Hunter Community Environment Centre
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March 7, 2013

Dear Sir/Madam

Supplementary submission to the Senate Committee Inquiry into the Impacts of Air Quality on Health

The Hunter Community Environment Centre made an initial (and substantive) submission in early February. This second submission is supplementary to the earlier submission.

The main substance of this supplementary submission is a report on particle pollution monitoring in eleven suburban locations in Newcastle and the Lower Hunter. The report was launched last night (7/3) and is attached.

As previously stated, we urge the committee to consider conducting a hearing in the Hunter region. Air quality is an issue of intense community concern and debate in our region. We are aware of many organisations that would appreciate the opportunity to communicate their concerns directly to Committee members.

Sincerely

Dr James Whelan
Dust and Health Committee Chair
Coal Terminal Action Group
Hunter Community Environment Centre

Term of reference (a): Particulate matter, its sources and effects

In late 2012, an alliance of community groups in Newcastle and the Hunter Valley known as the Coal Terminal Action Group (CTAG) conducted air quality monitoring in twelve suburban locations to determine current levels of particle pollution. Concerned that a proposed fourth coal terminal (T4) for the Port of Newcastle would double the concentration of coal dust in suburban areas, the alliance of 18 groups raised funds to hire industry-standard 'Osiris' equipment to monitor particles of up to ten microns in diameter (PM_{10}) and fine particles of up to 2.5 microns and 1 micron in diameter ($PM_{2.5}$ and PM_1) in residential areas between 5 December 2012 and 5 January 2013. The study program was assisted and results analysed by air quality scientists Associate Professor Howard Bridgman and Dr Jill Sweeney.

The full report is attached for your information. We commend the report to Committee members.

Community members in Newcastle and the Hunter Valley have expressed concern about the health impacts of coal dust for decades. Residents who live close to coal trains, stockpiles and mines are especially concerned. More than 30,000 people reside and 25,000 children attend school within 500 metres of the coal corridor between Rutherford and the Newcastle Port. The coal export capacity of the Port of Newcastle has grown exponentially in recent years, from 77 million tones per annum (Mtpa) in 1997 to 210 Mtpa in 2012. The T4 proposal by Port Waratah Coal Services (PWCS) would see this increase to 330 Mtpa. Most community members consider our air quality is already poor and will worsen if the New South Wales Government approves T4, a fear confirmed in the PWCS environmental assessment report and by NSW Health in their submission on the proposed terminal

CTAG considers the results of this monitoring report alarming. From the results it is clear that residential areas within 500 metres of coal trains and stockpiles are experiencing particle pollution at harmful levels. This has been acknowledged by NSW Health, as indicated in our preliminary submission. There has not been sufficient air quality monitoring to be able to fully measure the impact of current coal infrastructure nor to assess the potential impact of T4.

Findings

- The national standard for PM_{10} is 50 micrograms per cubic metre averaged over a 24-hour period. This standard was exceeded at seven locations. At some locations, levels recorded were more than 50% higher than the national standard and the standard was exceeded as often as every day.
- At all monitoring locations, particle concentrations were above the threshold to cause adverse health impacts. International research demonstrates adverse health impacts below the NEPM standard, especially for people with chronic heart or lung disease, with active respiratory infection, asthmatics, infants/children and the elderly who are susceptible to adverse health impacts at lower levels. The health impacts of air pollution in Newcastle have not been independently assessed.
- Higher levels of particle pollution were recorded when the wind came from nearby coal stockpiles and the coal train line.
- The study was designed to measure peak concentrations that would impact on local residents. This resulted in higher recordings of particulate pollution than EPA and Lower Hunter Monitoring stations during the same period that have been placed to measure 'background' concentrations.

On the basis of this monitoring study, community groups in Newcastle are calling for:

- Independent research to establish the sources of particle pollution in the Hunter's coal corridor. To date, there have been no studies to conclusively identify the proportion of the particle pollution close to the coal corridor that is coal dust, or the precise source/s of the coal dust (uncovered wagons and stockpiles, coal handling, ballast, etc). This study will require counting and characterising fine and ultrafine (sub-micron) particles and is an essential prerequisite to the assessment of any development that will add to particle pollution in the Hunter.

