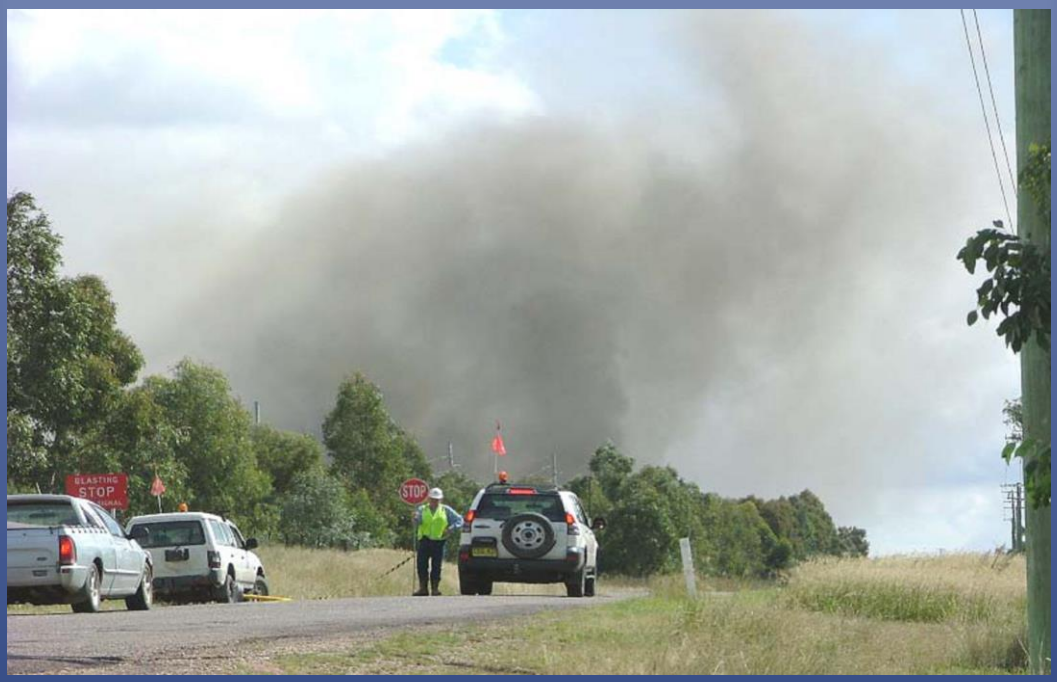
SINGLETON SHIRE



SSHEG DOCUMENT MARCH 2014

Mining Pollution Mitigation Priority Action

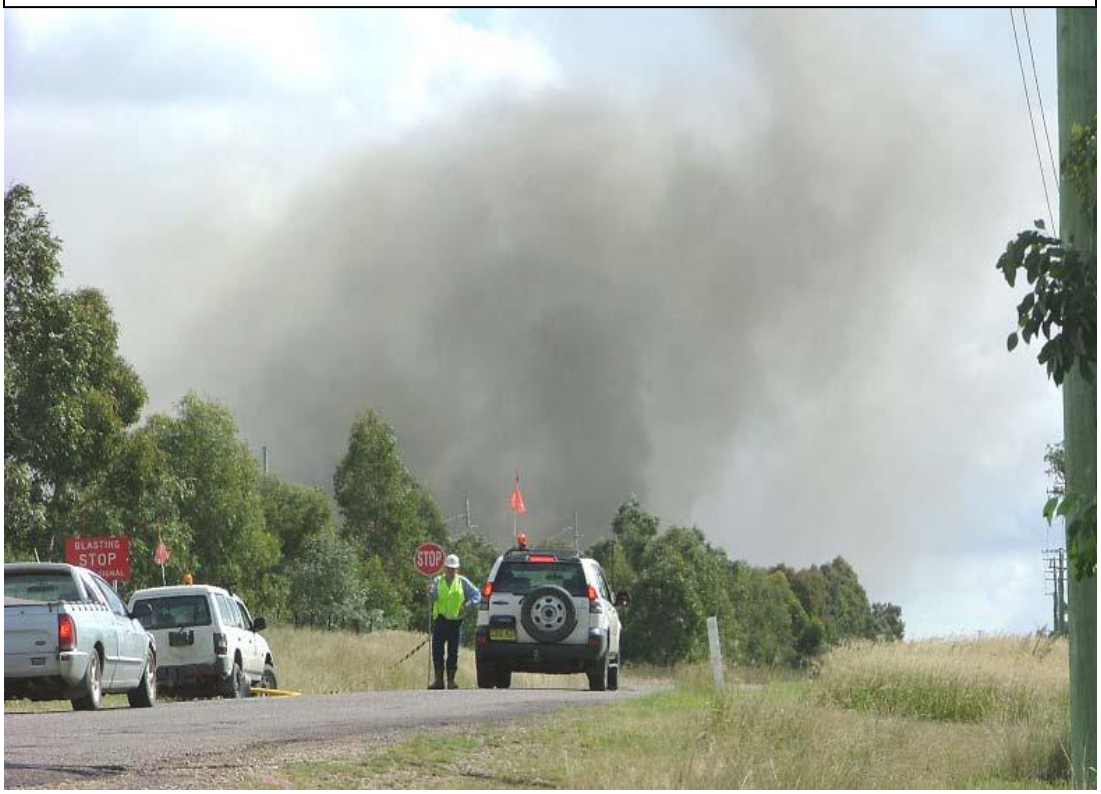
Following four(4) years of NSW Government Authorities investigations into Air Pollution in the Upper Hunter Valley, it took the World Health Organisation (WHO) announcement in October 2013 to confirm the connection between Air Pollution and Human Cancers. – " A GAME CHANGER"

