

METROPOLITAN COAL MINE LONGWALL 304 EXTRACTION PLAN Reasons for Approval

In granting a conditional approval of Metropolitan Coal's Extraction Plan application, I have carefully considered the following:

1. PROJECT APPROVAL STATUS

- The Metropolitan Coal Mine was approved by the Minister for Planning in June 2009 and has since been modified on three occasions.
- The existing project approval allows extraction of up to 3.2 million tonnes of coal per year for 23 years using longwall mining methods.
- The project approval requires an Extraction Plan to be approved by the Secretary before mining in specific longwalls commences.
- In June 2016, the Department approved first workings for Longwalls 301-303 based on 163 metre panel widths, 45 metre chain pillars and shortened extraction lengths. In November 2018, the Department approved first workings for Longwall 304 at these same dimensions and shortened extraction lengths.

2. ASSESSMENT BACKGROUND

- On 5 April 2019, the Department's Planning and Assessment (P&A) division received an application and associated assessment seeking approval to extract Longwall 304 of the Metropolitan Coal Mine.
- The accompanying Extraction Plan outlined the proposed management, mitigation, monitoring and reporting of potential subsidence impacts and environmental consequences in the proposed underground mining area during extraction of Longwall 304 at Metropolitan Coal Mine.
- P&A sought comments from relevant State agencies and the Independent Expert Panel for Mining in the Catchment (the Panel) on this application.
- On 16 May 2019, Metropolitan Coal provided a response to agency submissions. A further response with a revised Trigger Action Response Plan was provided on 26 June 2019.

3. SOCIO-ECONOMIC ISSUES

- P&A estimates that the remaining coal in the northern domain at the mine would provide about \$137 million in State Government revenue through royalties over the next 11 years.
- Metropolitan Coal produces metallurgical coking coal, which is transported by rail to Port Kembla Coal Terminal (employing 120 persons) for shipping to domestic and overseas customers.
- The company provides 415 direct jobs (employees and contractors) at the mine and is a significant contributor to regional employment.
- In 2018, the Metropolitan Coal Mine contributed \$12.5 million in royalties to the NSW economy and injected \$173.3 million in wages and business to the local economy

4. INDEPENDENT EXPERT PANEL

- A copy of the Panel's advice dated 27 June 2019 is **attached** to this document.
- In its advice, the Panel advised that:
 - it expects the Metropolitan Mine Risk Assessment Committee and the Eastern Tributary Technical Committee to keep P&A apprised of developments and management of critical features including basal shears and lineaments;
 - the recommendation by WaterNSW that 'cessation of mining should be seriously considered at TARP Level 2 if this is reached before the proposed completion of cut through, and P&A, be given authority to order cessation of mining if significant valley closure and rock-bar cracking is observed' has merit and is worthy of consideration; and

- it supports the approach proposed by P&A to start the higher frequency monitoring of the Eastern Tributary further back from the proposed finishing line and that the Eastern Tributary Technical Committee should meet at an increased frequency.
- P&A notes that Metropolitan Coal provided further information to WaterNSW in response to its comments regarding Level 2 triggers and possible cessation of mining. On 8 July 2019, Water NSW provided residual comments and a recommendation that the proposed TARP be implemented earlier than proposed by Metropolitan Coal.
- P&A considers that it is important to ensure that there are no further impacts on Eastern Tributary. P&A notes the Panel's comments on P&A's proposal for higher frequency monitoring and notes that this has been largely accepted by Metropolitan Coal and would be further strengthened by the proposed condition (see below).

