## IN THE MATTER OF The Hazelwood Coal Mine Fire Inquiry

## STATEMENT OF DR ROSEMARY LESTER PSM

Date of Document: 20 May 2014 Filed on behalf of: The State of Victoria Prepared by: Victorian Government Solicitor Level 25 121 Exhibition Street Melbourne VIC 3000 Solicitor's Code: 7977 Telephone: +61 3 8684 0444 Facsimile: +61 3 8684 0449 DX 300077 Melbourne Ref: 1403971 Attention: Peter Stewart

I, Dr Rosemary Lester, of 50 Lonsdale Street, Melbourne, Victoria, Chief Health Officer, Department of Health, can say as follows:

#### A. Introduction

- 1. My full name is Rosemary Ann Lester. My date of birth is 4 February 1957.
- 2. I am the Chief Health Officer of the State of Victoria. I was appointed as the Chief Health Officer in March 2012.
- 3. I am a registered medical practitioner. I hold a Bachelor of Medicine and Bachelor of Surgery, a Master of Public Health and a Master of Science (Epidemiology). I am also a Fellow of the Australasian Faculty of Public Health Medicine. A copy of my curriculum vitae is provided in <u>Attachment 1 [DOH.0006.003.0001]</u>.
- 4. As the Chief Health Officer, my functions and powers are set out in section 20 of the *Public Health and Wellbeing Act 2008* (Vic) (Act). These functions and powers include developing and implementing strategies to promote and protect public health and wellbeing, and providing advice to the Minister or the Secretary on matters relating to public health and wellbeing. I also have other specific powers set out in the Act. For example, I am empowered to make certain orders that may impact on individuals in order to protect the community, including orders to compel a person to be examined or tested or to refrain from certain activities that may pose a serious risk to public health. In making decisions about public health risk I am supported by the Health Protection Branch of the Department of Health (DH). I can also delegate my powers in accordance with section 22 of the Act if required.
- 5. I have worked at the DH in various roles since October 1989, including as Deputy Chief Health Officer from mid 2009 to October 2011, Acting Chief Health Officer and Acting Director, Health Protection from October 2011 until March 2012, and as

Assistant Director, Communicable Disease Prevention and Control Unit from March 2006 until October 2011.

- 6. This Statement has been prepared pursuant to the request made by the Principal Legal Advisor assisting the Hazelwood Coal Mine Fire Board of Inquiry at a meeting on 29 April 2014 and by letter of 7 May 2014 (the **Letter**).
- 7. I note that the Letter requests that this witness statement cover the following topics:
  - 7.1 Incident Control Structure;
  - 7.2 Brown Coal Fires;
  - 7.3 Strategic Approach;
  - 7.4 Health Advice during the Mine Fire; and
  - 7.5 Long Term Health Study.
- 8. This Statement seeks to address each of these matters.
- 9. This Statement comprises information predominantly from my personal experience and knowledge, or contained in records of DH.

#### B. Incident Control Structure - The role of the Chief Health Officer

- 10. DH acts as control agency only for emergencies relating to human disease, epidemics, food and drinking water contamination, and incidents involving radiological and biological materials (DH Control Incident). This is set out in Part 7 of the Emergency Management Manual Victoria (<u>Attachment 2</u>)
  [DOJ.0002.001.0053]. As the control agency for these emergencies, DH is responsible for managing the response to the incident. If a DH Control Incident has a high level of complexity, is long in duration, involves significant resources and agencies, and may have major or catastrophic consequences, I act as Incident Controller. When I act as Incident Controller, I am empowered, pursuant to the Public Health Control Plan (<u>Attachment 3</u>) [DOH.0002.001.0069], to manage all response activities.
- 11. For the Hazelwood Coal Mine Fire, DH acted as a support agency. Where DH acts as a support agency in responding to an emergency, DH provides resources and personnel to assist the response organised by the control agency. As Chief Health Officer, I provide advice and support to the Incident Controller in relation to public health consequences arising from the incident. I also act as the Government's media spokesperson on matters relating to public health.
- 12. As part of the incident control structure implemented under the State Health Emergency Response Plan (SHERP) (<u>Attachment 4</u>) [DOH.0002.001.0130], I am a member of the State Health Incident Management Team (S-HIMT). During the Hazelwood Coal Mine Fire, I also provided regular reports to the State Health and Medical Commander. This ensures coordination of information, resourcing and activity that has an impact on the health sector or on public health, at both the State and Regional level. I also represent DH on the State Emergency Management Team. This allows me to be fully informed of the current information available about the incident, which may inform public health advice.

