Singleton Shire Healthy Environment Group

"MTW Mine Management Plans Jan 2016"

Calling for

Minimisation

Of

AIR & NOISE POLLUTION

By

Amber Alarm Systems

WORLD Moves to

Air Pollution Minimisation

Slow recognition in the Hunter Valley Journey

- **2010 – 2013 Hunter Valley Study NSW Environmental Health Investigations.**
  SSHEG sought PM2.5 & Health Study
- **Oct 2013 WHO confirms – Air Pollution, Particulate Matter & Diesel Exhausts as Group 1 Carcinogens with no threshold.**
  30 Years of Research announced
- **May 2015 – World Health Assembly-Geneva, Air Pollution Resolutions and Press Release for "Minimisation". (Attm 1)**
  2 Years Later – World Health is acting
- **Dec 2015 – Australian NEPM Standards, reducing over 10 years PM10 and PM2.5 (Attm 2)**
  Some Caveats on these Standards
- **Dec 2015 – Clean Air Society Austr & NZ Press Release on NEPM Standards. (Attm 3)**
  Critical of decision due to Health Impacts
- **2016 – 2025 Impact on MTW Operations More stringent Air Pollution Alarms.(Attm 4)**

"How will MTW Respond & PM2.5's ?"

WORLD Moves to

Air Pollution Minimisation

Slow recognition in the Hunter Valley Journey

- **2010-2013 Hunter Valley Study**
  NSW Environmental Health Investigations.

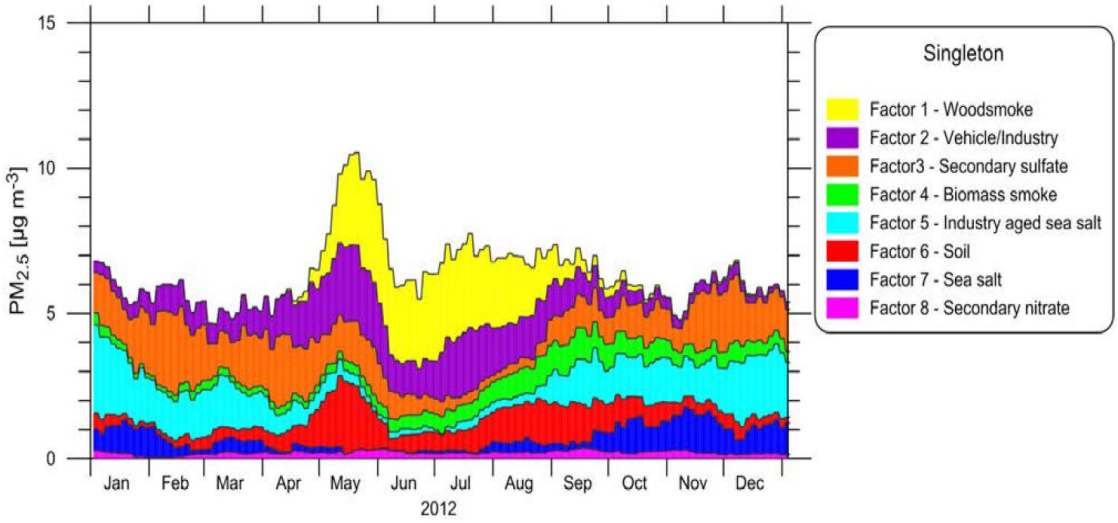
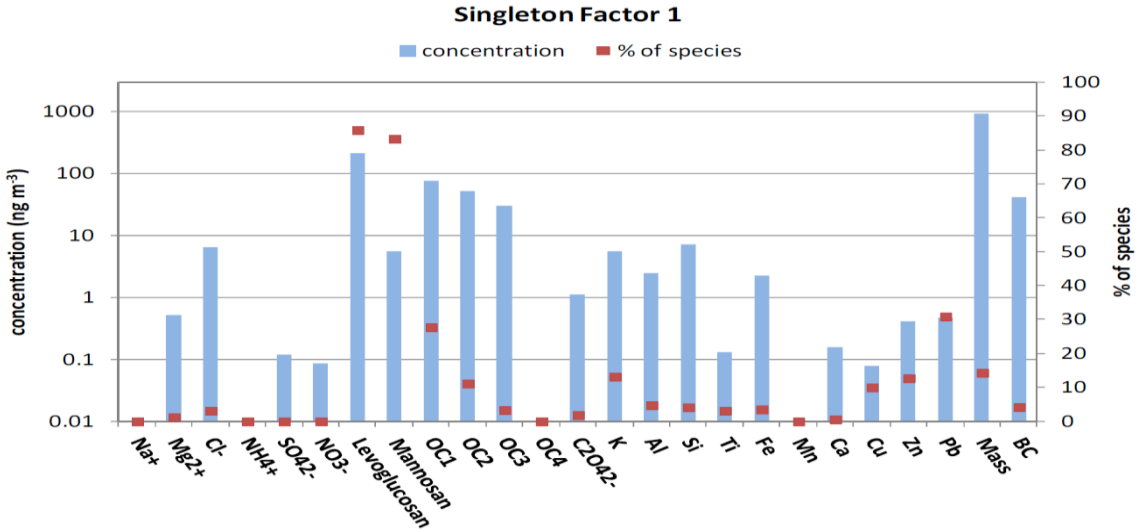