5. ENVIRONMENTAL FEATURES

- Eastern Tributary:
 - P&A notes that during the time of the original assessment of the Metropolitan Coal Project, predicted closure levels of 200 mm or less were considered to be appropriate for protecting surface features and in particular watercourses.
 - However, based on recent data provided by Metropolitan Coal and the Panel's advice regarding Longwall 303 dated 6 November 2018, P&A accepts that valley closure levels of less than 200 mm may still cause impacts on Eastern Tributary.
 - P&A notes that the adaptive management regime implemented for Longwall 303 resulted in that longwall pulling up short of the approved distance. As such, P&A accepts that an adaptive management regime can be implemented in these instances and is effective, subject to the technical oversight by independent experts, as was the case for Longwall 303.
 - Consequently, P&A considers a precautionary approach is appropriate and that an adaptive management regime similar to that implemented for the final 54 metres of Longwall 303 should be implemented. However, it considers that higher frequency monitoring at a greater distance from the finishing line should be required. This has been largely accepted by Metropolitan Coal and is proposed to be included as a condition of approval for the Longwall 304 Extraction Plan.
- Woronora Reservoir:
 - Longwall 304 is located 242 metres from the Woronora Reservoir's Full Supply Level. The floor of the water storage is not predicted to experience any measurable vertical subsidence, and only very minor tilts, strains, upsidence or valley closure.
 - The Department's approval of the Extraction Plan for Longwalls 301-302 required the engagement of independent experts to prepare a *Woronora Reservoir Impact Strategy*, which provides for a staged plan of action for further investigations and a report into the impacts of mining near the reservoir.
 - Professor Bruce Hebblewhite, Dr Frans Kalf and Emeritus Professor Thomas McMahon were endorsed by the Department to prepare the *Woronora Reservoir Impact Strategy* in May 2017.
 - The *Woronora Reservoir Strategy Report - Stage 1* was provided by the independent experts to the Department in September 2017.
 - The Stage 1 report found that the proposed surface subsidence monitoring program appeared to be reasonable and appropriate, given the major limitations of access in some parts of the surface approaching the reservoir (i.e. steep slopes and dense vegetation).
 - The Stage 1 report also included recommendations for further groundwater and surface water investigations and monitoring. The report was approved by the Secretary in December 2017.
 - The *Woronora Reservoir Strategy Report - Stage 2* report was provided by the independent experts to P&A in June 2019.
 - The Stage 2 report is currently being assessed by P&A and WaterNSW. A briefing by the independent experts, led by Prof Bruce Hebblewhite, is proposed to occur in August 2019.

6. KEY ISSUES

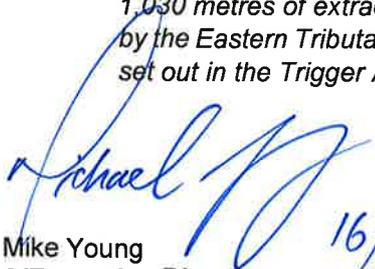
- P&A acknowledges that the mine has been generally designed to limit impacts on natural and built features at the surface, including relatively narrow longwall panel widths of either 138 m or 163 m.
- Nevertheless, P&A has adopted a precautionary approach to its assessment of recent Extraction Plans, which places an emphasis on installing additional monitoring and improving technical understanding of the potential impacts of mining in the catchment.
- It is also noted that the Extraction Plan's Trigger Action Response Plan (TARP) proposed to be used for Longwall 304 (see the Plan's Table 25) has been designed and refined to identify the onset of valley closure, rather than to meet a particular predicted or observed magnitude of closure that would result in an impact.

- P&A notes that the TARP has been further refined (compared to the one implemented for Longwall 303) to include higher frequency monitoring at a greater distance from the finishing line, as requested by P&A and other relevant agencies.
- It is proposed by Metropolitan Coal that the Eastern Tributary Technical Committee (ETTC) would continue to meet and review monitoring data within 24 hours of each monitoring event, from 1,230 metres to the finishing end of Longwall 304. Reports outlining the key outcomes would then be submitted to P&A and WaterNSW within 24 hours.
- However, WaterNSW has recommended that all Level 2 and 3 TARP triggers apply after 900 metres of extraction of Longwall 304 and that monitoring reports should be reviewed by the ETTC and reported to Government agencies within 24 hours. P&A considers that this recommendation has merit.
- However, P&A considers that an appropriately conservative implementation point would be from 1,030 metres as this is the point at which Metropolitan Coal commences high-resolution surveys at no greater than 3-day intervals. It is logical that the ETTC would begin to meet at the point in time at which more regular surveys are considered warranted by Metropolitan Coal.
- DPIE also has a role under the *Environmental Planning and Assessment Act 1979* to ensure compliance with the existing development consent and subsequent approvals under the consent.
- In undertaking this role, DPIE has a range of enforcement powers available to it if it considers that there may have been or may potentially be a breach of the project approval or subsequent approvals under the approval, including but not limited to, requiring further setbacks from key features or the cessation of mining operations if considered necessary.