#### C. Advice of the Chief Health Officer

- 13. In performing the functions and powers of the Chief Health Officer set out in the Act, I regularly inform Victorians about issues with the potential to impact their health and safety. I provide this information by issuing health alerts and advisories, as well as other informative documents as required, and through media statements.
- 14. A Health Alert advises the Victorian community and health practitioners of an issue that is urgent, poses an immediate threat to public health and requires an immediate response. For example, recent health alerts that I have issued include information about the suspected contamination of Propofol, legionnaires' disease, H7N9 influenza, measles in returned travellers from the Philippines, Bali, Thailand, India and Sri Lanka, and the Middle East Respiratory Syndrome Coronavirus.
- 15. A Health Advisory is less urgent than a Health Alert, and provides advice that is of importance to the Victorian public and health practitioners and may require action.
- 16. An Information Update may also be provided on any of the issues raised in a Health Alert or Advisory where the risk may have subsided but additional information is available.
- 17. The strategy of issuing different levels of health advice, in the form of a Health Alert, Health Advisory or Information Update, is adopted by public health agencies both in Australia and overseas. It is considered the most effective and efficient way of communicating important public health messages to health professionals and the public. Further details about the Health Alerts and Advisories issued during this incident are set out in paragraphs 68 and 74 below.
- 18. In preparing health alerts and advisories, and in order to properly assess the appropriate public health response, I may rely on advice from DH experts or independent experts, as well as technical information provided by other agencies. For example, in the lead up to the Hazelwood Coal Mine Fire, I relied on weather predictions and other information from the Bureau of Meteorology to issue a Heat Health Alert on 5 February 2014. During the Hazelwood Coal Mine Fire, I relied on the monitoring and expert assessment of air quality undertaken by the Environment Protection Authority (EPA) to inform the appropriate public health advice.

#### **D.** Air Quality and Health

- 19. Each year, DH and the EPA work collaboratively to share information and coordinate public health messaging about the impact of air quality on public health. The Bushfire Smoke, Air Quality and Health Protocol (Bushfire Smoke Protocol) was first developed during the 2006/2007 summer fire season. Each year the Bushfire Smoke Protocol is formally reviewed by DH and the EPA, and is endorsed by the Chief Health Officer and the Director, Environmental Regulation, EPA.
- 20. In 2014, the Bushfire Smoke Protocol was formally endorsed on 13 February 2014, but was operational in draft form before the Hazelwood Coal Mine Fire (Attachment 5) [DOH.0005.001.0115].
- 21. The Bushfire Smoke Protocol provides triggers for the EPA to issue a "low level" or "high level" smoke advisory based on defined air quality indicators. Each smoke advisory contains public health messages for broad media messaging to the community that I endorsed.

- 22. A low level smoke advisory recommends that sensitive groups (including people with an existing heart or lung condition, people aged over 65 or children) should avoid prolonged or heavy physical activity. A low level smoke advisory is issued where particulate matter is measured at 51-65 micrograms/m3 (at PM<sub>10</sub>) averaged over 24 hours.
- 23. A high level smoke advisory recommends that everyone should avoid prolonged or heavy physical activity. A high level smoke advisory is issued when particulate matter is measured to be above 66 micrograms/m3 (at PM<sub>10</sub>) averaged over 24 hours.
- 24. In addition to the particulate matter measurements averaged over 24 hours set out in paragraphs 22 and 23 above, the EPA may use other supporting information such as equivalent one hour values and visibility to inform potential impacts of smoke on air quality.
- 25. The bushfire advisory categories, based on  $PM_{10}$  monitoring, are summarised in Table 1 of the Bushfire Smoke Protocol.
- 26. The Bushfire Smoke Protocol also sets out more detailed recommended actions if people are exposed to bushfire smoke. The cautionary advice and actions are based on five air quality categories: good; unhealthy sensitive; unhealthy all; very unhealthy; and hazardous. The cautionary health advice is commensurate to the applicable air quality category, and is used to inform the basis of any additional advice that I may provide. The cautionary advice and actions are summarised in Table 2 of the Bushfire Smoke Protocol.

