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Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001
Attention: Ms Megan Dawson

megan.dawson@planning.nsw.gov.au

United Wambo Open Cut Coal Mine Project – SSD 7142
Environmental Impact Statement Review

I refer to your email to the Environment Protection Authority (EPA), dated 10 August 2016, referring the United Wambo Open Cut Coal Mine Project (the Project), application reference SSD 7142, to the EPA for review and comment. This application is detailed in the report titled '*United Wambo Open Cut Coal Mine Project – Environmental Impact Statement*' (EIS) dated August 2016, and prepared by Umwelt (Australia) Pty Ltd.

Based on the information provided in the EIS the EPA is unable at this stage to provide recommended conditions of approval for the Project. This is primarily based on noise and air quality matters. These are detailed further below and in Attachments A and B.

Harmonisation Project

The EPA understands this application was submitted by United Collieries Pty Limited and that two separate modification applications have been submitted by Wambo Coal Pty Limited which relate to the Project. The two related modification applications are:

- Wambo Mine Modification 16 – reference DA 305-7-2003 MOD 16; and
- Wambo Rail Modification 3 – reference DA 177-8-2004 MOD 3.

As detailed in the EIS the intention of the related Wambo Modification 16 and Wambo Rail Modification 3 applications is to extend the approved operational life of the Wambo Coal Handling and Preparation Plant (CHPP), Mine Infrastructure Area (MIA), and offices (Wambo Mod 16) and the Wambo train loading facilities (Wambo Rail Mod 3).

These modifications as well as the Project all utilise the same EIS report and are referred to in the EIS as the harmonisation project. These facilities are proposed to be utilised by the United Wambo Open Cut Coal Mine, and the extended period of approval will align the consents with the proposed life of the Project.

The EPA will be making submissions to the Department of Planning and Environment separately for each of these modifications, however a number of matters included in this submission may also be relevant to Wambo Mod 16 and the Wambo Rail Mod 3.

Noise Impact Assessment

The EPA has identified issues in regards to the application of noise criterion and regulatory conditions for the Project as well as the remaining area and facilities to be licensed under the current Wambo Colliery, Environment Protection Licence (EPL) 529.

The EPA is currently unable to support the project or provide recommended conditions of approval based on the noise impact assessment for the proposal.

The most significant issue with the Project in regard to noise impacts is that the information in the EIS does not sufficiently allow the EPA to assess and determine noise criteria and associated conditions for the separate United Wambo Open Cut Coal Mine and Wambo Coal Mine if approval is granted.

The EPA's detailed comments are provided at **Attachment A**.

Air Quality

The EPA has reviewed the EIS and specifically Appendix 7 '*United Wambo Open Cut Coal Mine Project – Air Quality Impact Assessment*' (AQIA), dated 13 July 2016.

The review has identified that further information is required to allow the EPA to adequately assess potential impacts from the Project. This includes:

- explicit inclusion of emissions from diesel engines in the emission used for modelling, particularly for estimating concentrations of $PM_{2.5}$ and nomination of controls for this source;
- assessment of modelled concentrations of 24-hour PM_{10} consistent with advice set out in '*Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*', particularly section 5.3.1; and
- control or mitigation measures to manage the risk of exceeding impact assessment criteria at Receptor 28.

The EPA's detailed comments on the AQIA are provided at **Attachment B**.

Surface water

The potential impacts and management of surface water is detailed in the EIS with further detail provided in Appendix 11 '*United Wambo Open Cut Coal Mine Project - Surface Water Assessment*' dated July 2016.

Currently Wambo Colliery, EPL 529, operates a discharge point and associated infrastructure. Discharge limits, monitoring, reporting and other conditions are stipulated under EPL 529 and in accordance with the Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002.

The Project proposes to incorporate parts of the existing Wambo Colliery infrastructure, including the water discharge infrastructure and arrangements currently permitted by EPL 529.