Figure 48. Time series (smoothed with 31-day running window) of the contribution of each factor to the total $PM_{2.5}$ in Singleton.



➢ Oct 2013 WHO confirms – Air Pollution, Particulate Matter & Diesel Exhausts as Group 1 Carcinogens with no threshold.

- ➢ **STOP PRESS RELEASE World Health Organisation 17th October 2013**
- ➢
- ➢ " IARC: Outdoor air pollution a leading environmental cause of cancer deaths

➢ **Lyon/Geneva, 17 October 2013** – The specialized cancer agency of the World Health Organization, the International Agency for Research on Cancer (IARC), announced today that it has **classified outdoor air pollution as *carcinogenic to humans* (Group 1)**. 1

➢

➢ After thoroughly reviewing the latest available scientific literature, the world's leading experts convened by the IARC Monographs Programme concluded that there is *sufficient evidence* that exposure to outdoor air pollution causes lung cancer (Group 1). They also noted a positive association with an increased risk of bladder cancer.

➢ **Particulate matter, a major component of outdoor air pollution, was evaluated separately and was also classified as *carcinogenic to humans* (Group 1).".**

➢ "The predominant sources of outdoor air pollution are transportation, stationary power generation, industrial and agricultural emissions, and residential heating and cooking. Some air pollutants have natural sources, as well".

➢ May 2015 – World Health Assembly-Geneva, Air Pollution Resolutions and Press Release for "Minimisation". (Attm 1)

World Health Organization

SIXTY-EIGHTH WORLD HEALTH ASSEMBLY
Agenda item 14.6

A68/A/CONF./2 Rev.1
26 May 2015

Health and the Environment: Addressing the health impact of air pollution

(PP1) Noting with deep concern that indoor and outdoor air pollution are both among the leading avoidable causes of disease and death globally, and the world's largest single environmental health risk;[2]

(PP2) Acknowledging that 4.3 million deaths occur each year from exposure to household (indoor) air pollution and that 3.7 million deaths each year are attributable to ambient (outdoor) air pollution, at a high cost to societies;[3]

(PP3) Aware that exposure to air pollutants, including fine particulate matter, is a leading risk factor for noncommunicable diseases in adults, including ischemic heart disease, stroke, chronic obstructive pulmonary disease, asthma and cancer, and poses a considerable health threat to current and future generations;

- **Dec 2015 – Australian NEPM Standards, reducing over 10 years PM10 and PM2.5 (Attm 2)**

Schedule 2 Standards and Goal

Table 1: Standards for Pollutants

Column 1 Item	Column 2 Pollutant	Column 3 Averaging period	Column 4 Maximum concentration standard	Column 5 Maximum allowable exceedances
1	Carbon monoxide	8 hours	9.0 ppm	1 day a year
2	Nitrogen dioxide	1 hour 1 year	0.12 ppm 0.03 ppm	1 day a year None
3	Photochemical oxidants (as ozone)	1 hour 4 hours	0.10 ppm 0.08 ppm	1 day a year 1 day a year
4	Sulfur dioxide	1 hour 1 day 1 year	0.20 ppm 0.08 ppm 0.02 ppm	1 day a year 1 day a year None
5	Lead	1 year	0.50 µg/m^3	None
6	Particles as PM_{10}	1 day 1 year	50 µg/m^3 25 µg/m^3	None None
7	Particles as $PM_{2.5}$	1 day 1 year	25 µg/m^3 8 µg/m^3	None None

Note: A number of caveats also apply

Table 2: Goal for Particles as $PM_{2.5}$ by 2025

Column 1 Pollutant	Column 2 Averaging period	Column 3 Maximum concentration
Particles as $PM_{2.5}$	1 day 1 year	20 $\mu g/m^3$ by 2025 7 $\mu g/m^3$ by 2025

For the purposes of this Measure the following definitions shall apply:

(1) Lead sampling must be carried out for a period of 24 hours at least every sixth day.

