 20ML in 13% of the 128 climatic sequences simulated. Consideration will therefore need to be given to options to mitigate this risk if such an event occurs such as acquiring additional water, minimising water use and/or maximising water recovery.
- Whilst some key concepts have been provided there is insufficient detail in the EA about how the monitoring network and program will be updated to reflect the needs of the modification. It is noted that Coffey (2018) has made several recommendations that would improve the water monitoring and mitigation/contingency measures. These should be implemented by the proponent.
- Construction activities are proposed outside of the UCDS for the establishment of soil stockpiles and the relocation of infrastructure including the D10 dam, explosives compound and magazine. Adequate design, installation and management of erosion and sediment controls for construction and operation of these facilities will be critical to mitigate impacts to Lake Cowal.

- The Water Management Plan should be revised to include an updated monitoring network with relevant triggers and corresponding mitigation and contingency measures. A comprehensive plan of metering and reporting of data will be required.

Rehabilitation

- The department recommends that the rehabilitation of the areas to be disturbed through this modification is to a similar standard as previous project approvals.
- The Rehabilitation and Landscape Management Strategy as outlined by the proponent meets the requirements of NSW DPI Agriculture.
- The proponent should consult with NSW DPI Agriculture if there are any changes to the approved strategy.

END ATTACHMENT A