As the Project is proposed to be licensed by an amended version of the existing United Colliery licence (EPL 3141) and will utilise the current discharge infrastructure and controls currently associated with the Wambo Colliery, and no changes to the current water abstraction or discharge infrastructure at the Wambo Colliery are proposed.

Currently both Wambo Coal Pty Limited and United Collieries Pty Limited hold credits under the Hunter River Salinity Trading Scheme (HRSTS).

The water balance modelling provided in Appendix 11 indicates a proposed HRSTS discharge regime of 550 ML/year. It's unclear where the HRSTS discharge value of 550 ML/year is derived from however the allowable discharges under the HRSTS are regulated by the number of credits held by the operator and the allowable discharge blocks for each approved discharge period.

Licence conditions currently on EPL 529 require a flow of 550 ML/day in Wollombi Brook (measured at the Bulga gauging station) before any HRSTS discharges are permitted. Wollombi Brook is the initial receiving environment for HRSTS discharges from Wambo Colliery. If approval is granted the EPA proposes to maintain this requirement for any future discharges associated with the Project.

As noted in Section 5.2 of Appendix 11 "*The water balance modelling indicates that the current HRSTS salt credits (63 credits held by United and Wambo) and EPL discharge limits are sufficient to meet the future predicted water discharge requirements*".

The EPA does not predict any issues associated with the proposed use of the existing Wambo HRSTS discharge infrastructure and controls. If approval is granted the EPL for the Project (which is proposed to be a varied version of the existing United Colliery EPL 3141) can be amended to incorporate the current conditions and requirements associated with this discharge point.

Licence boundaries and transfer of materials / equipment

The EIS describes the proposed separation of the existing Wambo Colliery EPL 529 (to remain in force applicable for the Wambo underground mine and surface facilities) and amendments to the existing United Colliery licence (EPL 3141) to apply to the Untied Wambo Open Cut Coal Mine.

The Project includes the transfer of materials and equipment across the two sites, including but not limited to water, coal, tailings and coal fines, and potentially overburden material.

The EIS does not appear to specifically identify the proposed Environment Protection Licence premise boundaries for the United Wambo Open Cut Coal Mine, or any boundary amendments to the existing Wambo licence boundary. It's unclear if the 'project area' identified throughout the EIS (for example as shown in Figure 4.1) is proposed as the EPL premises boundary for the Project, or if the EPL boundary will be determined at a later stage.

The EPA understands the intention is for the existing Wambo EPL 529 to apply to the Wambo underground operations and surface facilities, including but not limited to the Wambo CHPP, mine infrastructure area, and rail loop facilities. This is indicated in the EIS at Section 1.2 as "Wambo will continue to manage its underground mining operations which do not form part of the Joint Venture or this Project. The existing mining infrastructure including the CHPP and train loading facility will be used for both the Project and Wambo's underground operations, and it is anticipated that they will continue to be managed by Wambo (subject to any changes in the commercial arrangements that exist between United and Wambo)".

The project area identified at various points in the EIS covers an area which appears to overlap part of the existing Wambo surface facilities subject to EPL 529, including the Wambo CHPP as noted in section 3.8.1 of the EIS.

While the EIS refers to the intention and anticipation that the Wambo surface facilities will remain the responsibility of Wambo and subject to EPL 529 it is not specifically confirmed at this stage. Additionally the reference to "subject to any changes in the commercial arrangements that exist between United and Wambo" further indicates that this matter is yet to be finalised or determined.

To allow the EPA to accurately assess any potential issues relating to the transfer of materials and equipment between the proposed United Wambo Open Cut Coal Mine and the Wambo Colliery, the EPA recommends the proponent includes the predicted premises boundaries associated with the Project and Wambo Colliery if approval is granted. This will allow the EPA identify the responsible parties for all components of the sites and accurately identify potential noise, water and air impacts from the Project.

