

Attachment 2

1.0 SSHEG Review of Major Community Concern

Recent reviews by SSHEG of Camberwell Community Blasting Plume "Gassing" of Residents (Attachment 1), Photographs (Attachment 2) and Videos (Attachment 3) demands immediate cessation of Aston Mining Blasting Practices that release Flame, Gases and Dust, as Blast Plume into the atmosphere; to be by Government Order to change Blasting Practices to the non-release to atmosphere method.

On many occasions in the period 2004 to 2010 the Community Complaints Hotline has recorded numerous Blasting incidents mainly by Aston Mining that has damaged Homes, shaken and displaced Homes on their foundations, " it knocked tiles off the bathroom walls, glass fell from cupboards and pictures were knocked right off the walls", moved items on shelves inside the houses, showered Homes with debris, and to date no repairs to these homes of the damages has been carried out by the Mining Companies that surround the Camberwell Village. A particular extreme series of Blasts are recorded on or around 9.20am on 4th July 2007 (perhaps as an Independence Day prank or Licence # 11879).



Photo 1 ***Camberwell Gassing Incident 2010 type viewing West***
Mine Blast over the Ridge is sucked down to Glennies Creek
and drifts over Camberwell Residents in Bridge Street

SSHEG Document 2010 Blast Gassing Extracts

To the casual observer it would appear that in particular Aston Mining set about in 2004 to clear the Residents from this Historic Colonial Village which dates back to the mid 1800's by making the lives of the Residents so jittery by their excessive mining practices of Blasting Dust and Smelly clouds, and unbearable noisy 24 hour operations, that the inhabitants would be driven out. We trust that the Authorities were not an active participant in this Plan. Indeed the Expert Advisory Committee should investigate these Incident reports of the Mining Companies and the Authorities Response to appreciate the extent of the "Residents Environmental Attack".

The much more serious Health concern is of the continuous Airborne Dust Residents have been exposed to, while the frequency at which that the Community Complaints (Attachment 4) record the presence of Mine Blasting Plumes that descend upon the Residents with regular monotony. On the 4th complaint for the same series of Blasts on 4th July 2007, the Residents report " It shook the House, it smells like sulphur and covered us in dirt" – caller is only 600-700 metres from the coal mine.

Others Blast reports; "two Blasts" on a Sunday; "Big yellowish dust cloud and also a strong smell of sulphur affecting caller"; "huge mushroom of dust resulted which then settled over Camberwell Village"; "A rotten nauseating smell gunpowder type smell resident feel sick"; "has left caller nauseous and very shaken"; "dairy farm and cows are affected by dust and noise from blasting"; "the blast shock the house & the front door came open due to the impact of the Vibration"; "overpressure level 123 decibels"; "House shook for 11 seconds. Large rocks were blasted from the mine (about 700 metres away) and landed in the paddock on the north side of the creek- just 100 metres from houses".

It is surprising that the Authorities did not prohibit the Blasting in the entire period 2004 to 2010 that allowed the Blast Plumes to descend onto the Camberwell Residents; in this case at the Glennies Creek end of Dawson Street within 500 metres of Aston Mine over the Ridge to the west in Photo 1.

The Camberwell Community rightly recorded in the Complaints Hotline (Attachment 4) Why is it that Mines Compliance Monitoring and Recording Equipment do not register the intensity experienced by Residents?

SSHEG review has confirmed that all three types of Equipment, Blast intensity and Vibration, Noise, Dust and Blast Gases Levels have been completely ineffective as a day to day means of controlling Mining Operations within acceptable Community standards.

SSHEG have previously identified that significant changes are needed to the Real Time Monitoring Technology used to understand the Pollution Sources and their Health Impact on the Community. Specifically, the PM10 24 Hr Real Time Monitoring current reference needs to not only record PM4, PM2.5, PM1 but also record three 8 Hr Maximum & Minimum, and the 15 Minute running averages.

Similarly, Noise methodology needs to change to recognize:-

- (1) low frequency "rumbling sounds" that are felt also as vibrations through the ground particularly at night, and*
- (2) Metal on metal "clanging sounds",*

Both of which cause the most annoyance and mental anguish for Residents.



Photo 2



Photo 3

Blast Plume sucked down slope to Glennies Creek Slow dissipation over Camberwell

Camberwell Gassing Incident 2004 Lethridge St. area viewing North

The drifting of Blast Plumes in 2004 identified to the Aston Mining Company and the Authorities that the Plumes instead of rising and dissipating, were sucked over the ridge and down into the creek gully where it lingered and spread over the Residents of Lethridge Street as in Photos 2 & 3. A different Blast Plume drifting pattern also in 2004 is shown in Photos 4 & 5.