Document prepared to identify the SSHEG expectations and the Pollution areas in which investigations were expected to have been reported upon.

SSHEG Health Study Progress Report – March 2014

The Singleton Shire Community meeting in 2008 established the Singleton Shire Healthy Environment Group to undertake a Health Survey with Testimonials, resulting in the 2009 submission to NSW Government calling for an Independent Health Study to ascertain the relative Health state of Residents and the Risk imposed by Poor Hunter Valley Air Quality.

IT'S ONLY HAZE



AIR POLLUTION AND COMMUNITY HEALTH

World **H**ealth **O**rganisation announcement on Air Pollution in October 2013 warrants a **Rethink & Debate** on the Urgency for

Extensive Mining Pollution Mitigation

Coal Mining Air Pollution and Community Health

Prior Understanding

Up until now, the Community and Coal Mines
were led to believe by Medical and Government Authorities that:-

**"No convincing evidence of any association
between Mining and Community Diseases"**

WHO Oct 2013 "Game Changer" Carcinogens

**"Air Pollution and Particulate Matter"
as well as "Diesel Exhausts"
are classified as Group 1 Carcinogens"**

- same as Asbestosis, Arsenic and Mustard Gas, and on the same order of magnitude as passive Smoking.

"No Safe Limit of Pollution Exposure

on a Linear Relationship"

Ramifications for Mining

If Air Pollution Health Risk is not Mitigated by Mining Companies, then potentially James Hardy Asbestosis Type Compensation Risk Cases exist.

SSHEG Air Pollution Health Study Review 2014

Four years of Air Pollution considerations has not changed the determination of Singleton Shire Residents who day by day have their Health affected and threatened by the imbalance created by overzealous Open Cut Coal Mining in the Hunter Valley Rural areas; where Buffer Zones no longer exist and Mine Rehabilitation is mostly ineffective.

Three aspects have shaped the 2014 SSHEG Action Plans to reinstate at least in part this imbalance.

(1) Air Pollution Exposure Protection Plan for "Near Neighbours and Farming Families and Residents" in close proximity to Open Cut Mining.

(2) Ramifications of WHO October 2013 announcements confirming "Air Pollution and Particulate Matter" have serious Human Disease impacts. (Plus June 2012 Diesel Exhaust)

(3) Earlier in 2011, NSW Expert Advisory Committee confirmed the "Hospitalisation Risk" of Toxic Mine Blasting Plumes that drift at ground level outside Mine Lease Land.

Not surprisingly, NSW Authorities have put in place Action Plans, Audits, and Planning Management Systems to improve the overall Air Pollution Statistics, but the continuing push for higher Mining Production Volume suggests any improvement will be short lived.