(2) Measurement of lead must be carried out on Total Suspended Particles (TSP) or its equivalent.

(3) In Column 3 of table 1 and Column 2 of table 2 of Schedule 2, the averaging periods are defined as follows:

- 1 hour clock hour average
- 4 hour rolling 4 hour average based on 1 hour averages
- 8 hour rolling 8 hour average based on 1 hour averages
- 1 day calendar day average
- 1 year calendar year average

(4) In Column 5 of table 1 of Schedule 2, the time periods are defined as follows:

- day calendar day during which the associated standard is exceeded
- year calendar year.

(5) All averaging periods of 8 hours or less must be referenced by the end time of the averaging period. This determines the calendar day to which the averaging periods are assigned.

(6) For the purposes of calculating and reporting 4 and 8 hour averages, the first rolling average in a calendar day ends at 1.00 am, and includes hours from the previous calendar day.

(7) The concentrations in Column 4 of table 1 and Column 3 of table 2 of Schedule 2 are the arithmetic mean concentrations.

➢ Dec 2015 – Clean Air Society Austr & NZ Press Release on NEPM Standards. (Attm 3)

MEDIA RELEASE **23 DECEMBER 2015**

PEAK AIR QUALITY BODY WELCOMES PROMISE OF CLEANER AIR

A key measure is the proposed strengthening of reporting about fine particle pollution ($PM_{2.5}$). This has been an advisory standard since 2003 but will now have the same status as Australia's other ambient air quality standards. Fine particulate pollution increases mortality and ill health, in particular through its contribution to respiratory and cardiovascular disease, and cancer. Health impacts can occur both over the short and long term.

Unfortunately, the decision to set the national limit for coarse particle pollution (PM_{10}) at 25 micrograms per cubic metre for the annual average is not consistent with recommendations from the World Health Organisation (WHO). And some States are already proposing to use the value of 20 micrograms per cubic metre recommended by the WHO.

Dr Hibberd said, "The proposed national value of 25 micrograms per cubic metre is not based on the latest scientific evidence which is for an annual PM_{10} limit of 20 micrograms per cubic metre. We also know that there is no safe limit for particulate pollution. The greater the reductions we can achieve, the better the health improvements will be."

➢ 2016 – 2025 Impact on MTW Operations More stringent Air Pollution Alarms.(Attm 4)

(Extract from SSHEG MTW Mine Mgt. Plans Jan 2016)

This is a plea to MTW and Rio Management to consider a Culture change away from:-

❖ The present "*Compliance Limits*" and "*all reasonable and feasible measures*";

✓Change to

"**Implement all reasonable and feasible measures to Minimise the Operational, Low Frequency and Road Noise of the Development**".

Attachment 1 World Health Assembly 2015

World Health Organization

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World Health Assembly closes, passing resolutions on air pollution

New release

26 MAY 2015 ¦ GENEVA - The World Health Assembly closed today, with Director-General Dr Margaret Chan noting that it had passed several "landmark resolutions and decisions". Three new resolutions were passed today: one on air pollution, one on epilepsy and one laying out the next steps in finalizing a framework of engagement with non-State actors.

Air pollution

Delegates at the World Health Assembly adopted a resolution to address the health impacts of air pollution – the world's largest single environmental health risk. Every year 4.3 million deaths occur from exposure to indoor air pollution and 3.7 million deaths are attributable to outdoor air pollution. This was the first time the Health Assembly had debated the topic.

The resolution highlights the key role national health authorities need to play in raising awareness about the potential to save lives and reduce health costs, if air pollution is addressed effectively. It also stresses the need for strong cooperation between different sectors and integration of health concerns into all national, regional and local air pollution-related policies. It urges Member States to develop air quality monitoring systems and health registries to improve surveillance for all illnesses related to air pollution; promote clean cooking, heating and lighting technologies and fuels; and strengthen international transfer of expertise, technologies and scientific data in the field of air pollution.

The resolution asks the WHO Secretariat to strengthen its technical capacities to support Member States in taking action on air pollution. This includes further building capacity to: implement the *"WHO air quality guidelines"* and *"WHO indoor air quality guidelines*; conduct cost-benefit assessment of mitigation measures; and advance research into air pollution's health effects and effectiveness. At the Sixty-ninth World Health Assembly, WHO will propose a road map for an enhanced global response by the health sector that reduces the adverse health effects of air pollution.

