

1. PUBLIC RESPONSE TO T4 PROJECT AIR QUALITY ASSESSMENT

The following bullet points form the basis for public submission questions relating to ENVIRON Australia's (ENVIRON) Air Quality Assessment (AQA), report AS121324, on behalf of Port Waratah Coal Services (PWCS) proposed T4 Project.

Appendix M

■ Executive Summary (pg1)

Given the extended period over which the T4 Project will ramp up, and the concurrence of construction and operational stages, representative years from the following scenarios were assessed:

- *Stage 1 Construction (2013 - 2017);*
- *Stage 1 Operations concurrent with Stage 2 Construction (2017 - 2019; 70 Mtpa); and*
- *Stage 3 Operations (2022 onwards; 120 Mtpa).*

■ Section 4.1 Climate Records and Meteorological Data (pg 15)

Based on comparisons of the annual wind roses and statistical evaluation of the wind speed records for the previous five years, 2010 was concluded to be sufficiently representative of airflow patterns characteristic of each location.

Question: There appears to be no discussion or comment by ENVIRON regarding the issue of regional climate change and how climate change may impact on surface wind speeds, rainfall, air temperature, evaporation, periods of wind calm and other meteorological parameters that have the potential to influence the dispersion of dust from the T4 Project site. Will dust dispersion and environmental impact from the year 2022 be better, worse or the same? It may be satisfactory for the year 2010, but what about the year 2022 onwards?

The executive summary clearly identifies that ultimate PWCS T4 operations will commence from year 2022 (i.e. 120 Mtpa). Based on coal throughput tonnages, one may conclude that air impacts from the T4 Project will peak at year 2022 and onwards. ENVIRON has justified the year 2010 meteorological data for AQA dispersion modelling based upon retrospective statistical analysis of five previous calendar years. How does this meteorological dataset compare to predicted climate change in the year 2022 onwards? Is it adequately representative?

The Climate Change in Australia web site (developed by CSIRO and the Bureau of Meteorology in partnership with the Department of Climate Change and Energy Efficiency) presents probable climate change scenarios for Australia. I suggest ENVIRON consider these forecasting models and provide appropriate response(s) in the AQA.

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Appendix M (part2)

- **Fugitive Dust Emissions during Construction Operations (pg139)**

A control efficiency of 50% was applied to account for dust control by wet suppression which is typically applied during construction.

Question: It appears that ENVIRON have applied similar control factors as those published by Emission Estimation Technique Manual for MINING Version 2.3 - TABLE 3 Estimated Control Factors for Various Mining Operations Operation.

There is no mention of water application rates employed to suppress dust. What is the level (L/m²) of water suppression provided by haul vehicles etc. during construction, stockpile management etc?

A typical haul road achieving 50% dust suppression would require 2 L/m²/hr. Over a 100 ha working area this can amount to a significant amount of area to control. Has water demand and requirements required for dust suppression been taken into account in T4 Project Water Management Plan etc. over the life of the Project?

- **General comment on dust emissions**

Question: It appears there is no presented particle size distribution for coal, roadway and construction dusts that will be emitted from the site. Understanding the particle size range will determine the extent and rate of dust ground level concentrations and dust deposition (including PM_{2.5} impacts). The CALPUFF air model requires information about particle size such as geometric mean diameter and particle size standard deviation. Does the assumed particle size exhibit a log normal distribution? These appear to be not presented in the report and at best cursory reference has been made.