- An independent assessment of the health impacts of particle pollution in the Hunter to assess the social and economic impacts of current particle concentrations and to model the impacts of the proposed T4.

Snapshot of monitoring results

Suburb	Location/s	Highest PM_{10} level recorded (micrograms per m^3 averaged over 24 hours)	Number of days that the national standard was exceeded	Distance to nearest coal train line or stockpile
Mayfield	Crebert Street	52.4	3 of 6	700m to coal trains 1000m to stockpile
Mayfield	Upfold Street	47.7	0 of 7	400m to coal trains
Mayfield East	O'Mara Street	62.2	3 of 6	150m to coal trains 750m to stockpile
Carrington	Garrett Street	80	5 of 5	500m to coal trains 600m to port 800m to stockpile
Tighes Hill	Henry Street	67.3	5 of 7	300 to coal trains 550m to stockpile
Kotara	Park Avenue	44.3	0 of 6	100m to coal trains (low volume line)
Hexham	Maitland Road	45	0 of 3	50m to coal trains
Thornton	Deschamps Close	41.3	0 of 3	60m to coal trains
East Maitland	Charles Street	51.7	1 of 2	150m to coal trains
East Maitland	Cumberland Road	60.2	1 of 7	300m to coal trains
Lochinvar	Winders Road	50.9	1 of 7	100m to coal trains

Term of reference (b): Those populations most at risk and the causes that put those populations at risk

The study summarised above illustrates that people living close to coal train lines and stockpiles have a higher risk of being exposed to harmful levels of particle pollution than residents of suburbs further from the coal corridor.

Term of reference (c): The standards, monitoring and regulation of air quality at all levels of government

Monitoring rarely occurs where pollution levels are highest and populations are most at risk. When it does occur in these 'peak' locations, the monitoring tends to be undertaken by industry and data generated are not integrated with data collected by government regulators or used to assess whether the NEPM is being met.

Existing regulatory arrangements created under the NEPM and its implementation by state EPAs means that ambient air quality is primarily monitored at 'neighbourhood' or 'background' locations, not in peak locations such as within the coal corridor and close to coal stockpiles. With no monitoring in these areas, populations most at risk are unlikely to be informed of the quality of air they breath,

and regulators do not act to address exceedances of the NEPM standards. That is the reality in Newcastle.

This is also the case in areas where monitoring is conducted by industry. Monitoring results from equipment that is not part of the official (EPA) 'compliance network' are not integrated into the state regulators' datasets nor analysed by the regulators to ensure the NEPM standards are met. In Newcastle, Orica (chemical company) established a monitoring station in suburban Stockton following a catastrophic spill in 2011. The monitor has been generating data on ambient PM_{10} concentrations since late 2012 and measured 13 exceedances of the NEPM standard, with concentrations up to $80\mu gm^{-3}$. A report on this (Craig, 2013) is attached for the Committee's information. The NSW EPA is aware of the elevated levels of PM_{10} recorded in Stockton but does not consider this a breach of the NEPM, will not report it as such, and has taken no regulatory action to bring PM10 concentraitons down to below $50\mu gm^{-3}$.

Term of reference (d): Any other related matters

Community members, groups and other stakeholders have not been adequately engaged in this Inquiry to date. Unlike other Senate Inquiries, there have been no advertisements, community service announcements, public forums or other engagement activities. When the Ambient Air NEPM was initiated, the NEPC had a protocol for community engagement that had been developed through a participatory and consultative process. Workshops were held around the country. By contrast, the current inquiry is a 'black box'. Community members and groups only know about the inquiry if they happen to know someone who knows about it. Some Green Senators have issued media releases, but this does not represent adequate community engagement.

We would like to be informed of – and receive a copy of - the protocol or policy for community engagement that the Senate Committee and its secretariat are following in this instance.

Attachments

1. Rogers, Z., Whelan, J. and Mozely, F., 2013, 'Coal dust in our suburbs: A community-led study of particle pollution in Newcastle and the Lower Hunter coal train corridor', Coal Terminal Action Group.
2. Craig, K., 2013, 'Stockton Air Quality Monitoring Station Report No. 1.' Submitted to the Newcastle Community Consultative Committee on the Environment.