World Health Organization

SIXTY-EIGHTH WORLD HEALTH ASSEMBLY
Agenda item 14.6

A68/A/CONF./2 Rev.1
26 May 2015

Health and the Environment: Addressing the health impact of air pollution

Draft resolution proposed by the delegations of Albania, Chile, Colombia, France, Germany, Monaco, Norway, Panama, Sweden, Switzerland, Ukraine, United States of America, Uruguay and Zambia

The Sixty-eighth World Health Assembly,

Having considered the report on Health and the environment: addressing the health impact of air pollution,

(PP0) Reaffirming our commitment to the outcome document of the Rio+20 Conference "The future we want", in which all States Members of the United Nations committed to promoting sustainable development policies that support healthy air quality in the context of sustainable cities and human settlements, and recognized that reducing air pollution leads to positive effects on health;[1]

(PP1) Noting with deep concern that indoor and outdoor air pollution are both among the leading avoidable causes of disease and death globally, and the world's largest single environmental health risk;[2]

(PP2) Acknowledging that 4.3 million deaths occur each year from exposure to household (indoor) air pollution and that 3.7 million deaths each year are attributable to ambient (outdoor) air pollution, at a high cost to societies;[3]

(PP3) Aware that exposure to air pollutants, including fine particulate matter, is a leading risk factor for noncommunicable diseases in adults, including ischemic heart disease, stroke, chronic obstructive pulmonary disease, asthma and cancer, and poses a considerable health threat to current and future generations;

[1] UNEA resolution 1/7, PP6.

[2] Global Health Observatory http://www.who.int/gho/phe/en/ (accessed 18 March 2015).

[3] WHO. Burden of disease from ambient air pollution for 2012. http://www.who.int/phe/health_topics/outdoorair/databases/AAP_BoD_results_March2014.pdf?ua=1 (accessed 1 December 2014).

(PP4) Concerned that half of the deaths due to acute lower respiratory infections, including pneumonia in children aged less than five years, may be attributed to household air pollution, making it a leading risk factor for childhood mortality;

(PP5) Further concerned that air pollution, including fine particulate matter, is classified as a cause of lung cancer by WHO's International Agency on Research for Cancer;[1]

(PP6)Aware that both short- and long-term exposure to air pollution has a negative impact on public health, with a much greater impact resulting from long-term exposure and exposure at high levels, causing chronic diseases such as cardiovascular diseases and respiratory diseases, including chronic obstructive pulmonary disease (COPD), and also that for many pollutants, such as particles, long-term exposure even at low levels (below WHO air quality guidelines proposed levels) could result in some adverse health effects;

(PP7) Noting the strong significance of air pollution and its health effects for the objectives and targets contained in the WHO Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020, as well as the significance of the WHO Framework Convention on Tobacco Control, in particular Article 8 and Guidelines related to the protection from exposure to tobacco smoke, as applicable to the parties of the Convention;

(PP8)Noting that air pollution is a cause of global health inequities, affecting in particular women, children and old persons, as well as low-income populations who are often exposed to high levels of ambient air pollution, or in homes that have no other choice than to be exposed to air pollution from cooking, heating and, and that improving air quality is among the measures with the greatest potential impact on health equity;[2]

(PP9) Cognizant that most air pollutants are emitted as a result of the human activities identified as sources of air pollution[3] in the WHO guidelines on ambient and indoor air pollution, and that there are also naturally occurring phenomena that negatively affect air quality[4] and noting that there is a significant interrelation between outdoor and indoor air quality;

(PP9 bis) Aware that promoting energy efficiency and expanding the use of clean and renewable energy can have co-benefits for health and sustainable development and stressing that the affordability of this energy will help maximize these opportunities;

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[1] IARC Monographs Working Group on the Evaluation of Carcinogenic Risks to Humans on the following issues:

- Outdoor Air Pollution (2013, Volume 109);
- Diesel and gasoline exhausts and some nitroarenes (2012, Volume 105);
- Household use of solid fuels and high-temperature frying (2010, Volume 95);
- Indoor emissions from household combustion of coal (2012, Volume 100E);
- Tobacco smoke and involuntary smoking (2004, Volume 83).

[2] WHO Burden of Disease, Indoor and Outdoor Air Pollution, 2014.

[3] WHO Guidelines for Air Quality: Global Update 2005; WHO guidelines for indoor air quality: household fuel combustion; WHO Guidelines for indoor air quality: select pollutants; WHO guidelines for indoor air quality: Dampness and Mould.

[4] These include, inter alia, Radon, [a carcinogenic], dust- and sandstorms, volcanic eruptions and forest fires.