SSHEG therefore calls for Environmental Protection Action that directly addresses the Community Exposure Concerns related to the locality where Pollution is in close proximity to Residents; and especially their children.

In addition, SSHEG will continue to call for comprehensive Scientific Studies of the Biological Air Quality components to better understand the central Singleton Shire "Asthma Syndrome" and "Camberwell Cough" that so far has remained unanswered.

Mining Air Pollution Mitigation Action Priorities

Singleton Shire Resident's Health concerns surfaced not only in outlying Rural areas and "Near Neighbours" to Coal Industry Operations but also in the major Towns and Villages, and especially with regards children's Asthma Attacks.

The fact remains that Community Diseases increased as the shift from predominately Underground Mining to Open Cut Mining in Rural Populations occurred in the 1990's.

SSHEG 2014 Mining Mitigation Focus

Priority 1

"Elimination of Mine Blasting into the Atmosphere"

Priority 2

EPA to classify for compliance

"Near Neighbours, Rural Residents and Farming Families" as

"Occupationally Exposed Persons to

Open Cut Mining Companies"

To have OH&S and Workplace Protection by EPA Compliance Orders same as Underground Miners Air Quality Standards", especially Short Term Exposure Standards.

PRIORITY 1 "Elimination of Mine Blasting into the Atmosphere"

Air Pollution and Community Health

(3) SSHEG has been working for 2 years with the Mining Dialogue in the Hunter Valley to flesh out the issues and focus on Mitigation regarding, Land, Water and Air Quality issues.

SSHEG sees the

"Elimination of Mine Blasting into the Air"

as a necessary step.

STOP	Blasting Dust, Flames, Hot Gas Plumes, Unburnt Hydrocarbon & Waste oil
USE	"Plastic" Stemming Plugs & Designs
CONTROL	Blasting Video Monitoring & Controls

A Presentation Whiteboard at NSW Mining Dialogue Hunter Meeting Dec 2013.

(4) Why was Blasting Plumes the major Standout Pollution Issue ?

1. **Community Complaints of Family Gassings, Children outside unable to breath, some requiring Doctors , SSHEG Document 2010 Camberwell Gassing report.**

2. **NSW Chief Health Officer's Expert Advisory Committee suspended its investigations after 21 Miners gassing in SE QLD and Jerry Plains reported impacts in 2011 – confirming the Health Dangers to drifting Blast Plumes outside of Mine Leases at ground level.**

3. **ACARP C20016 Study of Blast Plumes & Toxicity**

4. **WHO & LANCET Journal release Oct 2013 identified "No Safe Limit of Pollution Exposure on a linear relationship".**

SSHEG sees NEPM Standards now needing reductions !

5. **The BROWN HAZE over the Hunter Valley is observed building up as Blast Plumes rise into the Atmosphere, with temperature Inversion layer influences. This we breath !**

PRIORITY 2 "Occupationally Exposed Persons to Open Cut Mining Companies"

Environment Standards for Residents Health Protection

Hunter Valley community have identified the need for protection of Residents from the Pollutants in the Atmosphere, which are not Pollutants from day to day residential living, but result from the somewhat unregulated and or uncontrolled Industrial Pollution activities. The following Health Actions are proposed to restore some semblance of balance between, the Property Rights and Health of Residents, and the imposition of unrestrained Pollutants imposed upon their persons and property by Government Approvals.

Health Standard One

"While mineworkers enjoyed Occupational Health protection, Near Neighbours, Farmers, Villages, and the town Communities nearby have no such protection from Open Cut Mines with Pollutant emissions well outside their Mining Leases"

Near Neighbours, families, children, Farmers working outdoors and unprotected by air conditioning enclosures are all Occupationally Exposed Persons to Coal Mining Air borne Dust, and the "Pseudo Ventillation Standard of underground Coal Mines" is to apply to all of the "Near Neighbour and farm workplace".

*"The exposure Standard for Atmosphere Contaminants in the Occupational Environment * is:-*

(a) Time Weighted Average (TWA) 50 micro g/m³.

(b) Short Term Exposure Limit (STEL)

15 minutes TWA exposure
and not more than 4 times a day
and at least 60 minutes apart."

*These limits have a Data set reference relating to Underground Mine Ventillation Standards where adequate ventillation flow to areas where people travel or work are a minimum velocity of 0.3 m/sec.

