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Subject Submission from David Langmore

3 attachments



Hazelwood Submission Cover Sheet 1.jpg



Hazelwood Submission Cover Sheet 2.jpg



Submission to the Morwell OC Fire Inquiry.doc

Please find attached a copy of my submission to the Hazelwood Mine Fire Inquiry. A copy of the completed standard cover sheets are also attached.

Yours sincerely

David Langmore

# HAZELWOOD MINE FIRE INQUIRY

Submission cover sheet

Post your submission with this cover sheet to:

Submissions Hazelwood Mine Fire Inquiry  
PO Box 3460  
GIPPSLAND MC Vic 3841

Email your submission with this cover sheet to [info@hazelwoodinquiry.vic.gov.au](mailto:info@hazelwoodinquiry.vic.gov.au).

Title: <i>Mr</i>	First Name: <i>David</i>	Surname: <i>Langmore.</i>
Organisation represented (if applicable):		
Email address:	[REDACTED]	
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Telephone: [REDACTED]	Mobile: [REDACTED]	
<input type="checkbox"/> Origin and circumstances of fire <input checked="" type="checkbox"/> Measures by Hazelwood Coal Mine to prevent fire <input checked="" type="checkbox"/> Application and administration of regulatory regimes <input checked="" type="checkbox"/> Other (please state)	Response to fire by: <input type="checkbox"/> Hazelwood Coal Mine <input type="checkbox"/> Emergency Services <input type="checkbox"/> Environmental Agencies <input type="checkbox"/> Public Health Officials <input type="checkbox"/> Other Government Agencies	

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Signature

*David L. Langmore*

OR if sending electronically please confirm your acknowledgment by ticking box

Date

*24/4/2015*

## SUBMISSION TO THE HAZELWOOD MINE FIRE INQUIRY

### Information about Submitter:

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Qualifications: B. Sc., Dip Ed., Dip. T.& R.P.

### Personal and Professional Planning Experience:-

I have lived in the Latrobe Valley for about 40 years. I am a retired town and regional planner with over 25 years experience working in various roles at senior levels with the Victorian Government on regional planning for the Latrobe Valley. From 1977 to 1984 I was the Regional Manager of the Town and Country Planning Board's Central Gippsland Regional Office. Between 1985 and 1995 I was employed by the Latrobe Regional Commission, initially as the Director of Planning and Environment and later as Manager, Infrastructure and Service Industries. For four years, from 1995 I was the Manager of the Gippsland office of the Department of Infrastructure (previously, Department of Planning). After retiring from the Victorian Public Service during 1999, I worked as an independent planning consultant on a range of planning projects in various parts of Gippsland for six years. A number of matters arising from my professional experience in the Latrobe Valley may have relevance to some aspects of this inquiry.

### Authorship of "Planning Power":-

Towards the end of 2013, Australian Scholarly Publishing published a book which I had written entitled "**Planning Power: The uses and abuses of power in the planning of the Latrobe Valley**". This book reviewed the planning and development of the Latrobe Valley in the period from 1920 through to the early 1980's. There are several important matters dealt with in this book which are of considerable relevance to this inquiry.

### Scope of Submission

This submission to the Inquiry will provide information and comment on issues arising from three major matters:

- The Morwell Open Cut and its distance from Morwell town
- Open cut rehabilitation
- The proximity of Timber Plantations

[Preliminary Note: Although the title for this Inquiry refers to the Hazelwood Mine, this submission mostly uses the term Morwell Open Cut which has probably the most generally used term in the past for the Hazelwood Mine. Initially, when it was first planning for the establishment of the mine, the State Electricity Commission of Victoria used to refer to the mine as the Maryvale South mine.]

