

12 March 2021

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Dear Ms Evans

#### **MOUNT PLEASANT OPTIMISATION PROJECT (SSD-10418)**

I refer to your email of 2 February 2021 requesting advice in relation to the Environmental Impact Statement (EIS) for the Mount Pleasant Optimisation Project 'the project'.

The Mount Pleasant Operation is an open cut coal mine located approximately 3 kilometres north-west of Muswellbrook in the Upper Hunter Valley of New South Wales (NSW). It is understood that the open cut mine is currently at its closest proximity to Muswellbrook and that the focus of mining activities will progressively move north and west, further away from Muswellbrook town.

The project proposal includes:

- Increasing the per annum extraction rate from the currently approved 10.5 million tonnes (Mtpa) of run-of-mine (ROM) coal to 21 Mtpa, in stages, as the active mining area moves further away from the town of Muswellbrook.
- Extending the life of the mine from December 2026 to December 2048.
- Increasing per annum waste rock removal from 53 million bank cubic metres (Mbcm) to 89 Mbcm.
- Deepening the North Pit by approximately 85 metres, and changing, but not increasing, the surface disturbance area.
- Maintaining the hours of operation at 24 hours per day, 7 days per week.
- No changes to the open cut mining method.

Hunter New England Population Health (HNE Health) has reviewed the EIS paying particular attention to the potential for public health impacts from the project's effects on air quality. The

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comments provided are contingent on confirmation by the NSW Environment Protection Authority (EPA) that the methods and modelling employed to assess air quality impacts are appropriate.

The summary of modelling results, Section 7.1, Appendix B - Air Quality Impact Assessment (AQIA) show that some privately-owned receptors near the proposed project are predicted to experience exceedances of particulate matter (PM) air quality criteria. This is a region where air quality often exceeds national standards. The following table, adapted from Tables 5-2 and 5-5 in the AQIA, demonstrate the extent to which PM<sub>10</sub> and PM<sub>2.5</sub> levels at Muswellbrook do not meet current Ambient Air Quality National Environment Protection Measures (NEPM) standards.

**Summary of ambient PM10 and PM2.5 levels from the Upper Hunter Air Quality Monitoring Network at Muswellbrook 2012 to 2019.**

Dust metric	NEPM standard (µg/m³)	NEPM 2025 Goal (µg/m³)	2012	2013	2014	2015	2016	2017	2018	2019
PM10 Annual Average	25		21.8	22.6	21.4	19.1	19.2	21.7	<b>27.2</b>	<b>34.4</b>
PM10 Maximum 24 hour average	50		<b>51.0</b>	<b>55.6</b>	<b>53.0</b>	<b>72.6</b>	43.9	<b>56.5</b>	<b>185.9</b>	<b>231.3</b>
PM 2.5 Annual average	8	7	<b>10.1</b>	<b>9.4</b>	<b>9.7</b>	<b>8.7</b>	<b>8.4</b>	<b>9.4</b>	<b>9.4</b>	<b>12.2</b>
PM2.5 Maximum 24 hour average	25	20	<b>26.4</b>	<b>36.6</b>	<b>27.4</b>	<b>31.2</b>	<b>29.4</b>	<b>31.1</b>	<b>26.5</b>	<b>77.4</b>
<b>Bold indicates exceedance of NEPM standards</b>										

Modelling within the AQIA predicts annual average PM2.5 at selected Muswellbrook receivers to be below the criterion (NEPM standard) when emissions from the project are added to the contribution from other mines and background (AQIA, Table 7-7, page 53). However, the project-only contribution to the annual average PM2.5 (0.5 to 1.4 µg/m³) represent 9 to 23% increases in annual average PM2.5 as reported in the AQIA. Population health studies have found that concentrations below the annual NEPM standard impact health and therefore efforts should be made to reduce the contribution that the project makes to the annual average PM2.5 of Muswellbrook receivers. The EIS's Human Health Risk Assessment (Appendix R, page 30), reports that 'In some areas surrounding and close to the Project, there are a number of individual receptors where incremental risks associated with dust (PM2.5) impacts are elevated and considered potentially unacceptable in the absence of proactive/reactive dust mitigation measures.'

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## Conclusion

There is no evidence of a threshold below which exposure to particulate matter (PM) is not associated with health effects. Therefore, it is important that all reasonable and feasible measures are taken to minimise human exposure to PM, even where assessment criteria are met. This mine is located in a region where air quality often exceeds national standards and it is especially important to ensure that this project does not contribute significantly to the air pollution in the area.

If you require any further information please telephone Carolyn Herlihy, Environmental Health Officer on 4924 6477.

Yours sincerely



Dr David Durrheim  
Director - Health Protection

