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Health concerns regarding PWCS T4 terminal

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Particulate Pollution

- The Environmental Protection Agency attributes 87.6% of PM10 and 66% of PM2.5 in the upper Hunter to coal mining ie. coal mining is the dominant source of particulate pollution.

- **NSW Department of Environment and Heritage 2014 cited in Coal and Health in the Hunter.**

- Negative health effects of particulate pollution for PM10 and PM2.5 are well documented. In 2013 the World Health Organisation stated, "there is no evidence of a safe level of exposure (to PM10 or PM2.5) or a threshold below which no adverse health effects occur." .

- **World Health Organisation, 2013, *Health effects of particulates*, available at http://www.euro.who.int/__data/ assets/pdf_file/ 0006/189051/Health-effects-of-particulate- matter-final-Eng.pdf**

Far reaching health effects

- In the Planning and Environment 2015 Addendum Report "the department is satisfied that the proposal is in the public interest".

- As the project is considered within the context of whether it will benefit NSW as a whole resulting health impacts beyond the perimeter fence should also be considered.

- With the proposed T4 coal loader being constructed to facilitate export of increased coal production rather than to replace existing terminal capacity coal mining in the Hunter is set to increase as is particulate pollution.

Health effects of particulate pollution

- Cardiovascular events - PM2.5 small enough to infiltrate the lungs and blood stream where they can trigger heart attacks and strokes.
- Increased respiratory illnesses
- Lung cancer
- Premature mortality
- **Armstrong F, et al., Coal and Health in the Hunter: Lessons from one valley for the world. Climate and Health Alliance.**
- **Doctors for the Environment Australia, Submission on the Port Waratah Coal Services Terminal 4, November 2013.**

Disproportionate air pollution for rural Hunter Region residents

- Data released in February 2013 from the Upper Hunter Air Quality Monitoring Network (UHAQMN) shows particle pollution in the population centres of Singleton and Muswellbrook exceeded national standards and was higher than the network average for the Sydney Greater Metropolitan Region .

- NSW Office of Environment and Heritage, 2013, New South Wales Air Quality Statement 2013, available at http://www. epa.nsw.gov.au/resources/air/ epasenateaqsub.pdf

- In 2014 Camberwell in the Hunter Valley had higher monthly PM10 levels than Rozelle in Sydney's Inner West.

- NSW Department of Environment and Heritage, 2014, *Air quality data, Monthly Maximums 01/01/2013 to 01/01/2014*, available at: http:// www.environment.nsw.gov.au/AQMS/ hourlydata.htm

- Armstrong F, et al., Coal and Health in the Hunter: Lessons from one valley for the world. Climate and Health Alliance.

Rail corridor particulate pollution

- Particulate pollution exceeding the current Australian standard has been documented from passing coal trains along the rail corridor. Unloaded coal wagons produced more particulate pollution than loaded coal wagons though both were more polluting than freight or passenger trains.

- Higginbotham N, Ewald B, Mozeley F, and Whelan J,"Coal Train Pollution Signature Study" August 2013 for the Coal Terminal Action Group Dust and Health Committee.

- Impacts on health to rail corridor residents have not been quantified with current numbers of coal train movements. Train movements are set to increase with operation of the T4 terminal with an increase in risk to residents health.

- **While the Addendum requires a protocol for cleaning of unloaded coal wagons the requirement to wash wagons and inspect wagons prior to discharge from the terminal should be specified.**

Further mitigation measures

- The Addendum discusses wetting of coal stock piles. On extremely windy days suspension of loading activities is required to minimise dust to surrounding suburbs. **Licensing should stipulate prompt cessation of operations when local dust monitoring indicates a problem.**

- Doctors for the Environment Australia, Submission on the Port Waratah Coal Services Terminal 4, November 2013.

Other negative health impacts of coal mining in the Hunter Valley

- Social dislocation due to community destruction when villages are bought out for mining and negative mental health impact
- Noise and light pollution
- Exposure to toxic gases from explosive blast fumes, transport and combustion. Nitrogen dioxide exposure to nitrogen dioxide at low levels can cause irritation of eyes, nose and throat, dizziness and headache, shortness of breath and wheezing, and can worsen asthma. At high levels pulmonary oedema.
- Carbon monoxide and nitric oxide are also harmful in blast fumes.
- **Armstrong F, et al., Coal and Health in the Hunter: Lessons from one valley for the world. Climate and Health Alliance.**

While the Addendum presents a recommendation that the T4 terminal is in the best interest of NSW this is at the expense of the health of Hunter residents.

Hunter residents bear a disproportionate health cost due to coal mining in comparison to the rest of NSW.

Increased negative health outcomes for Hunter residents.

- A 2010 NSW Health Report from 2010 reported that the Hunter regions most affected by open cut coal mining and coal-fired power generation have higher rates of emergency visits and hospital admissions for asthma and respiratory disease and cardiovascular disease compared with the rest of the state.

- **Armstrong F, et al., Coal and Health in the Hunter: Lessons from one valley for the world. Climate and Health Alliance.**

- A 2010 survey found the Hunter Region had the highest proportion of children diagnosed with asthma in NSW.

- **Centre for Epidemiology and Research, 2010, 2007–2008 Report on Child Health from the New South Wales Population Health Survey. NSW Department of Health, Sydney.**