## **1.0 Morwell Open Cut and its distance from Morwell.**

- 1.1 Environmental and hazard risk problems with the Morwell Open Cut are not a new phenomenon. Some of the problems with the Morwell Open Cut have existed for many decades. In fact, many of the existing problems are a direct result of serious inadequacies of the initial planning for the Morwell Open Cut during the 1940's and 1950's.
- 1.2 In order to put key features of Morwell Open Cut planning into context, it is relevant to briefly review some key features of even earlier State Electricity Commission of Victoria planning in the Latrobe Valley.
- 1.3 In 1921, the Commissioners of the SECV, including its Chairman, Sir John Monash, submitted a report to the Victorian Government, "Report on Establishment of Township at Yallourn". In that report it was indicated that the town of Yallourn, which was planned to accommodate a total population of 3,000 people, would be positioned about a mile (1.61 kms) from the power house and mining areas: It was also stated that: "*...as the mining area extends, the works may approach the (town) site only far as a Park Belt, which it is proposed to permanently reserve as a screen between the community and industry*".
- 1.4 In December 1946, a report "Further Development of the Briquette Industry Based on the Brown Coal Resources of the Latrobe Valley" was submitted by the SECV to the Victorian Government. This report recommended the opening up of a new brown coal open cut at Maryvale South, immediately to the south of Morwell town, which at that time had a population of about 2,700 people. The mine would have a depth of about 130 metres. While the 20 page report dealt with many resource and operational matters, not one mention was made about any of the issues which might require a "buffer zone" between an existing town and a proposed open cut development. The plans for the Maryvale South project showed the proposed open cut would be only approximately 400 metres away from then southern edge of Morwell town. However, the report did comment that: "*For at least the next 60 years any proposed works would not encroach on Morwell closer than the boundaries given on Plate No.8.*" (p.14). The report also proposed the eventual transport of overburden back from Maryvale South to Yallourn. (p.9).
- 1.5 In 1947, a report "Latrobe Valley Development" was prepared, on a consultant basis, for the SECV. This report was commonly referred to as the Heath Gower Report, as its authors were Frank Heath, an architect and town planner and Bill Gower who was the Chief Architect for the SECV. Among many other matters, this report recommended that in order to take into account the

effects of possible land subsidence, “...a distance of one mile (1.61 kms) has been laid down as a limit for safety and freedom of operation” (as the distance to separate open cuts from urban areas). Another hugely significant recommendation was that the town of Morwell should eventually be removed to enable the mining of coal beneath the town and that a new replacement town, “New Morwell”, should be established to the east of the existing town.

- 1.6 During 1946 and 1947, Morwell Shire waged a political campaign against the uncertainty of Morwell’s longer term future and against the proposal to establish a “New Morwell” town. In August 1947, the then Victorian Premier, John Cain (Senior), declared that the Government was opposed to the establishment of a new town and that the existing Morwell town would be retained and expanded in a north-easterly direction i.e. away from the most valuable brown coal resource areas. Plans for Morwell’s expansion were prepared. However, no consideration was ever given by the SECV, nor apparently by any other organisation, to making any changes to the previously proposed 400m separation distance between the existing Morwell town and the proposed Maryvale South open cut.
- 1.7 Work on the Morwell Open Cut commenced in 1955. At that time, Morwell had a population of about 8,000 people.
- 1.8 Buffer areas are needed in order to ensure that urban areas are adequately protected from any adverse effects arising from mining operations. Among the obvious factors for which buffer areas should provide adequate protection are: potential nuisances from land movement, including land subsidence; adverse air quality parameters, including dust levels; noise; visual screening of any unattractive landscape features; the amelioration of any negative effects arising from hazardous events which could occur in an open cut, including fires. The appropriate widths for buffer areas need to be determined on a case by case basis according to the particular circumstances applying in each specific area. However, it seems safe to assume that an adequate buffer width between Morwell town and the proposed Maryvale South (later referred to as the Morwell) Open Cut should almost certainly have been in the order of at least 1.5 kms.
- 1.9 The failure of the SECV to plan, and to provide for, a buffer area of an appropriate width, adjacent to a pre-existing town, may have been the result of: a shocking oversight; or gross professional negligence; or possibly even as a result of a view within the SECV that the future chances of removing the town (in order to mine coal beneath it) might be increased by not worrying too much about protecting the quality of Morwell’s urban amenity – even although this would have been in contravention to the decision of the Victorian Government. For whatever reason, Morwell has been left with a separation distance from the Morwell open cut which is completely inadequate.
- 1.10 By 1999, an Environmental Effects Statement: Maryvale Coalfield Development prepared by the consultant firm Woodward-Clyde stated that (since mining commenced in the Morwell Open Cut) “subsidence in the order

*of 1,800 mm [i.e. approximately 6 feet] has been recorded at the southern edge of Morwell township, 1,200 mm [i.e. approximately 4 feet] along the northern edge and around 500 mm [i.e. approximately 1.5 feet] at the eastern edge of the township".* Fortunately, the subsidence has been very even, with only a very small amount of differential movement occurring. The Woodward Clyde report commented further "*Differential subsidence within Morwell has exceeded 0.3% only rarely with values less than 0.1% being usual*".

