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Planning and Assessment Division
Department of Planning, Industry and Environment
Returned via Planning Portal

Attention: Joe Fittell

6 March 2023

Dear Mr Fittell

**Planning Referral – Advice Request – Environmental Impact Statement
Hunter Valley Operations North Open Cut Coal Continuation Project (SSD-11826681)
Hunter Valley Operations South Open Cut Coal Continuation Project (SSD-11826621)**

Thank you for requesting input from the NSW Environment Protection Authority (EPA) on the environmental impact statement (EIS) for Hunter Valley Operations (HVO) North Open Cut Coal Continuation Project (SSD-11826681) and Hunter Valley Operations South Open Cut Coal Continuation Project (SSD-11826621).

The EPA understands the proposal is for:

- The continuation of HVO North from 2025 to 2050
- The continuation of HVO South from 2030 to 2045
- The annual extraction rate will remain the same at 22 Million tonnes per annum (Mtpa) of Run of Mine (ROM) coal at HVO North
- A reduction in the approved maximum extraction ROM capacity for HVO South from 20 to 18 Mtpa.
- Infrastructure upgrades and changes including the realignment of part of Lemington Rd, the relocation of transmission and telecommunication lines, the construction of a new product stockpile and train loading bin and an extension of the existing coal stockpile.

The EPA notes the two mine sites, HVO North and HVO South are approved under separate development consents. However, they are operated as one complex and are regulated by the EPA under Environment Protection Licence 640.

The EPA has reviewed the EIS titled '*Hunter Valley Operations Continuation Project Environmental Impact Statement*' prepared by EMM consultants dated December 2022 and the related Appendices including Appendix H of the EIS - '*Air Quality and Greenhouse Gas Assessment*', prepared by Jacobs Pty Ltd, dated 9 November 2022 (the AQIA).

The AQIA predicts there are additional exceedances at various sensitive receptors and that these impacts can be reduced by implementing measures in the air quality management plan. However no supporting evidence has been provided to demonstrate implementation of such measures will ensure compliance with the impact assessment criteria.

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Before the EPA can determine whether it can recommend conditions for the proposal development additional information should be provided. The further information required is listed and discussed below:

1. Provide revised dispersion modelling scenarios to include the actual implementation of the proposed reactive mitigation measures to demonstrate that their implementation will reduce the risk of additional exceedances occurring.

Consideration must be given to but not limited to the following:

- a. Detailed discussion to demonstrate that the dispersion modelling has allowed for 'reaction time/delay' to implement the corresponding reactive measures.
- b. Specific 'triggers' (e.g., meteorological conditions, concentrations) and specific actions to be used to inform the implementation of reactive measures.
- c. Detailed discussion to specify how individual activities were modified (i.e., modelled) to be representative of the actual implementation of the proposed reactive mitigation measures.
- d. A summary of the number of hours/days the reactive measures were included in the modelling.
- e. Presenting a timeseries graph of cumulative impacts showing the effect of implementing the reactive control measures at a minimum of two of the most impacted receptors (i.e., receptors with the largest predicted increments). This must include but is not necessarily limited to:
 - Predicted concentrations with and without the implementation of the proposed reactive controls.
 - The levels used to trigger the implementation of the proposed reactive controls.
- f. A summary table showing incremental and cumulative ground level concentrations to demonstrate that no additional exceedances are predicted at any of the identified receptors for any of the modelling scenarios.

The AQIA includes five dispersion modelling scenarios to assess the potential impacts due to future operational years. The AQIA indicates that operational year 3, year 7, year 11, year 18 and year 22 were selected as they represent the maximum material handling quantities, maximum haul distances, varying proximities to local communities and combined interactions with other existing or approved mining operations.

Models presented in the AQIA show that there are many additional exceedances predicted at receptors included in the assessment. Based on the information in Appendix F -Tabulated model results there are approximately 121 receptors where at least one additional exceedance of the 24-hr PM10 impact assessment criterion is predicted for at least one of the five modelling scenarios. The number of predicted additional exceedances at individual receptors vary depending on the modelling scenario, it is noted that most of the additional exceedances are predicted to occur during year 11 and year 18. This is of particular interest as:

- Figure 20, anticipates operations between years 10 to 20 fall within similar operating/extraction rates, indicating that additional exceedances could also occur due to operations between years 10 and 20.
- It is anticipated that by year 18 (2040), only four of the ten currently approved mining operations included in the modelling scenarios will be operating concurrently with the HVO complex. Therefore, indicating that the additional exceedances predicted for year 18 and onwards are driven by the proposal.

2. Provide a rank of individual source contributions to the ground level concentration(s) at the most impacted receptors (i.e., receptors with the largest predicted increments).
 - a. Based on the rank, provide discussion to demonstrate that all feasible and reasonable mitigation measures are being proposed to reduce the predicted impacts.
 - b. Where priority is not given to the highest level of control, the proponent should provide justification with supporting evidence on why these measures are not feasible or practical for implementation.

Table 33 in the AQIA includes the emission management measures for the proposal and how they were included in the preparation of the emissions inventory. However, and considering there are large increments (i.e., project only contributions) predicted at various receptors for most modelling scenarios, it is considered appropriate that the proponent provides information to demonstrate that emissions from the sources that contribute the most to the predicted impacts are being prevented or minimised as far as it is practicable. The additional information will provide a transparent review of the input data and assumptions made in the preparation of the AQIA.

3. Provide a comparison table showing the anticipated rehabilitation and/or land stabilisation targets for future operating years, and the assumed areas used in the preparation of the emissions inventory.

The AQIA indicates the proposed operations will be undertaken within the extent of the existing mining tenements. However, it is unclear if the proposal will result in significant changes to the currently approved disturbance areas.

Considering that wind erosion is typically one of the largest sources of dust emissions identified in the Hunter Valley region, and likely to be one of the major sources contributing to ground level concentrations at sensitive receptors, additional information should be provided to transparently demonstrate that the assumptions made in the preparation of the emissions inventories are in line with the anticipated disturbed and land rehabilitation/stabilisation goals.

4. Provide information to justify the selection of 2014 as a representative modelling year including quantitative information to demonstrate that using a different meteorological year is unlikely to result in additional exceedances of the corresponding short-term impact assessment criteria.

The AQIA includes information to support the selection of 2014 as a representative modelling year. However, based on Figure 7 and Figure 8 in the AQIA, year 2014 seems to have a lower wind frequency from the WNW and NW directions.

Given that these are two of the most predominant wind directions recorded at both meteorological stations and that Maison Dieu is downwind from the proposed mining activities, it is unclear if the use of a different meteorological year will result in an even greater number of additional exceedances of the short-term impact assessment criteria downwind from the proposal. Figure H1 in the AQIA shows that using a different meteorological year, results in higher predicted annual concentrations downwind from the project towards Maison Dieu.

5. Provide additional information about the assumptions made to derive the PM_{2.5} background levels used in the assessment.

The AQIA states that “the derived PM_{2.5} background levels follow the same profile as the derived PM₁₀ background but with an annual average that matched the available and more recently (2020) measured PM_{2.5} concentrations near the project at the Kelly monitoring location”. However, it is still unclear what this actually means and how the daily PM_{2.5} concentrations were calculated or compared against recent data.

If you have any questions about this request, please contact Hannah Schuchmann on 0419 905 137 or via email at Hannah.Schuchmann@epa.nsw.gov.au.

Yours sincerely

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