7. CONDITIONS ON LONGWALL 304

P&A has imposed the following condition on the Extraction Plan approval for Longwall 304:

The Applicant must implement the Extraction Plan's Eastern Tributary Valley Closure Trigger Action Response Plan (version provided to the Department on 26 June 2019) effective from 1,030 metres of extraction of Longwall 304, including regular review of all monitoring results by the Eastern Tributary Technical Committee in accordance with the frequency of monitoring set out in the Trigger Action Response Plan.


 Mike Young
 A/Executive Director
 Energy and Resources
 as nominee of the Secretary

16/7/19.



Mr Mike Young
A/Executive Director
Resource Assessments and Compliance
Department of Planning and Environment
320 Pitt Street
SYDNEY NSW 2000

Dear Mr Young

**Re: Advice to the Department of Planning and Environment
IEPMC 2019-03: Metropolitan Coal Mine Longwall 304 Extraction Plan**

I write further to correspondence from the Independent Expert Panel for Mining in the Catchment (the Panel) dated 6 June 2019 in response to a request for advice from the Department under Term of Reference 3 regarding the Metropolitan Mine Longwall 304 Extraction Plan.

The Panel notes the response from the Metropolitan Mine dated 12 June 2019 to preliminary comments from the Panel as well as issues raised in previous advices.

The Panel does not fully follow the logic of the proposed Trigger Action Response Plans (TARPs) for Longwall 304 relying on triggering one of three TARP measures across ETAU, when these metrics are already moving due to Longwall 303; and noting that no significant reversal or cessation of movement has occurred in relation to Eastern Tributary Valley Closure and Longwall 303.

Notwithstanding this, the Panel relies on the presumption that the outcomes of the Metropolitan Mine Risk Assessment Committee and decisions of the Eastern Tributary Technical Committee have the endorsement of the Woronora Reservoir Impact Strategy Expert Panel (WRISEP) (given the involvement of a WRISEP member on both these committees). The Panel expects that the Metropolitan Mine Risk Assessment Committee and The Eastern Tributary Technical Committee, which have responsibility for assessing and critiquing the monitoring regime and outcomes and for ensuring the rigour of risk assessments, will keep the Department apprised of developments and management of critical features including basal shears and lineaments.

The Panel also notes the recommendation from WaterNSW in regard to the proposed TARP levels and actions: *“Cessation of mining should be seriously considered at TARP Level 2 if this is reached before the proposed completion of cut through, and the Department, in consultation with company and agencies, should be explicitly given the authority to order cessation of mining if significant valley closure and rock-bar cracking is observed”*. The Panel considers the approach to have merit and worthy of consideration.

The Panel supports the approach proposed by the Department to start the higher frequency monitoring of the Eastern Tributary further back from the proposed finishing line and that the Eastern Tributary Technical Committee should meet at an increased frequency.

Finally, the Panel notes that there remains an outstanding report from the WRISEP on the impact of future longwalls under the Woronora Reservoir and advises that this report needs to be critically considered for informing future mine planning decisions. The Panel reminds the Department that survey lines at the ETAU site need to be maintained to identify and control for any incremental movement arising from proposed Longwalls 305 and 306 should they proceed.

Should you have any questions, please do not hesitate to contact Dr Jaclyn Aldenhoven, who can be reached on 9338 6838 or email jaclyn.aldenhoven@chiefscientist.nsw.gov.au.

Yours sincerely



27/6/19

Dr Chris Armstrong
Deputy Chief Scientist & Engineer
Acting Chair, Independent Expert Panel for Mining in the Catchment

Cc: Mr Howard Reed
Ms Jessie Evans