#### E. Brown Coal Fires

- 27. The health effects of exposure to smoke and ash for fire responders are different from the health effects of exposure to smoke and ash for the community. This is because the level of the exposure for fire responders is significantly higher due to their close proximity to the fire and, in the case of a mine fire, the lack of dispersion of the smoke. I have limited this witness statement to the health effects of smoke and ash for the community generally.
- 28. Smoke is a complex mixture of different-sized particles, water and gases including carbon monoxide, carbon dioxide and nitrogen oxides. The composition of smoke and ash depends on the fuel source and nature of the fire and conditions of burning.
- 29. Coal is a combustible brown-to-black carbonaceous sedimentary rock formed by compaction of partially decomposed plant material. It contains mostly carbon (50-98%); hydrogen (3-13%) and oxygen, with smaller amounts of nitrogen, sulphur and other elements.<sup>1</sup>
- 30. Brown coal from the Latrobe Valley is unique. It has a high moisture content (up to 67%), and contains low levels of ash (< 4%), sulphur (< 1%) and nitrogen (<1%). Discrete minerals and heavy metals are present in minute concentrations. This differs from brown coal found in other parts of Victoria which contain high levels of sulphur. The Latrobe Valley brown coal also differs from black coal which has high concentrations of discrete minerals and heavy metals.</p>

<sup>&</sup>lt;sup>1</sup> For further information, see *The Science of Victorian Brown Coal Structure, Properties and Consequences for Utilisation* edited by Dr RA Durie (1991)

- 31. The composition of brown coal from the Latrobe Valley means that the smoke produced when it is burnt contains water, ash (large particles), fine particles, carbon dioxide, carbon monoxide and polycyclic aromatic hydrocarbons. Bushfire smoke is a mixture of different-sized particles, water vapour and gases, including carbon monoxide, carbon dioxide and nitrogen oxides. As with bushfire smoke, fine particles present the greatest risk to public health from a brown coal fire. The similarity of the constituent elements of the Latrobe Valley brown coal smoke and smoke from a bushfire meant that the Bushfire Smoke Protocol was appropriate for me to use to guide public health messaging, including identifying those groups most susceptible to the effects of fine particles (discussed in paragraph 40 below), at the beginning of this event.
- 32. The public health effects of exposure to smoke from a brown coal fire depend on:
  - 32.1 the size of the fire and how long it burns;
  - 32.2 levels of fine particles;
  - 32.3 known effects to the body from breathing in these levels;
  - 32.4 how long a person is exposed (short term exposure is generally considered to be from days to weeks, and long term exposure is generally considered to be one year or more);
  - 32.5 the person's individual susceptibility (for example people with an existing heart or lung condition or the very young or elderly); and
  - 32.6 the level of exercise or physical activity.
- 33. Fine particles in smoke are known as  $PM_{10}$  and  $PM_{2.5}$  and are small enough to be breathed deep into lungs and can aggravate existing heart or lung conditions, including asthma. Smoke can cause local irritation of the eyes, nose and throat.
- 34. Coal ash is the fine powdery material produced as a by-product of the combustion of coal. When coal is burnt, any particles that do not completely combust or are too large to remain airborne are deposited on surfaces as ash. The ash deposited by a brown coal mine fire is similar to ash found in a fireplace.
- 35. Ash particles may also cause irritation to skin, eyes, nose and throat.
- 36. The short term health effects of exposure to smoke and ash from a fire generally subside once the smoke ceases (i.e. the smoke clears and the ash settles).
- 37. As the health effects of short term exposure to fine particles and ash are transitory, it is not expected that there will be medium or long term health effects.
- 38. Long term exposure (considered to be one year or more) to poor air quality is known to have a negative impact on health, such as increased risk of chronic disease, including heart disease, lung disease or cancer. As set out in paragraph 31, fine particles present the greatest risk to public health from smoke from a brown coal fire. A list of studies setting out the long term health effects of exposure to fine particles is set out in <u>Attachment 6 [DOH.0005.001.0138]</u>. This includes a reference to the annual average advisory reporting value for PM<sub>2.5</sub> in the National Environmental

Protection Measure for Ambient Air Quality which was developed based on the long term health effects of long term exposure to fine particles.