If you require any further information regarding this matter please contact me on 4908 6819 or by email to hunter.region@epa.nsw.gov.au

Yours sincerely

MICHAEL HOWAT
A/Head Regional Operations Unit - Hunter
Environment Protection Authority

Encl: **Attachment A** – EPA's Review of Noise Impact Assessment matters
Attachment B – EPA's Review of the Air Quality Impact Assessment

<u>ATTACHMENT A</u>

EPA'S Review of Noise Impact Assessment matters

The EPA has reviewed the EIS and the assessments titled '*United Wambo Open Cut Coal Mine Project – Noise Impact Assessment*' (NIA), dated July 2016, and the '*United Wambo Open Cut Coal Mine Project – Blasting Impact Assessment*' (BIA), dated 23 May 2016.

The assessment has identified a number of issues to be addressed.

<u>Assessment and application of noise conditions / limits for the separate licensed premises</u>

The NIA has not been prepared in strict accordance with all guidance within the NSW Industrial Noise Policy. However, the EPA's view is that this is not likely to significantly affect the outcomes of our assessment and we consider the NIA and BIA to be technically adequate for our assessment of potential noise and blasting impacts from the Project.

While the EPA considers the NIA and BIA to be technically adequate, the EPA cannot support the proposal as currently put forward in the NIA.

The proposal seeks to combine open-cut operations at both United and Wambo mines under United's management. The EIS notes the intention that Wambo retains management of the operation of the associated mining infrastructure (including the Wambo MIA, CHPP, train loading facility and other ancillary infrastructure).

The NIA, however, does not align with this approach and only assesses the combined impact of the open cut operations together with the associated mining infrastructure. This means that the EPA is unable to derive recommended noise conditions / limits for the open cut operations under United's management, and the associated mining infrastructure under Wambo's management, separately.

The NIA also does not propose a suitable method to determine whether each individual licensee (United or Wambo) is complying with its respective licence conditions under this proposal, and if any non-compliance is identified at a sensitive receiver location, how the licensee(s) responsible for the non-compliance would be identified.

As a way forward, the EPA proposes the following options:

(1) The proponent revise the EIS and NIA so that a single legal entity (e.g. the United Wambo Joint Venture, or United) will be responsible for the management of all surface activities at the project, and accept the inclusion of noise conditions / limits for all surface activities on its EPL.

(2) the proponent revise the EIS and NIA so that the predicted noise emissions for the combined open cut operations at United and Wambo mines, and the predicted noise emissions for the associated mining infrastructure (including the Wambo MIA, CHPP, train loading facility and other ancillary infrastructure) are presented separately. Under this option, the proponent is to also either:
   a. provide a methodology, to the satisfaction of the EPA, for establishing whether each individual licensee (United or Wambo) is complying with its respective licence conditions, and if any non-compliance is identified at a sensitive receiver location how the licensee(s) responsible for the non-compliance would be identified; or
   b. accept that if a non-compliance is identified at any sensitive receiver location in Area 1 or Area 2 in Figure 4.2 of the NIA, that non-compliance will be attributed to the associated mining infrastructure under Wambo's management as proposed, and if a non-compliance is identified at any other sensitive receiver location in Figure 4.2 of the NIA, that non-compliance will be attributed to the combined open-cut mining operations under United's management as proposed.

<u>Sleep disturbance criteria</u>

Table 4.5 of the NIA provides sleep disturbance criteria for the day, evening and night-time periods as some surrounding residents are shift workers. The EPA recommends adopting only the sleep

disturbance trigger levels for the most stringent night-time period, with a minimum LA1(1minute) level of 45 dBA.

The origins of some of the sleep disturbance criteria in Table 4.6 of the NIA are unclear (for example, the night-time criteria for Areas 3, 4 and 5 are not 15 dB above the respective Rating Background Levels in Table 4.1 for those areas). These criteria should be reviewed and amended, if necessary.

Construction noise criteria

In Section 5.2 of the NIA, the text states that the 'outside standard hours' construction scenario is based on the use of half the machines that would be used during 'standard hours'. It is unclear which items of plant and equipment constitute the half, or whether a numerical adjustment was used in the analysis – this should be clarified in the text.

