NSW GOVERNMENT | Department of Primary Industries

- 5 JUL 2013

OUT13/16687

Ms Sara Wilson,
Mining and Industry Projects
NSW Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Sara.Wilson@planning.nsw.gov.au

Dear Ms Wilson,

Moolarben Coal Mine Stage 1 - proposed Modification
(MP 05_0117 MOD 9)

I refer to your email dated 5 June 2013 requesting advice from the Department of Primary Industries (DPI) in respect to the above matter.

Comment by Crown Lands
The extension to open cut pit 1 encroaches on Crown reserve land (Reserve No.80525, being Lot 7010 DP 1025345), and other parts of the proposal encroach on Crown road. It is understood that the proponents maintain that their mining tenure negates the Crown's interest in these lands. However, Crown Lands advise:

(i) use of Crown road area will require that road to be closed under the *Roads Act 1993* and either purchased or some other access/occupation arrangement authorised.
(ii) occupation of Lot 7010 DP 1025345 will need to be authorised under the *Crown Lands Act 1989*. In relation to this land it is also advised that its reservation includes a restriction "from sale or lease other than Annual Lease" (refer GG 3/4/1958).

The proponents should make early contact with Crown Lands in relation to these matters.

For further information please contact Jody Burgess, Property Management Project Officer (Dubbo office) on 6883 5404, or at: jody.burgess@lands.nsw.gov.au.

Comment by Agriculture NSW
Agriculture NSW advise:
(i) the original Director General requirements have been addressed in relation to agricultural land issues.

(ii) there are no concerns with the proposal on the understanding that most of the land to be impacted by this modification is land unsuitable for agriculture, with the final landform to consist of mainly lands that will be vegetated for biodiversity and stability outcomes.
(iii) the soil and land assessment has confirmed that no land could be considered as Biophysical Strategic Agricultural Land and there is no evidence of any critical industry cluster. No agricultural socio- economic assessment needed to be undertaken as part of the project requirements.

For further information please contact Mary Kovac, Resource Management Officer (Dubbo office) on 6881 1250, or at: Mary.Kovac@industry.nsw.gov.au.

Comment by Fisheries NSW

Fisheries NSW advise as follows:

(i) Fisheries NSW policy advocates the use of terrestrial riparian buffer zones as per the *Policy and Guidelines for Fish Habitat Conservation and Management Update 2013*, available at http://www.dpi.nsw.gov.au/publications. This Policy states that "*NSW DPI will generally require riparian buffer zones to be established and maintained for development or activities in or adjacent to TYPE 1 or 2 habitats or Class 1-3 waterways.*"
(ii) Fisheries NSW requests that adequate riparian buffer zones be established, particularly with regards the proposed extension of Open Cut 2 and proximity to Moolarben Creek.

For further information please contact David Ward, Fisheries Conservation Manager (Tamworth office) on 6763 1255 or at: david.ward@industry.nsw.gov.au.

Comment by NSW Office of Water

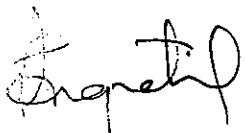
The NSW Office of Water advises the following key issues:

(i) the Environmental Impact Statement (EIS) states that there will be negligible increase of inflows as a result of this modification proposal, and that all inflows will be accounted for under an existing licence under Part 5 of the *Water Act 1912*. The Office of Water understands that there may be a small impact on base flows to Moolarben Creek; however the proponent is in the process of acquiring a water access licence that will fully account for the impacts from this proposal.
(ii) the proposal falls within Level 1 of the minimal impact considerations of the NSW Aquifer Interference Policy (AIP), which is defined as acceptable by the AIP.
(iii) the EIS notes that an increased volume of surface water will be intercepted as a result of this proposal; however it is not clear how this water will be accounted for. The proponent needs to estimate the volumes of water taken from both the surface water, including rainfall runoff, and groundwater from each water source to determine licensing requirements.
(iv) the proponent will need to develop strategies on how to manage the surface and groundwater in a modified land form, and should also update the Water Management Plan to accommodate this modification.

