

**MIN5003 Work Plan Variation Conditions (Final – 17/05/2011)****Mine Stability**

1. Prior to excavation of coal within the Maryvale field a review of the stability and deformation of the Morwell River Diversion (MRD), in particular southern section of the Morwell River Diversion (MRD) where it runs alongside the conveyors for Maryvale field, is required to be submitted to the Department:
  - a) This review should encompass the short and long term potential impacts on the MRD due to mining in Maryvale field and address as a minimum:
    - i. Whether this mine design has adequately captured the experience and performance of the MRD within existing mining operations such as the East Field;
    - ii. Verification and confirmation of the suitability of parameters used for stability modelling supported with site specific data from geotechnical holes for each batter and extended at depth into the coal seam, full suite of geophysical logs, suite of engineering index testing of the inter seams, comprehensive geotechnical logging and core photography and direct shear strength testing of weaker clay layers;
    - iii. Subsequent review and analysis of mine design for suitability; and
    - iv. The considered stability and Factor of Safety (FOS) for the MRD at that time.
  - b) This review is to be undertaken by those demonstrably expert and professionally qualified to undertake such a review.
  - c) Following on from the initial review an ongoing review program that includes these above requirements is to be undertaken in accordance with the Ground Control Management Plan (GCMP) requirements but at least immediately following the removal of each final or bottom bench within the Maryvale Field.
2. Monitoring is to be reviewed and a comprehensive Trigger Action Response Plan (TARP) established for the MRD and Maryvale slopes prior to excavation of coal within the Maryvale field.

3. A study of aquifer depressurisation and the impacts of this on the interseam pressures is required to be submitted to the Department prior to the excavation of coal within the Maryvale field. This should include as a minimum the assessment of:
  - a) Stratigraphy of Maryvale field;
  - b) Aquifer depressurisation requirements (including overburden);
  - c) Aquifer and interseam monitoring requirements and maintenance of the monitoring network during mining;
  - d) Practicalities of depressurisation bore installation and redundancy requirements ; and
  - e) Impacts of interseam pressures on batter stability.
  
4. The mine batters of the Maryvale field must be designed, mined and maintained post mining so that they remain stable at all times.

#### **Native Vegetation Offsets**

5. The requirements for native vegetation offsets as agreed with the Department of Sustainability and Environment (DSE) and the Commonwealth, that are additional to previously approved arrangements, are to be incorporated into the Conservation Management Plan, clearly identified as pertaining to this Work Plan Variation and managed in accordance with said requirements.
  
6. The requirements for native vegetation offsets that are within the mining licence(s) covered by this Work Plan Variation and as agreed with the Department of Sustainability and Environment (DSE) and the Commonwealth, which are Appendices to this Work Plan Variation and, are to be implemented in accordance with said undertakings and in particular:
  - i. DSE – Offset Management Plan (Appendix C) – commence implementation 6 months prior to the removal of any of the native vegetation approved under this Work Plan Variation; and
  - ii. The Commonwealth – Obtain approved Offset Management Plan and commence implementation prior to the removal of any of the native vegetation approved under this Work Plan Variation;
  - iii. Native Vegetation Offset that is secured under the mining licence(s) is to be secured in perpetuity to the satisfaction of :
    - DSE prior to the cessation of the mining licence(s); and
    - The Commonwealth – within 2 years of the approval.

7. The Yallourn Mine Rehabilitation Plan is to be reviewed regarding the feasibility of the flooded mine scenario versus other alternatives with 12 months of the approval of this Mine Work Plan Variation. This review should include as a minimum:
  - a) Long term water balance studies;
  - b) How to form safe and stable rehabilitated batters, including for the non-flooded mine scenario;
  - c) How to minimise mine floor heave, including for the non-flooded mine scenario;
  - d) Strategic use of overburden in flooded and non-flooded mine scenarios; and
  - e) Advantages and disadvantages of the flooded and non-flooded mine scenarios regarding progressive rehabilitation opportunities.