(PP9 ter) Underscoring that the root causes of air pollution and its adverse impacts are predominantly socioeconomic in nature and cognizant of the need to address the social determinants of health related to development in urban and rural settings, including poverty eradication, as an indispensable element for sustainable development and for the reduction of the health impact of air pollution;

(PP9 cinc) Emphasizing the importance of promotion, transfer and diffusion of environmentally sound technologies, particularly to developing countries, to address the health impact of air pollution;

(PP10) Acknowledging recent global efforts to promote air quality, in particular the 2014 United Nations Environment Assembly resolution on air quality, as well as the many national and regional initiatives to mitigate the health impacts of indoor and outdoor air pollution, and noting that regional and sub-regional co-operation frameworks provide good opportunities to address air quality issues according to the specific circumstances of each region;

(PP11) Recognizing that in order to contribute to national policy choices that protect health and reduce health inequities, the health sector will need to engage in cross-sectoral approaches to health, including adopting a health-in-all policies approach;[1]

(PP12) Noting that WHO's air quality guidelines for both ambient air quality[2] (2005) and indoor air quality[3] (2014) provide guidance and recommendations for clean air that protect human health and recognizing that these need to be supported by activities, such as the promotion and facilitation of implementation;

(PP13) Acknowledging that while many of the most important and cost-effective actions against outdoor and indoor air pollution require the involvement and leadership of national governments as well as regional and local authorities, cities are both particularly affected by the consequences of air pollution and well-placed to promote healthy city activities to reduce air pollution and its associated health impacts, and can develop good practices, complement and implement national measures;

(PP14 bis) Acknowledging that mobilizing national and, as appropriate, international resources is important for re-tooling relevant infrastructure which contributes to air pollution reduction is an integral element of global sustainable development, and that air pollution-related health impacts can be a health-relevant indicator for sustainable development policies;

[1] Taking into account the context of federated states.

[2] WHO air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide – *WHO Air Quality Guidelines – Global Update 2005*: summary of risk assessment. Geneva: World Health Organization; 2006 (document WHO/SDE/PHE/OEH/06.02).

[3] WHO indoor air quality guidelines: household fuel combustion; 2014; (http://www.who.int/indoorair/guidelines/hhfc/en/).

(PP15) Aware that promoting air quality is a priority to protect health and provide co-benefits for the climate, ecosystem services, biodiversity, and food security;[1]

(PP15 bis) Acknowledging also the complexity between improving air quality and reducing emissions of warming climate-altering pollutants, and that there can be meaningful opportunities to achieve co-benefits resulting from these actions;

(PP15 bis bis) Underlining that higher temperatures, heatwaves, dust- and sandstorms, volcanic eruptions and forest fires can also exacerbate the impact of anthropogenic air pollution on health,

(OP1) URGES Member States[2] to:

(OP1.1) Redouble their efforts to identify, address and prevent the health impacts of air pollution, by developing and strengthening, as appropriate, multisectoral cooperation on the international, regional and national levels, and through targeted, multisectoral measures in accordance with national priorities;

(OP1.2) Enable health systems, including health protection authorities, to take a leading role in raising awareness in the public and among all stakeholders of the impacts of air pollution on health and opportunities to reduce or avoid exposure, including by guiding preventive measures to help reduce these health effects, to interact effectively with the relevant sectors and other relevant public and private stakeholders to inform about sustainable solutions, and to ensure that health concerns are integrated into relevant national, regional and local policy, decision-making and evaluation processes, including public health prevention, preparedness and response measures, as well as health system strengthening;

(OP1.3) Facilitate relevant research, including developing and utilizing databases on morbidity and mortality; health impact assessment; the use and costs of health care services and the societal costs associated with ill health; supporting identification of research priorities and strategies; engaging with academia to address knowledge gaps; and supporting the strengthening of national research institutions and international cooperation in research to identify and implement sustainable solutions;

(OP1.4) Contribute to an enhanced global response to the adverse health effects of air pollution in accordance with the national context including by collecting, and utilizing data relevant to the health outcomes of air quality, contributing to the development of normative standards, dissemination of good practices and lessons from implementation and working towards harmonization of health-related indicators which could be used by decision makers;

(OP1.6) Improve the morbidity and mortality surveillance for all illnesses related to air pollution, and optimize the linkage with monitoring systems of air pollutants;

[1] United Nations Environment Assembly Resolution 1/7 (http://www.unep.org/unea/download.asp?ID=5171 accessed 20 March 2015). Smith, K.R., A. Woodward, et al, 2014: Human health: impacts, adaptation, and co-benefits. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 709–754.