- 39. Whilst the short term health effects of short term exposure, and the long term health effects of long term exposure, to smoke are well understood, DH has identified that there is a gap in medical understanding of the long term health effects from exposure to smoke for a period similar in length to the Hazelwood Coal Mine Fire. In order to identify any unexpected long term health effects, and to contribute to the knowledge in this area, DH has committed to undertaking a long term health study. Further details are set out in paragraph 93.
- 40. The health effects of exposure to smoke and ash from a brown coal mine fire, set out in paragraphs 33 38, differ for particular groups in the community. Children, the elderly, smokers, pregnant women and people with pre-existing illnesses such as heart or lung conditions, are more sensitive to the effects of breathing in fine particles. This is because:
  - 40.1 young children have developing lungs, and a higher respiration rate per unit of body weight compared to adults. Children are also more active, and if very young have a tendency to put their hands in their mouth;
  - 40.2 the elderly may have a decrease of functional reserve in their bodies;
  - 40.3 fine particles can aggravate existing symptoms experienced by smokers and people with pre-existing illnesses, especially heart or lung conditions;
  - 40.4 there is evidence that lower birth weight of babies may occur where the mother is exposed to fine particles over a sustained period.

#### F. Air Quality and the Hazelwood Coal Mine Fire

- 41. Due to the significant bushfire activity across the State on 10 February 2014, including the Mickleham-Kilmore fire, the initial focus of public health messaging was the impact of bushfire smoke. Throughout the summer period, the DH factsheet "Bushfire Smoke and Your Health" was available at all times from the DH website, including in several community languages. From 11 February 2014, the EPA issued media releases containing public health advice in accordance with the Bushfire Smoke Protocol.
- 42. On 10 February 2014 I was advised by the State Health Coordinator that there was a fire in the Hazelwood Coal Mine. On the same day, I was advised by the DH Advisor, Health Risk Management Environmental Health, that smoke from a brown coal fire in this location produces relatively low levels of ash, and relatively low levels of the oxides of sulphur and nitrogen. As explained in paragraph 31, this meant that the smoke from this fire was unlikely to contain levels of sulphur or nitrogen combustion products (including ammonia, hydrogen cyanide and sulphur dioxide, which are all respiratory irritants) likely to cause public health concern. Similarly, the low levels of sulphur meant that the ash and smoke particles were not expected to be acidic. This information allowed me to form the opinion that, as with bushfire smoke, the greatest risk to public health from a brown coal fire in the Latrobe Valley related to exposure to fine particles.
- 43. I was also advised on 10 February 2014 that the EPA had air quality monitoring equipment in Traralgon, but no air quality monitoring equipment in Morwell or Moe.

44. On 11 February 2014, I asked the DH Environmental Health Team to contact the EPA about whether air quality monitoring equipment would be located in Morwell. I also discussed this with the Chief Executive Officer of the EPA that evening.

## G. Strategic Approach

- 45. As outlined in paragraphs 11 and 12 above, the role of the Chief Health Officer is to act as the Government's media spokesperson on matters relating to public health and to provide advice to the Incident Controller in relation to public health consequences arising from the incident.
- 46. The strategy that I adopted in discharging my powers and functions as the Chief Health Officer was to ensure that timely, accurate health information, commensurate with the level of risk, was provided to the community throughout the incident. The activities that I undertook, the assessment of this strategy and the advice provided by external experts are detailed in the following sections of this statement.
- 47. The broader health service strategies are coordinated by DH through its emergency management response function. This strategy is detailed in SHERP, and is the responsibility of the State Health and Medical Commander.