Attachment A provides further detailed comments, a summary of licences and approvals required under the *Water Management Act 2000* and the *Water Act 1912*, and recommended conditions should the application be approved.

For further information please contact Hemantha Desilva, Senior Water Regulation Officer (Newcastle office) on 4904 2525, or: hemantha.desilva@water.nsw.gov.au.

Yours sincerely



Phil Anquetil
Executive Director Business Services

Attachment A

Moolarben Coal Mine Stage 1 - proposed Modification (MP 05_0117 MOD 9)
Additional advice by NSW Office of Water

A. ADDITIONAL COMMENT.

1. Potential groundwater-related environmental impacts

Potential impacts of the proposed project include:
- leakage of groundwater from shallow aquifers
- changes to base-flows in surface drainage systems
- impacts on water supply bores and wells
- potential changes in groundwater quality in water bearing strata
- long term void discharge and water quality
- impacts on groundwater dependent ecosystems

(i) Impacts on Creeks and Alluvium

RPS Aquaterra (2011) predicted the Stage 2 mining will have minimal impact on the alluvium in the Goulburn River and Wilpinjong Creek, but would extend into the Moolarben Creek Valley. Both the Stage 1 and Stage 2 modelling predicted drawdown exceeding 2 metres up to 700 metres from Open Cut 1 in the Moolarben Creek Valley. Moolarben Creek is the stream most likely to be affected due to its close proximity to the proposed modification. The proposed modification is likely to slightly increase the extent of drawdown in the Moolarben Creek Valley.

Previous Stage 1 and Stage 2 modelling concluded that mining will have no effect on flows in Moolarben Creek due to:
- a larger proportion of the Ulan Seam being dry in this area;
- a separation distance >200 metres between the proposed extension and the alluvium; and
- the presence of granite bedrock between the pit boundary and alluvium.

At its nearest point the proposed extension is 170 metres to the west and 300 metres to the south from the mapped alluvium of Moolarben Creek.

MCO is currently in the process of purchasing a licence of 9 ML/year to offset impacts on the Goulburn River Water Source (Moolarben Creek). It is considered this licence will cover any minor loss to the Goulburn River Water Source through reduced baseflow to Moolarben Creek from the proposed modification.

(ii) Impacts on Groundwater Dependent Ecosystems

The proposed modification will have a nil impact on the 'The Drip', the only significant seep/spring GDE within the locality. Stage 2 modelling predicted nil impact on The Drip due to its relative distance from and limited hydraulic connection. The proposed modification will have nil change in the groundwater drawdown in the vicinity of The Drip. Therefore, there will be no impact on vegetation supported by The Drip.

(iii) Groundwater Model

MCO state the water level and pit seepage data collected to date is within the ranges predicted by previous investigators using numerical models, which verifies the soundness of the previous studies. As the previous models had been gradually refined over time as new data was collected, had been subject to peer review, and were showing good agreement with field data, they were deemed appropriate for use in assessing the impact of the proposed modification, and no further modelling was undertaken. Mine inflows for the majority of the proposed modification are stated

to be within the range predicted for Stage 1 and Stage 2. A large proportion of the proposed extension area is within landscapes that are "dry" or contain limited saturated thickness of groundwater above the base of the Ulan Seam.

(iv) Aquifer Interference

Assessment against Aquifer Interference Policy (AIP)

To meet the Level 1 minimal impact consideration of the AIP, aquifer interference activities must not induce a decline of more than 2 metres in the water table or water pressure at any water supply work, i.e. a bore or a well in both highly and less productive groundwater sources. No private bores are captured within the zone of drawdown indicating that the Project falls within Level 1 of the minimal impact considerations of the AIP.

To meet the Level 1 minimal impact consideration for water quality, the AIP requires "no increase of more than 1% per activity in the long term average salinity in a highly connected surface water source at the nearest point to the activity". Dewatering due to pit development is expected to reduce the volumes of baseflow to local streams. This effectively reduces the discharges of more saline groundwaters into the streams and therefore MCO considers it improbable that the proposed modification would increase the stream salinity. The Project meets this requirement, and therefore falls within Level 1 of all minimal impact considerations.

