

# HAZEL WOOD MINE FIRE INQUIRY

## Submission cover sheet

Post your submission with this cover sheet to:

Submissions Hazelwood Mine Fire Inquiry  
PO Box 3460  
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Email your submission with this cover sheet to [info@hazelwoodinquiry.vic.gov.au](mailto:info@hazelwoodinquiry.vic.gov.au).

Title: Mr	First Name: John	Surname: Poppins
Organisation represented( <i>if applicable</i> ):		
Email address:	[REDACTED]	
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Telephone: [REDACTED]	Mobile: [REDACTED]	
<input type="checkbox"/> Origin and circumstances of fire <input type="checkbox"/> Measures by Hazelwood Coal Mine to prevent fire <input type="checkbox"/> Application and administration of regulatory regimes <b>Other</b> (please state) Future effects downstream, Latrobe R. and Gippsland Lakes		Response to fire by: <input type="checkbox"/> Environmental Agencies future actions, costs, risks.

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**Signature** John Poppins

Date 12<sup>th</sup> May 2014

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**John Poppins, Yarragon South, Vic 3823**  
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ref:

## **Summary**

Smoke from fires around the mine periodically reaches Yarragon South, depending upon weather conditions.

However my major concerns are for the effects that the fire will have upon the Latrobe River downstream of the mine site and upon the Gippsland Lakes.

Such adverse impacts will follow any pumping of waste water from the mine pit.

These impacts will become most pronounced and most dangerous in warm summer and autumn weather, particularly when river flows and wind speeds are low.

We must anticipate problems and ensure that we have appropriate water treatments and management regimes in place to minimise these problems.

If we do not prepare in advance, there could be substantial foreseeable losses to

- Tourism
- Agriculture
- Industry
- Environment

down the Latrobe and through the Gippsland Lakes.

These are likely to be most pronounced over the next summer and autumn, or in later years if pumping of water from the mine pit is deferred or prolonged.

## **Causes**

Fires in open pit mines are to be expected. They can be caused by spontaneous combustion, lightning strikes and by sparks from many possible ignition sources, natural and man-made.

Equipment and systems to fight these fires are standard requirements around mines.

Any High or Extreme fire danger day must be categorised as a serious risk to all our open cut mines and flammable infrastructure and planned for.

In the case of the Morwell Mine the potential danger was exacerbated by the existence of timber plantation on the northern boundary of the mine.

This may have been a help in stabilising the land above the mine faces. It also offered some prospect of a saleable crop on a rotation of 20 to 30 years.

The Plantation timber however also provided a large fire fuel load in a very flammable form. Natural mature forest is far less flammable. Pasture provides smaller fuel loads but does not tie the topsoil together as well. So there was a plentiful supply of 'kindling' to pick up any fire, however started, to be carried by the most threatening northerly and westerly winds straight into the pit.

## **Fire Fighting Protection Systems**

As I am involved with the Earls Road Landcare Group's fire protection network I follow a wide variety of media sources on fire hazards and incidents in West Gippsland.

When the Morwell mine caught fire I followed the action closely.

I was puzzled as to why the water systems which the SECV used to have in place had not been effective.

I wrote the Age regarding this. They resurrected and published that letter a few days later.

It has since become clear that some water systems had been removed. We have been told that remaining systems had power supplies rendered inoperative by the fire.

Given the likelihood of mine fires and the predictable weather conditions this is astonishing evidence of negligence.

The long term fire fighting action which followed consumed great labour and material resources.

Severe immediate health issues were reported in the community and also by firefighters.

Air quality was clearly a problem. Firefighters reported infections of cuts which became difficult to heal.

Considerable tonnages of fire retardants, such as Phos-Chek, must have been used by firemen and the helicopter services.

Retardants typically contain large proportions of phosphates. These are nutrients which wash out into streams and lakes where they can cause toxic algal blooms, particularly in warm still conditions.

These blooms can lead to the biological death of the streams over an extended time.

The water becomes poisoned by toxins created by algal decay.