[2] And, where applicable, regional economic integration organizations.

(OP1.7) Take into account the WHO Air Quality Guidelines and WHO Indoor Air Quality Guidelines and other relevant information in the development of a multisectoral national response to air pollution and carry out measures supporting the aims of those guidelines;

(OP1.8) Encourage and promote measures that will lead to meaningful progress in reducing levels of indoor air pollution such as clean cooking, heating and lighting practices and efficient energy use;

(OP1.9) Take effective steps, to address and to minimize as far as possible air pollution specifically associated with health care activities, including by implementing, as appropriate, relevant WHO guidelines;

(OP1.10) Develop policy dialogue, collaboration and information sharing between different sectors to facilitate a coordinated, multisectoral basis for future participation in regional and global processes to address the impact of air pollution on health;

(OP1.10 bis) Strengthen international cooperation to address health impacts of air pollution, including through facilitating transfer of expertise, technologies and scientific data in the field of air pollution, as well as exchanging good practices;

(OP 1.10 ter) Identify, at the national level, actions by the health sector that reduce health inequities related to air pollution and work closely with the communities at risk who can gain the most from effective equitable and sustained actions, so as to facilitate the full realization of the right to the enjoyment of the highest attainable standard of physical and mental health;

(OP1.11) Meet the commitments made at the 2011 UN High level meeting on non-communicable diseases and to use, as appropriate, the road map and policy options contained in the WHO global action plan for noncommunicable diseases;

(OP1.11 bis) Meet the obligations of the WHO FCTC, if the Member State is a Party to this treaty;

(OP1.13) Collaborate with regional and international organizations in developing partnerships to promote access to adequate technical and financial resources to improve air quality;

REQUESTS the Director-General:

(OP2.1) To significantly strengthen WHO's capacities in the field of air pollution and health in order to provide:

(a) Support and guidance for Member States in implementing the WHO Air Quality Guidelines and WHO Indoor Air Quality Guidelines;

(a bis) Support and provide guidance for Parties of the WHO FCTC in implementing the obligations under article 8 of the treaty and its guidelines, in coordination with the Convention Secretariat;

(b) Enhanced technical support and guidance to Member States, including through appropriate capacities in regional and country offices to support country activities;

(c) Further identification, development and regular updating of WHO air quality guidelines and cost-benefit tools, including monitoring systems, to support effective and efficient decision making;

(d) Enhanced technical capacity of WHO to collaborate, as appropriate, with relevant international, regional and national stakeholders, to compile and analyse data on air quality, with particular emphasis on health-related aspects of air quality;

(e) Assistance to Member States to increase awareness and communicate to the general public and stakeholders, in particular communities at risk, about the effects of air pollution and actions to reduce it;

(f) Dissemination of evidence-based best practices on effective indoor and ambient air quality interventions and policies related to health;

(g) Enhanced ability of WHO to convene, guide and influence research strategies in the field of air pollution and health, in conjunction with the *WHO Global Health Observatory*;

(h) Appropriate advisory capacity and support tools to assist the health and other sectors at all levels of government, especially the local level and in urban areas, taking into account different sources of pollution in tackling air pollution and their health effects;

(i) Appropriate advisory capacity and support tools at regional and subregional level to help Member States address the health effects of air pollution and other challenges to air quality with a cross-border impact, and to facilitate coordination among Member States in this respect;

(j) To create, enhance and update, in cooperation with relevant UN agencies and programmes a public information tool of WHO analysis, including policy and cost-efficiency aspects, of specific and available clean air technologies to address the prevention and control of air pollution, and its impacts on health;

(OP2.2) To exercise global health leadership and maximize synergies, while avoiding duplication with relevant global efforts that promote health improvements related to air quality, and air pollution reduction while continuing to work on other environmental challenges to health through, among others, the implementation of the WHA Resolution 61.19 *Climate Change and Health;*

(OP2.2 bis) To work with other United Nations partners, programmes and agencies, in particular with reference to the UN Environment Assembly resolution on Air Quality;

(OP2.2 ter) To raise awareness of the public health risks of air pollution and the multiple benefits of improved air quality, in particular in the context of the discussions on the post-2015 development agenda;

(OP2.2 quart) To continue to exercise and enhance the leading role of WHO in the Strategic Approach to International Chemicals Management to foster the sound management of chemicals

and waste with the objective of minimizing and, where possible, preventing significant adverse effects on health, including from air pollution;

(OP2.3) To strengthen, and where applicable, forge links with existing global health initiatives that can benefit from air pollution reduction, including global efforts to reduce noncommunicable diseases and improve children's health;[1]

(OP2.3 bis) To set aside adequate resources for the work in the Secretariat, in line with the Programme budget 2014–2015 and Proposed programme budget 2016–2017 and the Twelfth General Programme of Work 2014–2019;

(OP2.4) To report to the Sixty-ninth World Health Assembly on the implementation of this resolution and its progress in mitigating the health effects of air pollution; and other challenges to air quality;

(OP2.5) To propose to the Sixty-ninth World Health Assembly a road map for an enhanced global response to the adverse health effects of air pollution.

