

Supplementary Submission to Inquiry Board on the Department of Health Response to the Hazelwood Fire

I, Rosemary Lester, Chief Health Officer of the Department of Health (DH), have prepared this submission which I hope, along with the letter to the Inquiry Board from the Victorian Government Solicitor dated 23 June (VGS letter), provides clarification in what is a complicated area. I and the Department of Health (DH) are available to assist with further clarification to the Board should this be necessary.

Role of the Chief Health Officer

The Chief Health Officer (CHO) is a statutory position created under section 20 of the *Public Health and Wellbeing Act 2008* (PHWBA).

Under the PHWBA, the CHO is given a range of powers, which represent a hierarchy of powers of intervention for the purpose of responding to risks to public health. The public health risk powers, contained in Division 1 of Part 10 of the PHWBA, are exercisable for the purpose of investigating, eliminating or reducing a risk to public health. The CHO may authorise the use of these powers without reference to other decision makers.

The precautionary principle in section 6 of the *PHWBA* provides that “if a public health risk poses a serious threat, lack of full scientific certainty should not be used as a reason for postponing measures to prevent or control the public health risk.” This nonetheless requires that a serious threat be identified and established. The Chief Health Officer also has regard to the other principles set out in Part 2 of the PHWBA. Of particular relevance in this instance are the principles of evidence based decision-making and proportionality, which are outlined in sections 5 and 9.

DH does not exercise control responsibilities for emergency events such as fire, but under Victoria’s emergency management arrangements, the department may be called on by other control agencies to provide coordination and support during any other emergency.

Where the department does not take the role of incident controller, the CHO provides support and advice in relation to public health consequences arising from an incident, consistent with the general statutory functions of the office under the PHWBA. This may include issuing alerts and advisories as outlined in my Witness Statement to the Board of Inquiry dated 20 April 2014, and providing high level advice to the incident controller about health issues relating to the incident. In an emergency, in fulfilling this role the CHO will report to the State Health and Medical Commander, which ensures coordination of information, resourcing and activity that impact on the health sector or on public health.

Introduction

Throughout the incident, the goal was to protect the health of the people of Morwell and surrounding towns, while mounting a response proportionate to the degree of risk. As has been documented in my Witness Statement, this was done on a firm evidence-based approach.

When the fire commenced on 9 February, this was in the context of several bushfires/grassfires in the surrounding areas, as well as many others throughout the state. Using the endorsed Bushfire Smoke, Air Quality and Health Protocol, messages were issued to the community according to the measured/predicted levels of air quality.

Environment Protection Authority (EPA) smoke warnings are regional in nature – bush fires lead to smoke, which usually affects large areas. These general warnings were designed for, and applicable to, the people in the Latrobe Valley. More specific advice tailored for the people of Morwell was developed throughout the fire and distributed to the community in the many ways described in my Witness Statement.

On 10 February, emailed advice was received from DH's Adviser, Health Risk Management that the brown coal in the Latrobe Valley produced relatively low levels of ash and was low in the oxides of sulphur and nitrogen. Hence, the main hazards of concern were carbon monoxide (CO) and particulate matter.

In the early days of the incident, a key focus of DH and EPA was to obtain validated (hourly rolling average) data on these hazards that might have been present in the atmosphere which could have affected the community, i.e. CO and particulate matter.

Carbon Monoxide Response Protocol

The circumstances of the fire's progression on 15 / 16 February are well detailed in the VGS letter so I will paraphrase the key points relevant to my role as CHO.

As no community based protocol for outdoor CO exposure from an emergency incident existed in Victoria for this type of fire prior to 15 February, we developed one over the weekend of 15 and 16 February with the involvement of all key agencies.

The "Protective Action Decision Guide for Emergency Services during Outdoor Hazardous Atmospheres", signed off by all relevant Victorian agencies in 2011 was used as the basis for the selection of the thresholds for action. It recommended that the AEGL (Acute Exposure Guideline Levels) were to be used for short term community exposures to outdoor air chemical concentrations for a range of hazards. The thresholds in the AEGLs are documented in evidence before the Board of Inquiry (see paragraph 10.88 of the Victorian Government Submission dated May 2014).

Several commentators, including the reviewers engaged by the EPA, have suggested that an alternative (more conservative) standard should be used. But, to depart from a well-researched, widely-adopted and formally approved (in Victoria) standard (the AEGLs) suitable for emergency events of this type to an alternative, but inappropriate, standard designed for long-term exposure is not acceptable.

The review of the Protocol by Toxikos noted that “ambient air quality guidelines and standards, such as the NEPM standards and WHO guidelines [Anderson and Johnston referenced the WHO guidelines in their comments] are developed to protect the most sensitive individuals in a population for a lifetime (assumed 70 years) exposure. They have a high level of conservatism built into them and are not appropriate for use in emergency situations to determine whether evacuation is necessary.”