All creatures living in in the stream can be killed, the toxins concentrating up the food chain.

The streams and lakes become dangerous to swimmers, fishermen and livestock.

Unpleasant odours can affect surrounding tourist destinations and leisure activities.

Some retardants, depending upon chemical composition and fire conditions, can create highly toxic degradation products.

Halogenated compounds can create dioxins and endocrine disruptors.

Widely used Retardants, such as Phos-Chek, are known to foster heavy algal blooms in streams downstream of firefighting areas in Victoria.

In time it will become necessary to pump some water out of the pit.

If this is not done exceptional flooding may carry it out at a time not of our choosing and beyond our control

Wherever it is pumped, it will ultimately enter the Latrobe River and from there our Gippsland Lakes, carrying a heavy load of phosphates, along with many other chemicals mobilised out of the coal by the fire. This may include toxic heavy metals which accumulate up the food chain.

### **Future Repercussions we must Anticipate**

The surge of nutrients and toxic heavy metals when pumping - or flooding - leads to their entering the Latrobe River and thence the Gippsland Lakes must be planned for. It will occur, when is uncertain.

Our **State Government,**

**Environment Protection Authority** and

**Catchment Management Authority** should immediately consider:

- Assessment of the magnitude of the problem
- Provision of warning systems
- Installing filtration or chemical removal systems
- Methods and tools to alleviate problems if heavy blooms do arise.

### **Action Needing Planning Now**

Our EPA and WGCMA must be properly funded to effectively:

- Investigate the retardants used and by-products likely to emanate from them
- Research likely effects down the catchment.
- Monitor the pit, any pumped water, and watercourses downstream.

Provision of equipment and materials likely to help improve the quality of waste water from the pit.

## **Costs**

It appears that some water systems for firefighting had been removed or relocated to save money. Some of those remaining were not of a standard to operate in the conditions that made them necessary.

A small amount of money was presumably saved by these measures taken by the private mine owners.

A vast cost has accrued to our State Government (tax payers), to the CFA and to volunteer fire fighters. Residents of Morwell have incurred costs well beyond the assistance given by the government.

Insurance companies will have faced significant claims.

The helicopter costs must have been enormous.

It is to be hoped that this inquiry will attempt to quantify Labour, Material and Social costs of this prolonged and toxic fire.

The fire is now out. But there will be costs extending into the future, particularly

- Medical
- Environmental
- Governmental

An attempt must be made to quantify and provide for these.

## **Personal Background**

My father was a senior engineer with the old SECV. Although a Civil Engineer on the Kiewa scheme he later became responsible for management of areas of design and procurement for the SECV workshops in the Latrobe Valley.

In my later school years he several times took me with him when visiting the Valley in school holidays.

I followed his example by taking out a degree in Engineering, also at Melbourne University.

As I approached and moved into retirement over the most recent 22 years I became involved with small scale farming, Landcare, re-vegetation of watercourses, and the Latrobe Valley Field Naturalists.

I developed a special interest in the condition of my own and the region's water quality and distribution.

This led to voluntary involvement with the Catchment Management Authority, as a WaterWatcher.

This requires some training and annual Quality Assurance testing.

The work requires monthly sampling and testing of water quality, chemical and physical, also riparian conditions, in my case in the Narracan Ck and Moe River, which I have sampled over the past 18 years.

I also participated in several catchment strategic planning studies.,

The major involvement was as a representative for Environment Victoria in a substantial scientific and engineering study on environmental flows. Key indicator species were identified, and development of a mathematical model of the behaviour of the Latrobe, Thomson and Macallister Rivers. This enabled determination of economical management regimes needed to ensure minimum basic environmental health of these rivers. This was an exciting and educational project of long term value.

Earlier this year the West Gippsland Catchment Management Authority made a "Lyrebird" award for this work.

So I have a special interest in the Latrobe Catchment, in its water quality and management throughout the catchment and to the mouth of the Gippsland Lakes, allied with some engineering background including system analysis and safety.