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[1] Examples of such efforts are the WHO global action plan for noncommunicable diseases, Integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea (GAPPD), The Global Strategy for Women's, Children's and Adolescents' Health and the Every Woman Every Child Movement.

Attachment 2 Extracts

Variation to the National Environment Protection (Ambient Air Quality) Measure

National Environment Protecton Council Act 1994

The NATIONAL ENVIRONMENT PROTECTION COUNCIL makes this variation to the National Environment Protection (Ambient Air Quality) Measure under section 20 of the *National Environment Protection Council Act 1994* (Cwlth), *National Environment Protection Council (New South Wales) Act 1995* (NSW), *National Environment Protection Council (Victoria) Act 1995* (Vic), *National Environment Protection Council (Queensland) Act 1994* (Qld), *National Environment Protection Council (Western Australia) Act 1996* (WA), *National Environment Protection Council (South Australia) Act 1995* (SA), *National Environment Protection Council (Tasmania) Act 1995* (Tas), *National Environment Protection Council Act 1994* (ACT) and the *National Environment Protection Council (Northern Territory) Act 1994* (NT)

Dated 15 December 2015

Schedule 2 Standards and Goal

Table 1: Standards for Pollutants

Column 1 Item	Column 2 Pollutant	Column 3 Averaging period	Column 4 Maximum concentration standard	Column 5 Maximum allowable exceedances
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4	Sulfur dioxide	1 hour 1 day 1 year	0.20 ppm 0.08 ppm 0.02 ppm	1 day a year 1 day a year None
5	Lead	1 year	0.50 µg/m^3	None
6	Particles as PM_{10}	1 day 1 year	50 µg/m^3 25 µg/m^3	None None
7	Particles as $PM_{2.5}$	1 day 1 year	25 µg/m^3 8 µg/m^3	None None

Table 2: Goal for Particles as $PM_{2.5}$ by 2025

Column 1 Pollutant	Column 2 Averaging period	Column 3 Maximum concentration
Particles as $PM_{2.5}$	1 day 1 year	20 $\mu g/m^3$ by 2025 7 $\mu g/m^3$ by 2025

For the purposes of this Measure the following definitions shall apply:

(1) Lead sampling must be carried out for a period of 24 hours at least every sixth day.

(2) Measurement of lead must be carried out on Total Suspended Particles (TSP) or its equivalent.

(3) In Column 3 of table 1 and Column 2 of table 2 of Schedule 2, the averaging periods are defined as follows:

- 1 hour clock hour average
- 4 hour rolling 4 hour average based on 1 hour averages
- 8 hour rolling 8 hour average based on 1 hour averages
- 1 day calendar day average
- 1 year calendar year average

(4) In Column 5 of table 1 of Schedule 2, the time periods are defined as follows:

- day calendar day during which the associated standard is exceeded
- year calendar year.

(5) All averaging periods of 8 hours or less must be referenced by the end time of the averaging period. This determines the calendar day to which the averaging periods are assigned.

(6) For the purposes of calculating and reporting 4 and 8 hour averages, the first rolling average in a calendar day ends at 1.00 am, and includes hours from the previous calendar day.

(7) The concentrations in Column 4 of table 1 and Column 3 of table 2 of Schedule 2 are the arithmetic mean concentrations.

Attachment 3 CASANZ Media Release

MEDIA RELEASE **23 DECEMBER 2015**

PEAK AIR QUALITY BODY WELCOMES PROMISE OF CLEANER AIR

The Clean Air Society of Australia and New Zealand (CASANZ), the peak body for air quality professionals, welcomes the National Clean Air Agreement released last Monday by Commonwealth, State and Territory environment ministers.

CASANZ President, Dr Mark Hibberd said, "The framework of the National Clean Air Agreement is an encouraging sign that air quality is firmly on the national agenda. If the actions in the two-year work plan are undertaken, then we should see a real improvement in air quality."