The protocol developed for community safety is quite distinct from the occupational health and safety protocols used by the fire services, which is well documented in the VGS letter.

The lack of validated, rolling average data continued to be an issue. The data from EPA continuous monitoring stations came to DH as a regular rolling average from 19 February. In the interim, there was an agreement that 5 minute average data reports were to be provided by the EPA if the thresholds were triggered.

The AEGL standard requires continuous exposure readings because it is continuous exposure to CO that is potentially dangerous. Averaging spot readings for a period invariably does not give an accurate estimate of continuous exposure.

CO levels on 16 February

On 16 February, several elevated readings of CO from overnight were reported to DH. These, along with other elevated readings recorded later in the afternoon were discussed with EPA. Again, this is well documented in the VGS letter.

In my role as CHO, I was aware of both sets of elevated readings. Clearly, experienced officers on the ground were dealing with the assessment of these data. I considered their advice and the available evidence. I concluded that no additional action other than the high level bush fire smoke advisory was required that evening because the likely risk to the public of that level of carbon monoxide exposure was low.

On the morning of 17 February, DH was advised that levels of CO had dropped overnight. From 18 February onwards, CO levels in the community were not of concern again.

The data available from health presentations in Morwell has clearly shown that there were no increase in presentations to Latrobe Regional Hospital in the relevant periods of 15, 16 and early on 17 February (or on any other days during the incident).

Particulate Matter Issues

With regard to particulate matter, there have been observations regarding the community health warnings given on this topic and the subsequent temporary relocation advisory given to groups at risk.

The risks of relocation and my assessments of the possible impacts of particulate matter from the start of the fire are dealt with in detail in the VGS letter.

The argument that temporary relocation advice should have been given on 16 February (or even at the start of the fire) does not use the evidence that was available day-to-day on the varying conditions that were being experienced.

The primary reasons for my temporary relocation advice on 28 February are in the VGS letter. This advice was based on the situation evolving on the ground and the evidence that was available to me.

Through the course of the fire, the health data that was being collected and collated daily by DH consistently showed no evidence of any serious health impacts that could be attributed to the smoke or particulate matter.

Conclusion

The public health advice I provided during the incident was based on the information available to me at the time as well as constant review of the available evidence. This information included advice from DH air quality experts, observational information, advice from independent experts (both from Australia and overseas) and data about air quality provided by the EPA as set out in my Witness Statement.

While the demand for assurance regarding health risks from the smoke and ash remained high, DH continued to apply the best available evidence to inform messaging and therefore ensured those messages were appropriate and consistent with the level of risk.

In her review for the EPA dated 24 February, Fay Johnston from the Centre for Air Quality and Health Research and evaluation (CAR), provided the following comments:

“We note the enormous challenges presented by the current coal mine fires in the La Trobe Valley and the **considered and systematic public health responses implemented to date** [emphasis added]. There is considerable uncertainty about the likely duration and severity of the ongoing pollution episode....We understand that many complex clinical and public health judgements are required in applying the available evidence and resources to manage this event, which is unprecedented in Australia.....We recognise that there is no clear correct course of action and that all approaches taken to mitigate the public health impacts will have associated benefits and risks.”

With regard to specific criticisms of my and the DH response to the Hazelwood fire, I submit that:

- As detailed above and in the VGS letter, the risks of particulate matter were appropriately managed and the temporary relocation advice of 28 February was timely and appropriate for the reasons outlined above and in my Witness Statement and the VGS letter.
- The CO protocol was ground breaking in its development, pulling together the best available science and expert opinion, in an area where there was a distinct lack of readily available guidance for the circumstances produced during this event, and has been independently validated as appropriate.
- The assessments of 16 February of CO risks and the recommendations for action were appropriate and based on the best available evidence at the time. Certainly, the levels of CO were elevated and of concern and they needed to be watched. They were not “dangerously high levels”. I reject the assertion by Counsel Assisting that “This inaction was dangerous” on

that evening. This is strongly reinforced by the data available from health presentations in Morwell.

Finally, with regard to communications, the communications for Morwell residents were targeted and distributed in multiple ways through many media and local health professionals. They evolved as the fire persisted and the dangers changed.

The submissions of others to the inquiry have predominantly, and inappropriately, concentrated on the general EPA smoke warnings designed for the region.

It was recognised from the first week of the fire that these were not completely relevant to the people of Morwell and appropriate warnings and health messages were tailored for them and updated regularly as the circumstances changed.

I very much accept that many people in the community did not receive these messages, did not accept them, or did not understand them. We have committed to reviewing all of the factors in our communication performance and to try and improve performance in this regard in the future.

Similarly, DH has already submitted a list of issues to the inquiry board in the second government submission that we believe we should address.

In conclusion, DH has used an approach based on best available evidence to managing the risks of the Hazelwood fire. The evidence collected on health outcomes during the fire and subsequently does not demonstrate any serious health impacts that could be attributed to the smoke, particulate matter or carbon monoxide.

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Chief Health Officer