The origins of some of the construction noise criteria in Table 4.8 of the NIA are unclear (for example, the night-time criteria for Areas 3, 4 and 5 are not 5 dB above the respective Rating Background Levels in Table 4.1 for those areas). These criteria should be reviewed and amended, if necessary.

Night-time period

In Section 5.1.7 of the NIA, the night-time period appears to be erroneously identified as from 6am to 7am, this should be checked and amended if necessary.

Rail noise

Section 6.5 of the NIA relates to rail noise levels and states "*Wambo's current coal train movements on the Main Northern Rail Line contribute 0.4 dB to the noise levels generated by coal train movements*". It is unclear what the 0.4 dB refers to, and this paragraph should be clarified, preferably with reference to overall rail noise levels and the relative noise contributions of both Wambo and external rail traffic. A table may assist in presenting the information in this section.

ATTACHMENT B

EPA's Review of the Air Quality Impact Assessment

The EPA has reviewed the EIS and the report provided at Appendix 7 of the EIS which is titled '*United Wambo Open Cut Coal Mine Project – Air Quality Impact Assessment*' (AQIA), dated 13 July 2016.

The AQIA generally follows the guidance set out in the *'Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales'* (Approved Methods). However the assessment departs from guidance in three areas:

- developing a sound and thorough emissions inventory including appropriate representation of emissions from the use of diesel engines,
- assessment of 24-hour PM_{10} concentrations, and
- impacts greater than impact assessment criteria.

Diesel emissions

Emissions estimation has taken care to explicitly consider emissions from diesel-powered equipment, but did not include these estimates in the emissions for dispersion modelling. Rather, the AQIA proposes that as explicit estimation results in an increase to PM_{10} emissions of less than 5%, there is no need to revise the emissions estimates.

The EPA's position is that diesel emissions are predominantly $PM_{2.5}$ and the relative contribution from diesel for this size fraction will be significantly higher than that found for PM_{10}. Section 3 of the Approved Methods requires a sound and thorough emissions inventory. This implies using the best available estimates. The EPA advises that controls for this source need to be nominated.

The emissions inventory used for dispersion modelling needs to include the explicit estimates for diesel emissions, for both PM_{10} and $PM_{2.5}$, and to nominate controls for this source.

Assessment against 24-hour PM_{10} criterion

The AQIA adopts a variant criterion for 24 hour PM_{10} concentration. It's noted that exceedences of the criterion for twenty-four hour PM_{10} are expected as a result of background concentrations. Treatment of these elevated background concentrations is stated as "the trigger for whether a receptor is predicted to be impacted was defined as the Project only contribution greater than 50 $\mu g/m^3$".

The AQIA adopts a criterion for the number of days on which cumulative PM_{10} concentration exceeds 50 $\mu g/m^3$ of 5. This was taken from the National Environment Protection (Ambient Air Quality) Measure.

The AQIA does not appear to have followed the guidance in the Approved Methods regarding treatment of elevated background concentrations. Section 5.1.3 of the Approved Methods sets out in that where background concentrations are elevated, the criterion is that "no additional exceedences of the impact assessment criteria will occur as a result of the proposed activity".

Thus assessment should present maximum cumulative concentration. Where this is greater than the criterion (50 $\mu g/m^3$ for 24-hour PM_{10}), further analysis should be presented assessing whether emissions from the project cause additional exceedence days.

Impacts at receptor 28

Receptor 28 is assessed as potentially experiencing additional days exceeding the twenty-four hour PM_{10} criteria for, at least, year 2 of the project.

Section 2.4.4 of the Approved Methods requires that where impact assessment criteria are not met, "the assessment must be revised to incorporate additional control or mitigation measures".

The assessment needs to include discussion of additional control or mitigation measures to manage the risk of exceeding impact assessment criteria at Receptor 28.