



Department of Primary Industries

OUT15/23892

Mr Carl Dumpleton
Resource Assessments
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

21 SEP 2015

Carl.Dumpleton@planning.nsw.gov.au

Dear Mr Dumpleton,

Bengalla Mine Continuation Project (SSD 5170 Mod 1) Proposed Modification

I refer to your email dated 14 August 2015 requesting advice from the Department of Primary Industries (DPI) in respect to the above matter.

Comment by DPI Water

The Department of Primary Industries - Water (DPI Water) has reviewed the Statement of Environmental Effects (SEE) for the Bengalla Mine Continuation Project MOD 1. DPI Water's comments are outlined as follows.

Mine Water Balance

The mine water balance relies upon the following components:

- Runoff capture and harvesting,
- Groundwater ingress,
- Regulated river pumping,
- Recapture and reuse of any runoff which reports to mine water storages.

Bengalla Mine holds 1455ML high security and 4562ML general security licences from Zone 1 of the Hunter Regulated River Water Source. These have been previously incorporated into the site water balance modelling up to the year 2016 at the previous mine production limits of 8 and 10 Mt ROM per annum. A recent modification to the consent permits resource extraction up to 15 Mt ROM coal per annum, which significantly amends the water balance.

During an extended period of drought, the high security shares are likely to receive close to 1 ML per share, while general security may receive a much lower volume per share, and as low as 0 ML per share. The site water balance does not take this into account, but appears to assume 100% allocation (ie 1 ML per share) will apply

to all climate scenarios. This must be clarified, as shortfalls of several hundred megalitres will occur if allocations are lowered after Year 7 (median rainfall) or Year 3 (dry rainfall) scenarios. Information about historical water allocations in the Hunter Regulated River can be found online at:

<http://www.water.nsw.gov.au/water-licensing/registers>. The 2006-2007 water year is an example of a drought year, and in that year high security allocations reached 0.92 ML per share while general security allocations only reached 0.35 ML per share.

Net water demand to the site will increase over time. Demand reported in the SEE outlines CHPP throughput will increase from the existing 830ML per annum to 1164ML per annum. Stockpile dust suppression will also increase from 115ML to 150ML per annum. Other water demands vary from year to year. In addition, water demands identified do not include water for site rehabilitation and revegetation, which would be a significant demand during extended dry conditions.

It should be noted that groundwater supply is negligible to non-existent. As with many mines, runoff harvesting supplies the majority of mine water requirements. Unfortunately, although the catchment area of mine dams (including sediment basins and dams) is reported, the annual runoff capture volumes are not. This is a significant omission, as runoff harvesting is the most sensitive input to climatic conditions, and should be presented in detail.

Without rehabilitation, revegetation and maintenance watering estimations during dry years, mine water demand may be approximately double that presented in the SEE. This should be properly included, to allow a volumetric estimate of water demands and potential shortfalls to be made, and to understand licensing requirements from runoff harvesting and take which is not exempt under the Harvestable Rights Orders under the *Water Management Act 2000* or another exempt supply.

The water balance is incomplete. The nominal demand barely exceeds regulated river supply under extended dry conditions, for only core industrial activities. Water supply for revegetation and rehabilitation purposes is not raised, and it is unclear how management and maintenance of regeneration and maintenance of dump and final landform slopes will occur.

The site water balance assesses the Hunter Regulated River water supply volumes however it is considered there are significant gaps in the water balance assessment in relation to water sourced from the Muswellbrook Water Source.

Erosion and Sediment Control

The SEE outlines appropriate erosion and sediment control measures as outlined in the current WMP for the mine will be in place whilst works as part of the modification are carried out. DPI Water consider appropriate measures should be in place prior to construction and until the sites are stabilised, to minimise potential impacts on surface water and groundwater in the locality.

Recommendations:

It is recommended the following information is supplied to allow DPI Water to provide more accurate advice on the proposed modification.

1. Water demand figures for drought incidence to total site usage, including likely irrigation on active rehabilitation, and sustenance to regenerating vegetative cover under the four rainfall scenarios used (10% wet, median, 90% dry and 99% dry conditions).
2. Likely variations in dust suppression requirements under the above rainfall scenarios (esp. under four-eight year travelling dry years, say using the 1937-48 drought).
3. Separation of capture and re-use of contaminated site runoff (which is exempt) to sediment basin harvesting (which may not be exempt), including annual volumes and nomination of which dams from Table 3.6 of Appendix D (Surface Water) are considered Harvestable Rights Dams.
4. Identification of annual volumetric requirements from the Muswellbrook Water Source through mine life.

For further information please contact Christie Jackson, Water Regulation Officer, (Tamworth office) on (02) 6763 1426 or at christie.jackson@dpi.nsw.gov.au.

Comment by Office of Agricultural Sustainability & Food Security

As per arrangements for mining applications that impact on agricultural land, the Office of Agricultural Sustainability & Food Security will respond direct to your Department.

For further information please contact Rob Williamson, Leader Regional Services (Orange office) on 6391 3166, or at: robert.williamson@dpi.nsw.gov.au.

DPI Fisheries and Crown Lands have no comments on the proposed modifications.

Yours sincerely



Kristian Holz
Director Policy, Legislation and Innovation