What are the Authorities doing ?

- **Mining Air Pollution Reduction Programme**

(1) Initially NSW Dept. of Planning – Singleton Compliance Officers with Monthly Reports

(2) EPA Dust Stop Audits & Programs – Dump Trucks & - Air Particle Action Plans (EPA Nov 2013)

(3) EPA Proactive reports – Shift to Risk based Licencing

(4) Real Time Dust Monitoring – Operational Alarms & Mitigation Controls

(5) Exposed Mine Dumps - Aerial Seeding & Rehabilitation

(6) Diesel Engines Exhaust Reduction - Audit & Fleets

(7) NSW Agencies - "National Plan for Clean Air"
Council Toolkits for pollution Reduction
New Web Site Air Pollution by Source Type

What are the Authorities Not doing ? ASTHMA

(1) Scientific Biological versus Air Pollution Asthma Study

- **Pollens, Spores, Fungii etc**
- **Bushfires & Backburning**
- **Domestic heaters Smoke**

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November 2013 Email:
info@environment.nsw.gov.au

Managing particles and improving air quality in NSW

www.epa.nsw.gov.au

Contents

Appendix 1: Health effects of particles

Effects of short-term and long-term exposures

Short-term and long-term exposures to particulate matter are associated with mortality and morbidity from cardiopulmonary disease.

Over the short term, increases in 24 hour average concentration of $PM_{2.5}$ and PM_{10} are associated with mortality and hospitalisations from cardiovascular and respiratory diseases. In the longer term, a robust association has also been demonstrated between annual average $PM_{2.5}$ and mortality from all-causes and cardiopulmonary causes. The International Agency for Research on Cancer has classified outdoor air pollution, and specifically the particulate matter component, and also diesel exhaust, as carcinogenic to human beings, based on sufficient evidence that exposure to these causes lung cancer (IARC 2012).

Short-term and long-term exposures are thought to have different mechanisms of effect. Short-term exposure appears to exacerbate pre-existing diseases while long-term exposure most likely causes disease and increases the rate of progression.

Health benefits of reducing particles

The health impacts of particles place a cost burden on the community. A 2005 study into the health impacts of air pollution in Sydney estimated that particle pollution costs the NSW economy between $1 billion and $8.4 billion annually, with an average cost of $4.7 billion (DEC 2005a).

In 2011, the EPA commissioned AECOM to undertake an economic assessment of a range of policy options for controlling smoke from domestic solid fuel heaters in residential locations with potentially high population exposure to wood smoke. The study *Economic Appraisal of Wood Smoke Control Measures* predicts that particle pollution from wood smoke could result in $8 billion dollars in health costs by 2030 (OEH 2011a).

These studies show that there are substantial health and economic gains to be made by reducing particle pollution. A 2010 study, Final Regulation Impact Statement for Review of Euro 5/6 Light Vehicle Emissions Standards, prepared by the Commonwealth Department of Infrastructure and Transport, also found that tightening Australian emission standards for light vehicles to match European standards would yield up to $807 million worth of benefits nationally, primarily due to the reduction in mortality associated with reducing particles (Department of Infrastructure and Transport 2010).

There is no evidence of a threshold below which exposure to particulate pollution is not associated with adverse health effects. Any additional exposure to PM_{10} and $PM_{2.5}$ is associated with an increased risk of adverse health outcomes, and there are significant health and economic gains to be made from reducing exposure to particle pollution.

Research on the health impacts of particles

Numerous health studies have shown an association between exposure to fine particles and adverse health effects in Australia and overseas. These include studies of health impacts of particles in Australian cities, studies of impacts on respiratory effects in children and studies focusing on specific particle sources such as diesel emissions along busy roads, wood smoke, and bushfires and hazard reduction burning.

Relevant studies have been reviewed and summarised as part of the current review of the Air NEPM. The EPA and NSW Health have contributed funding to a number of these studies and NSW Health researchers have also done some of them. These are listed in **References and links**.

The EPA, in collaboration with NSW Health and health research institutions, will continue to scan new international developments on the health impacts of particles and to support new health research in Australia. This will include, for example, tracking emerging science on the health impacts of ultrafine particles.

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