- 1.11 It may be warranted to expand the width of the buffer width (on the north side of Morwell) between Morwell and the potential southernmost expansion of the Maryvale Coal Field from 1 km. to, perhaps, 2 to 3 kms, in order to provide some partial compensation to the town of Morwell for the gross inadequacy of the separation distance between Morwell and the Morwell Open Cut and also to reduce the risks of compounding problems which are continuing to occur due to the close proximity of the Morwell Open Cut.
- 1.12 Of course, an adequate buffer would not prevent the occurrence of fires within an open cut mine. However, an appropriately wide buffer area could have facilitated fire protection measures which may have reduced the chances of a fire entering the open cut. Furthermore, a wide buffer area would have helped, to a small degree at least, to ameliorate some of the intensity of the adverse environmental effects of the fire on the urban area of Morwell. It may also have been of some benefit in facilitating the fire fighting.
- 1.13 Organisation/s charged with the management of any open cut must be required to take a whole range of measures to reduce the risk of the occurrence of a various environmental problems. The stringency of these measures may need to be markedly greater when a major town is located very close to the open cut. Thus, the very close proximity of the northern face of the Morwell Open Cut to Morwell town both necessitates, and obligates, extremely stringent environmental and hazard reduction management arrangements which need to be maintained in a fail-safe manner at all times.
- 1.14 If adequate fire suppression systems were in existence, and maintained in a fail-safe condition, and were being operated appropriately, then there should have been no possibility that a series of fires could ever take hold in a brown coal open cut mine. The fact that fires did take hold in the Morwell Open Cut is prima facie evidence that either fire suppression systems were inadequate and/or that the fire suppression systems were not being maintained in fail-safe condition and/or that the fire suppression systems were not being operated properly.

## **2. Open Cut Rehabilitation**

- 2.1 As outlined in “Planning Power” (p. 366), open cut mining of brown coal has been occurring in the Latrobe Valley for over 90 years. In this period, a total area of approximately 50 square kms have been mined. (This is approximately the same area as the Sydney Harbour or equivalent to an area in Melbourne encompassed within a line joining Flemington Racecourse with Williamstown, Albert Park and Studley Park.)
- 2.2 Overburden is not a waste material whose use does not require very careful planning. Rather, overburden is a precious commodity which is in relatively short supply – particularly when considered in the context of the low overburden to coal ratios which exist for all of the Latrobe Valley’s huge open cuts mines. Overburden will be critically important to the achievement of effective rehabilitation for all Latrobe Valley open cut mines, regardless of what form that may take. In addition, placement of thick layers of overburden over worked out coal mine faces is one of the most effective means of substantially reducing fire hazard risks within the open cuts. Consequently, there is a need for comprehensive strategy plans for the progressive placement of overburden back into all the existing open cuts.
- 2.3 A brief review of the progress which has been made toward the rehabilitation of the open cut mine areas in the Latrobe Valley after over 90 years of operations is outlined in the next few paragraphs.
- 2.4 When information was being sought in 2010 for the writing of “Planning Power”, it was claimed by the various companies mining Latrobe Valley coal that a total area of about 17 sq. kms. had been either significantly, or substantially, rehabilitated. However none of the 50 sq. kms. of mined land had been so fully rehabilitated that it has had its ownership transferred back to non-mining interests, either public or private.
- 2.5 The extent of open cut rehabilitation has been greatest in the Yallourn mine, where mining has been occurring for over 90 years. It was claimed that 7.5 sq. kms of mined area at Yallourn had been fully rehabilitated. A viewing of the mined area at Yallourn would seem to confirm that an extensive amount of effective rehabilitation has occurred within the mined area.
- 2.6 As far as the Morwell Open Cut was concerned, it was claimed in 2010, that 5 sq. kms. of mined area had been fully rehabilitated. However, it was not specified which particular areas were being claimed to have been fully rehabilitated. From a superficial viewing of the Morwell Open Cut area, it is not obvious which parts of the open cut could reasonably be classified as being “fully rehabilitated”. Possibly, the claim may, in part, at least, have related to the now completed External Overburden Dump, located on the south-eastern side of the open cut, which has been well rehabilitated.
- 2.7 After the commencement of the Morwell Open Cut in 1955, the SECV



dumped the mine's overburden on the Morwell External Overburden Dump. This overburden dump was developed on what had previously been flat land. It progressively came to form a huge hill, approximately 40m in height, covering an area of 330 ha and containing approximately 80 million cubic metres of overburden material (Source: SECV "Site Selection for the future overburden disposal area to serve the Morwell Open Cut", April 1986). Up until the mid 1980's the SECV were very reluctant to consider discontinuing the dumping of overburden on to the External Overburden Dump. Internal dumping of overburden back into the Morwell Open Cut did not commence until about 1995. Thus, internal dumping of overburden into the void of the Morwell Open Cut did not start until about 40 years after the initial commencement of the open cut. As a consequence, there was a corresponding delay on the commencement of any significant rehabilitation work within the Morwell Open Cut.