The AIP establishes and objectively defines minimal impact considerations as they relate to water-dependent assets. These considerations have been used as the basis for the assessment by the NSW Office of Water and are as outlined in Table 1.

Table 1: Assessment of proposal against AI Minimal Impact Considerations

Aquifer	Category	Level 1 Minimal Impact Consideration	Assessment
Alluvial aquifers of Wollar Water Source	Less Productive	A cumulative pressure head decline of not more than a 2 m decline, at any water supply work.	**Level 1 - acceptable**
		Any change in the groundwater quality should not lower the beneficial use category of the groundwater source beyond 40 m from the activity.	**Level 1 – acceptable** No predicted change in beneficial use category beyond 40 m from the activity
Porous/ Fractured Rock	Less Productive	A cumulative pressure head decline of not more than a 2 m decline, at any water supply work.	**Level 1 - acceptable**

(v) Groundwater Monitoring

Groundwater levels and water quality are currently monitored in approximately 60 bores. The current monitoring regime of groundwater levels and water quality is considered sufficient to monitor the effects of the proposed modification.

B. LICENCE REQUIREMENTS.

(i) *Water Act 1912*

- No exemptions for licences under the *Water Act 1912* apply as a result of approval under the *Environmental Planning and Assessment Act 1979*.
- Licences required for all bores under Part 5 (s.112) of the *Water Act 1912* (definition of a bore is provided under s.105).
- Monitoring bores may require licensing under Part 5 of the *Water Act 1912* unless the bores meet the criteria for exempt monitoring bores as defined in the *Water Management (General) Regulation 2011*.
- Flood control works will require licensing under Part 8 of the *Water Act 1912*.

Application forms for licences and approvals are available on the Office of Water website at www.water.nsw.gov.au.

(ii) *Water Management Act 2000* (WMA)

- Water Access Licences are required to take water from any water source managed under the WMA.
- Exemptions for access licences are provided in Clause 18 and the Schedule 5 of the *Water Management (General) Regulation 2011*.
- Section 54 of the WMA provides details on harvestable rights.
- Requirements for access licence dealings are provided in Section 71 of the WMA and the following documents:
  - *Access Licence Dealing Principles*. Refer: www.legislation.nsw.gov.au/maintop/view/inforce/subordleg+433+2004+cd+0+N
  - Part 12 of the *Water Sharing Plan*. Refer: www.legislation.nsw.gov.au/maintop/view/inforce/subordleg+347+2009+cd+0+N

Application forms for access licence and access licence dealings are available on the Office of Water website at www.water.nsw.gov.au.

C. RECOMMENDED CONDITIONS OF APPROVAL.

1. The proponent is required to estimate the volumes of water taken from both the surface water and groundwater from the areas covered by the *Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009*, and obtain sufficient licensed entitlement to account for take from all water sources managed under the *Water Management Act 2000* prior to commencement of activities.
   (Note: Actual allocation may vary from time to time due to changes in available water determination.)

2. The proponent is required to obtain all necessary licences under the *Water Act 1912*.

3. The proponent is required to hold or retire sufficient licensed entitlement to cover the perpetual take of water flowing into the final void (and out of the evaporative sink) at the cessation of mining.

4. The proponent must report on the groundwater monitoring and evaluation program as outlined in the Environmental Impact Statement every two years after the commencement of the project. The report is to include records of groundwater take against licences, groundwater hydrographs, assessment of groundwater impacts, including a comparison against predicted impacts, and details of the response to any such impacts.

5. The proponent must provide the report identified in condition 4 to the Office of Water when requested, and include it in the annual environmental monitoring report.

6. The Site Water Management Plan should be amended to incorporate the proposed modification. The amended plan should include:
   - a methodology to estimate the annual volume of surface water and alluvial groundwater intercepted by the operation;
   - a groundwater monitoring and contingency plan;
   - review and validation of model predictions using groundwater monitoring data; and
   - strategies to manage water in the post mining landscape to minimise harm to water sources or their dependent ecosystems.

End Attachment A