A key measure is the proposed strengthening of reporting about fine particle pollution ($PM_{2.5}$). This has been an advisory standard since 2003 but will now have the same status as Australia's other ambient air quality standards. Fine particulate pollution increases mortality and ill health, in particular through its contribution to respiratory and cardiovascular disease, and cancer. Health impacts can occur both over the short and long term.

Unfortunately, the decision to set the national limit for coarse particle pollution (PM_{10}) at 25 micrograms per cubic metre for the annual average is not consistent with recommendations from the World Health Organisation (WHO). And some States are already proposing to use the value of 20 micrograms per cubic metre recommended by the WHO.

Dr Hibberd said, "The proposed national value of 25 micrograms per cubic metre is not based on the latest scientific evidence which is for an annual PM_{10} limit of 20 micrograms per cubic metre. We also know that there is no safe limit for particulate pollution. The greater the reductions we can achieve, the better the health improvements will be."

Health costs of air pollution from wood heaters are estimated at over $20 billion annually in Australia, so it is laudable that wood heater emissions are included in the Agreement. However, the emissions standard for new wood heaters sold in Australia will remain at almost double the current New Zealand limit until 2020. CASANZ's position is that there is also an urgent need to take action on existing non-compliant heaters, which otherwise could remain a problem for a long time. No new resources have been allocated to address this issue, which Dr Hibberd notes, "Is technically probably one of the simplest and cheapest air pollution issues to fix."

CASANZ welcomes the plan to set up a National Air Quality Data Service so that nationally consistent air quality data and statistics are regularly available to stakeholders.

Dr Hibberd hopes that the service will provide much more than the quarterly reports proposed in the plan, "Accurate and readily available air quality data is essential for understanding the impacts of poor air quality on Australians. It's also really important that the community has easily accessible information. While we welcome the proposed data service, I think we can do much better at a national level especially given the technology that is available and the type of real-time information that is already being provided by some States."

-ends-

For interviews, further information, and images, please contact:
Nick Koerbin, General Manager CASANZ, on 0418 568 093 or nkoerbin@casanz.org.au

Attachment 4 Air Quality

Amber Alert Alarms

The Singleton Shire Healthy Environment Group takes this opportunity to comment upon the Mount Thorley Warkworth Management plans focusing clearly on the "**Minimisation of Air and Noise Pollution'**.

This is a plea to MTW and Rio Management to consider a Culture change away from:-

- ❖ The present "*Compliance Limits*" and "*all reasonable and feasible measures*";
- ✓ Change to "**Implement all reasonable and feasible measures to Minimise the Operational, Low Frequency and Road Noise of the Development**".

Table 3 - Real Time Air Quality Alarm System Overview

Monitoring location	Trigger level		Response actions
MTW Charlton Ridge Met Station	**RED**	**AMBER**	
Bulga TEOM	**Stage one** • 10 min average PM_{10} > 150µg/m^3 • 1 hour average PM_{10} > 50µg/m^3 for consecutive hours	75ug/m3 50ug/m3 once	• Validation of alarm (verify monitors functioning correctly and review meteorological conditions) • Notify relevant Open Cut Examiner • Response per section 6.3.3.2
Wallaby Scrub Road TEOM	**Stage two** • rolling 24hr average PM_{10} > 50µg/m consecutive hours (winds in arc of mi	25ug/m3 12 times	
Warkworth TEOM	• 10min average PM_{10} >150 µg/m^3 for consecutive hours (winds in arc of mi	75ug/m3 Once	
MTIE Early Warning Unit	• 10 min average PM_{10} > 200µg/m^3	100 ug/m3	• Inspection (field inspection or dust cameras) • Response per section 6.3.3.2
	• PM2.5 15 Min Av> 8ug/m3	5ug/m3	

Amber Alert Noise Alarm

The BarnOwl monitors are configured to trigger alarms, received by mine personnel in the event of elevated noise (<1000Hz) from the direction of MTW. Triggers are listed in Table 4.

35bB(A)
Single
15minute

Table 3 - BarnOwl alarm triggers

Monitoring Location	Consent Area	Amber Alert (dB(A))	
Bulga	WML	36	
	MTO	36	38
Wambo Road	WML	36	38
	MTO	36	38
Inlet Road West	MTW	N/	35
Long Point	WML	35	

The real time noise alarm process operates as follows:

- A noise alarm is generated following two consecutive 15min measurements at a monitor location from the directions of MTW operations (<1000Hz low pass data, from the direction of either of MTO, WML, or MTW combined) above the trigger threshold, detailed in Table 4;