REX CHRISTOPHER PLUMMER
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RYLSTONE, NSW 2849

The Director,
Resource Assessments,
Planning and Assessment,
DPIE,
Locked Bag 5022,
Parramatta,
NSW 2124

Dear Sir,

APPLICATION NAME: BOWDENS SILVER MINE AMENDMENT
APPLICATION NUMBER: SSD5765
BLAST FUME

I **object** to this proposal (SSD 5765).

I declare that **I have not made any Donations or Gifts** to any political party or personnel in the last two years.

Firstly it is quite clear from the EIS that Bowdens will use 1000 tonnes of Ammonium Nitrate and oil explosive per year. It's also known as ANFO, and one kilogram detonated creates 20 cubic metres of gas.

The fume comprises carbon monoxide, carbon dioxide and some hydro carbons and a mix of oxides of nitrogen (NO,N2O, NO2, N2O4, N2O3, N2O5); there will also be fine particulate matter, dust. If inhaled NOx create (inter alia) Nitric Acid in the human lungs there also other direct health effects, often cardiovascular. A yearly fume output from Bowdens would be *20 million cubic metres* of toxic gases. The dust will mostly be in the form of PM 2.5.

The blast fume is roughly 40,000 cubic metres per week, produced every few days. (It may be 20,000 cubic metres per firing).

NSW Health Department has published a news sheet "Mine Blast Fumes and You", it highlights human health issues. (Copy attached)

'World Health Organisation guidelines for NO (gases) are a one hour level of 200 micrograms per cubic metre and an annual average of 40 micrograms per cubic metre. However typical concentrations of NO gases in post blast clouds can measure between 5.6 and 580 parts per billion, exceeding the safe limits by around 30 to 3000 times' Bowdens output should be typical; therefore it is dangerous to human health.

Secondly Bowdens will be in control of when they detonate and therefore the conditions in which the fume is created. The wind conditions at the time of firing are the most important parameters; wind strength and direction. Bowdens suggest that if the mining proposal the will put forward a blast management plan. By then it will be too late to modify and regulate. Bowdens will (lterally) calling the shots

In their ideals what do they want? For example does Bowdens to wait for dead still conditions so the whole 20,000 cubic metres remains in the vicinity of the mine? It may poison staff and contractors. Bowdens may prefer to wait for a brisk north westerly wind so they can poison edible crops in a vineyard, two olive groves, beef cattle and their pastures?

Hazards of human and environmental exposure to **20 million cubic metres of toxic fume per year** is yet another reason for DPIE and IPC to not approve the Bowdens project and to reject it in full.

Yours sincerely,

10/8

R C Plummer

NSW GOVERNMENT | Health

MINE BLAST FUMES AND YOU

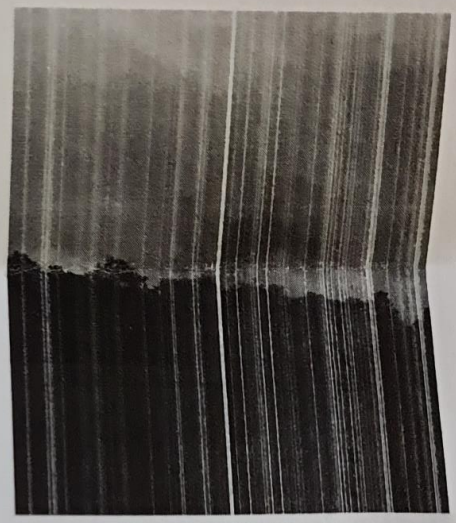
The information below is for the general community. For assessment of occupational risks, and health impacts of blast fumes for mine workers, please refer to the relevant occupational health service for advice.

What are blast fumes?

Blasting is used to break up solid rock in open cut mines and quarries. Blast fumes are the gases that may be generated during blasting. Some of the gases are toxic and some are not. In terms of health impacts, the critical gases generated are oxides of nitrogen (NOx) - nitrogen dioxide (NO_2) and nitric oxide (NO).

Nitrogen dioxide gives blast gas plumes their characteristic reddish orange colour and pungent odour.

Gases produced during blasting usually disperse rapidly and pose no acute health risk. Under certain conditions the gas plume may persist and can affect nearby people or residents who are downwind of the blast site.



Picture: The Singleton Argus.

What are the potential health effects from exposure?

Exposure to the fumes in a blast plume is usually very brief – seconds to minutes. For most people, any health effects from exposure to a blast plume are short lived.

Symptoms from high level exposure may include:

- Eye, nose and throat irritation and coughing
- Dizziness and headache
- Shortness of breath
- Wheezing or exacerbation of asthma

Serious lung inflammation (pulmonary oedema) has been known to develop several hours after exposure to very high levels of NO_2.

What should I do if I see a plume?

1. Avoid exposure to the plume. If you see a plume, do not enter it (this includes driving through it) and move out of the plume's path if possible. If at home, head indoors, close all doors and windows. If you are in a car, wind up windows and close vents until the plume passes.
2. If you find yourself in a plume, try to move out of it as quickly as possible.
3. If you have been exposed, use water to thoroughly wash eyes, and to clear your nose and throat.
4. If you experience respiratory symptoms you should seek immediate medical attention and inform the doctor of possible NO_2 exposure. Be alert for possible delayed breathing problems. If you are an asthmatic, use your reliever medicine.

Who should I notify if I see a blast plume?

Throughout NSW blast fumes can be reported to the NSW Environment Protection Authority's environment line on **131 555**. In the Upper Hunter Valley, blast fumes should also be reported to the Department of Planning & Infrastructure compliance office on 6575 3405.