Photo 4



Photo 5

Blast Plume drifting at ground level over Camberwell Village Residents in 2004

SSHEG also feel that urgent progress is needed towards Major changes to all Hunter Valley Mine Operations and Compliance Standards to counter the authority's complacency that is allowing mine generated Dust Clouds and Blast Plumes to often drift at high concentrations over "Near Neighbors" and "Village Residents Properties". Camberwell Residents as close as 500 to 800 metres from Mine Operations experience choking Dust and Gases for varying periods from some minutes upwards to 30 minutes at high concentration, and often days at a time.

SSHEG Document 2010 Blast Gassing Extracts

Recent Videos have been provided to Dr David Durrheim of HNEAH detailing these types of occurrences where Blast Plumes float over the ridge and for some reason sucked down to the Glennies Creek level and then drifts generally at ground level over the Camberwell Residents area. Camberwell Residences have reported and photographed these events since 2004, only to be let down by the Authorities; however it should be noted that this does not release any of the persons involved who allowed these events to continue unchecked as they remain both culpable and liable to consequential damages that result from these events, then or in the future.

4.0 Mine Blasting Plumes

Historically, the drilling of hundreds of holes into various Mine Strata were filled with an explosive mix, and the holes capped in such a way as to contain the explosions below ground to prevent the release of Pollutants to the atmosphere.

In modern times Mining Service Companies such as Orica have developed so called Cost Effective Blasting Practices that have porous Hole capping. Modern Explosions allow Flames, Gases, Strata composition based Dust and Products of the Explosions together with a percentage of the vapourised Explosive Mix of Ammonia Nitrate and Diesel Fuel and Emulsifiers released as a Hot Dust and Gaseous Blast Plume into the Atmosphere.

Orica style Blasting is probably satisfactory in outback Queensland and Western Australia, but has no place in the confines of the Hunter Valley in amongst Townships, Rural Villages and Near Neighbours Farms.

The Toxic Blast Plumes consist of four Major component Gases along with more complex gaseous components in the mix of fine and course Particulate matter resulting from the high temperature contact during the explosion and the subsequent Flame front contact with the Air.

The Blast Plume tends to act as a bubble of Toxic Hot Dust and Hot Gases with a Volume that depends upon the magnitude of the number of Blast holes; some have been measured around one to twenty Million Cubic Metres.

The Major Component Gases at the Blast site has a typical Composition of Carbon Monoxide (CO) @ 3000 ppm, Nitric Oxide (NO) @ 180 ppm, Nitrogen Dioxide (NO₂) @ 20 ppm, Sulphur Dioxide (SO₂) @ 40 ppm, and Hydrocarbons (HC), Polycyclic Aromatic Hydrocarbon (PAH), and Volatile Oxy Carbons (VOC's) @ 8000 ppm.

The extent of the Health Threat to "Near Neighbours and Camberwell Village Residents" depends upon on such factors as the Volume of the Blast Plume, composition of the Plume, the prevailing Wind patterns, the Mine embankment influence on flow patterns with reference to Residents, how homogeneous the Hot Gases remain, the speed that the Plume drifts across the ground, and the tendency for the Gas Bubble to remain longer than expected rather than dissipate into the Atmosphere as was the previous understanding.

In the last 7 years Camberwell Residents have reported numerous Blast Plumes "Gassings" to both the EPA and DECCW with Photographs and Videos in recent times confirming that Blast Plumes at high concentrations indeed had been sucked down over the Mine embankment, down over the Camberwell Common to the level of Glennies Creek in the Village area, and at ground level then drifted over Residences. (Refer Attachments 1, 2 & 3)

The Blast Plume is dangerous when it drifts as a Bubble of concentrated Hot Particles and Gases that are likely to expose Residents for a period of 15 Minutes to 1 Hour depending upon the climatic conditions that exist at the time.

Authorities having been advised of these incidents, and unbelievably they have not been seen by the Community to have acted to Mitigate or correct the Problem.

Once the Blast Plume has dissipated it contributes along with other Mine Blast Plumes to form the tell tale Brown Smog that is somewhat trapped by the Mountains that surround the Hunter Valley, mixing with Power Stations Plume emissions, and the other Air Pollutants and aerosols.