James Whelan

Submission on the proposed Wallerah 2 Coal Mine

Environmental Justice Australia

1. The NSW EPA conducts no independent air pollution monitoring in the Central Coast region, despite the region being home to two of the state's largest coal-fired power stations.

2. The Wallerah 2 EIS 'Air Quality and Greenhouse Emissions' report refers to air pollution monitoring conducted in the region by Wyong Areas Coal Joint Venture since 1996. Coarse particle PM_{10} concentrations have been monitored every 6 days, except from 2003 to late 2006 (p.17). The EIS notes that the data is incomplete, with only 66-79% of data available and that there is no continuous PM_{10} data for the area (p.39). Even the limited company monitoring data is not available to stakeholders from the project website or upon request from the company.

3. Elsewhere in NSW, self-monitoring of air pollution by coal mining companies has been found to be entirely unreliable (e.g. SMH 24/8/16 'Wildly in Error' http://www.smh.com.au/environment/wildly-in-error-dodgy-coal-pollution-data-fans-demand-for-independent-control-20160818-gqvhat).

4. Without independent data to identify baseline pollution concentrations (ie. pre coal mine), it is not possible to reliably assess the cumulative air pollution concentrations during the mine's construction or operation. The modelling conducted for this EIS is highly speculative.

5. The project proponents estimate that PM_{10} emissions during construction will represent no more than 48% - less than half – the anticipated emissions during operation (Air Quality and Greenhouse Gas Assessment p.v). During construction, the project will cause 27,669kg of PM_{10} and during operation it will cause 57.212kg per annum (p.26-27). This estimate appears without basis and contrary to observations of coal mine operation elsewhere in NSW. Removal, transportation and mounding of over-burden are intensely polluting activities.

6. Coal mining is the largest single source of coarse particle pollution (PM10) in NSW. Coal stockpiles, conveyors, loading and unloading facilities including load-out facilities are all major sources of particle pollution. Diesel vehicles and engines required for the proposed mining operation are a major source of fine and ultrafine particles ($PM_{2.5}$ and PM_1) which can be deeply inhaled and contribute to premature death and a range of cardiovascular and respiratory ailments. Diesel emissions have been listed by the World Health Organisation as carcinogens.

7. **The proposed mining operation entails continuous flaring (burning) of coal seam methane.** The flaring process will create elevated concentrations of oxides of nitrogen (NOx) in the vicinity. According to the National Pollutant Inventory, "low levels of oxides of nitrogen can irritate eyes, nose, throat and lungs, possibly leading to coughing, shortness of breath, tiredness and nausea. Exposure can also result in a build up of fluid in the lungs for 1-2 days after exposure. Breathing high levels of oxides of nitrogen can cause rapid burning, spasms and swelling of tissues in the throat and upper respiratory tract, reduced oxygenation of tissues, a build up of fluid in the lungs, and maybe even death" (http://www.npi.gov.au/resource/oxides-nitrogen-0).

8. **The proposed mine site is less than 4 kilometres from a densely populated suburban area.** During winter months, the prevailing wind blows from the proposed mine site towards Blue Haven.

9. **The EIS uses the wrong standards to interpret maximum pollution levels.** Australia's nine environment ministers, including NSW Environment Minister Mark Speakman, committed to a new annual standard for PM_{10} (coarse particle) concentrations in December 2015. This stricter standard of 25 micrograms per cubic metre is not used in the EIS (pages 8, 9). Instead, the project proponents refer to a NSW DEC guideline of $30ug/m^3$. The new national standards for $PM_{2.5}$ (fine particles) will become somewhat stricter in 2025, shifting to a 24 hour average of $20ug/m^3$ and annual average of $7ug/m^3$. This is not acknowledged in the EIS.

10. **Annual PM_{10} concentrations in the area have exceeded the state and national standards in recent years** (p.17). Annual average PM_{10} concentration reached $38ug/m^3$ in 2002 and $31ug/m^3$ in 2006 – well above the new national standard of $25ug/m^3$. At both reference monitoring sites, 24 hour average PM_{10} concentrations have exceeded the national standard of $50ug/m^3$ (p.18). The mine is predicted to increase PM_{10} concentrations by as much as $29.5ug/m^3$ (p.32).

11. **Fine particle pollution in the vicinity is already at the national standard.** There has been no fine particle ($PM_{2.5}$) monitoring conducted within 40km of the proposed mine site. With no data to back up their methodology, Pacific Environment make the extraordinary 'guestimate' that background (no mine) $PM_{2.5}$ concentrations in the region are already $7ug/m^3$ (p.22). This is the long-term (2025) standard set by ministers in December 2015. There is no safe level of exposure to fine particle pollution and adverse health impacts are caused at levels well below $7ug/m^3$.

12. The EIS recommends a range of coal dust control measures described as Best Practice Management (BPM), citing a Katestone report published by Donnelly et al 2011. The implementation of many of these measures is still not going to keep particle concentrations below the national standards.

13. **Coal wagons will not be covered.** The Katestone 'Best Practice' report identifies covering coal wagons as best practice, but this is not proposed. Despite noting that recent studies including the Chief Scientist's report have found that unloaded coal wagons are a more significant source of particle pollution than loaded wagons, Kores propose to simply spray and profile wagons. Citizen science conducted by community groups in Newcastle has identified significant ongoing coal dust and associated coal loss and fugitive pollution despite spraying and profiling coal wagons that use the Hunter coal corridor.

Recommendations:

1. The proposed coal mine should be rejected.
2. The NSW EPA should establish a network of no fewer than three air pollution monitors within 10km of the proposed mine site.
3. Ambient PM10 and PM2.5 concentrations should be continuously monitored for no less than 12 months to establish baseline particle pollution concentrations.

Contact:
Dr James Whelan
[redacted]