- 2.8 When the Loy Yang power project was being planned in 1974, it was specified that internal dumping into the void of the Loy Yang Open Cut would commence in the year 2000 (SECV Loy Yang Project Evidence to the Parliamentary Public Works Committee Inquiry, December 1974, Figure 22). To date, there has been no internal dumping of overburden into the worked out areas of the open cut. All overburden from the mine area has been placed on a huge external overburden dump located to the south of the power stations. This means that no significant internal mine rehabilitation work has commenced in the 11 sq. kms of area that has already been mined at Loy Yang. It also means that there are massive exposed coal face areas which would be highly vulnerable to fire hazards, if there were any deficiency in the fire suppression systems in that open cut. It is understood that there has been some significant rehabilitation work done on some of the peripheral areas of the Loy Yang open cut.
- 2.9 There would seem to be no acceptable justification for any new overburden not to be placed within the voids of existing open cuts i.e. there should be no further development of any external overburden dumps anywhere in the Latrobe Valley. Furthermore, serious consideration should also be given to the early transfer of substantial amounts of overburden from some of the existing external overburden dumps back into the open cuts, in order to speed up the lamentably slow progress toward acceptable rehabilitation for both the Morwell and the Loy Yang open cuts.
- 2.10 Rehabilitation of the open cut mines in the Latrobe Valley should be directed to ensuring that all open cuts are eventually left in a form which is environmentally safe and attractive and which provides for use/s of significant value for the community. This is not likely to be an easy, quick or a cheap process. It is likely to necessitate the expenditure of hundreds of millions of dollars for each mine area.
- 2.11 Appropriate rehabilitation of mining areas should be viewed as being a non-negotiable, concomitant obligation for organisations which are granted the opportunity, and the privilege, of being allowed to undertake mining operations. However, because of the substantial costs which are inevitably

involved, it is entirely predictable that mining companies will seek to limit and delay their rehabilitation contributions to the minimum which they are able to get away with. Consequently, the requirements and costs of mine rehabilitation work need to be determined and strictly enforced by governments on behalf of the community.

- 2.12 It is understood that the rehabilitation bond required to be paid for by the operators of the Morwell mine, and probably for other Latrobe Valley mines, is ludicrously small. If this is the case, the matter needs to be promptly rectified in an appropriate manner.
- 2.13 Rehabilitation of brown coal open cut mines is such a substantial, specialised and important task that a purpose specific organisation, based in the Latrobe Valley, should be developed and assigned the task of ensuring the appropriate rehabilitation of the Latrobe Valley open cuts. This organisation should be provided with adequate statutory powers, finance and staffing to enable it to ensure the appropriate, timely rehabilitation of all the Latrobe Valley open cut mines. The organisation should have its own board, including strong representation from the Latrobe Valley community and from people with relevant technical and environmental skills.

### **3. Proximity of Timber Plantations**

- 3.1 It is understood that Eucalypt and pine species are amongst the most highly flammable types of trees in the world. After a few very high temperature days, some Eucalypt species trees can be characterised as being like “potential incendiary bombs”. Furthermore, the bark and branches of many Eucalypt species are particularly prone to forming embers which, when blown by the wind, can cause “spot fires” significant distances in advance of a fire front.
- 3.2 The timber, pulp and paper industries are very important contributors to the Latrobe Valley’s economy. Extensive pine and timber plantations have been developed in parts of the Latrobe Valley to provide supplies to these industries. While having regard to the interests of these industries, it is very important that timber plantation areas are located and managed in a manner which has proper regard for the potential fire risks and hazards which are associated with them.
- 3.3 In general terms, the more distant timber plantations are away from particularly vulnerable sites, such as open cut mines and towns, the lower the likelihood of ember attack in those sites. Of course, there is no practical separation distance which can provide an absolute guarantee against the possibility of ember attack. However, it would be expected that a reasonable buffer distance separating timber plantations from open cuts and towns would significantly reduce the risk of ember attacks spotting fires into open cuts or towns. At present there is a buffer distance of 1 km from a mining licence area within which plantations are only permitted with a planning permit after fire issues have been considered. It is suggested that the width of this buffer distance should be increased to perhaps, in the order of 1.5 – 3.0 kms. Expert advice may need to be sought on this matter. When a determination is made on this matter, planning controls will need to be amended to give effect to the decision.