#### H. Public health consequences arising from the Hazelwood Coal Mine Fire

- 48. The fire in the Hazelwood Open Cut Mine was complex. There are no recent examples of a fire in an open cut brown coal mine of the size, duration or the amount of smoke produced, as occurred this year. The fire was complex in two important respects:
  - 48.1 although not the first fire to occur in brown coal, in either underground or above-ground circumstances (DH had been involved in assessing the public health risk from the fire at the Hazelwood Coal Mine in 2006), it was large in scale compared to Australian experiences to date; and
  - 48.2 the fire burned, and emitted smoke, at the same location, adjacent to the town of Morwell, for a longer duration than previous fires (the 2006 fire at the Hazelwood Coal Mine burned for approximately one week).
- 49. During the first week of the fire, the Bushfire Smoke Protocol was used to inform the public health advice I provided. However, it became apparent that new decision-making tools were required to inform public health advice arising from the uncertain duration of the fire and its complex features outlined in paragraph 48 above.

#### Carbon Monoxide

- 50. Carbon monoxide is a colourless and odourless gas, found in smoke and formed from the incomplete combustion of fuels, including coal. Carbon monoxide is found in smoke from any combustion source, including bushfires. Once carbon monoxide is dissipated in the atmosphere, the concentration of carbon monoxide in the air reduces rapidly and usually does not present a risk to human health.
- 51. From 12 February 2014, there was significant concern, including among the community, about the levels of exposure to carbon monoxide to incident responders and the community generally. Whilst exposure to carbon monoxide for incident

responders is a significant concern, I understood that the likely risk to the public of carbon monoxide exposure was low (for the reasons set out in paragraph 50).

- 52. From 13 February 2014, the EPA and Country Fire Authority (CFA) conducted air quality monitoring for carbon monoxide in Morwell. I was advised that carbon monoxide was being monitored using fixed monitoring equipment located within the mine, on the immediate boundary of the mine, and using hand-held monitoring equipment in the community.
- 53. In order to address the community concerns about the health effects of exposure to carbon monoxide, on 14 February 2014 DH produced a fact sheet providing specific information about the health effects of the Hazelwood Coal Mine Fire, including carbon monoxide. This fact sheet was made available at the Community Meeting and is provided in <u>Attachment 7</u> [DOH.0006.006.0001]. I also ensured that the public health message that carbon monoxide does not present a risk to the general community was reiterated in subsequent media interviews and press conferences (referred to in paragraph 72).
- 54. On 15 February 2014 DH received information which suggested a possible spike in carbon monoxide levels in the Morwell community. This information was a "spot reading" (i.e. an instantaneous value), rather than averaged data and so was insufficiently reliable to inform public health advice.
- 55. In order to provide a decision-making tool to assess the risks, and appropriate responses, to high levels of carbon monoxide, on 15 February 2014 DH developed a Carbon Monoxide Response Protocol (CO Response Protocol) (<u>Attachment 8</u>) [FSC.0006.007.0020]. This was also necessary as existing protocols only dealt with short term exposure (i.e. a number of hours) to particular hazards.
- 56. The CO Response Protocol established the minimum data set required for a public health risk assessment to be made. The minimum data set required: rolling average one hour environmental carbon monoxide levels; precise location of the measured levels; and Bureau of Meteorology weather forecast for the next 24 hours, including wind direction, speed and predictions. The CO Response Protocol also established an "advice matrix" which indicates when particular levels of health protection advice should be given to the community if carbon monoxide readings reach particular levels (see Figure 2 of the CO Response Protocol).
- 57. In order to ensure that the CO Response Protocol represented an appropriate decision-making tool, and in accordance with DH's usual practice to undertake peer review of scientific protocols, on 25 February 2014 DH engaged Toxikos, an independent toxicology consulting firm, to undertake a peer review. The Report provided by Toxikos is set out in Attachment 9 [DOH.0005.001.0139].
- 58. DH received information from the EPA about the results of the carbon monoxide testing from 16 February 2014. On 17 February 2014 I had a number of conversations with the EPA requesting that carbon monoxide monitoring data be provided in a systematic format that would assist my decisions to issue public health advice. This information was provided from 19 February 2014. The levels of carbon monoxide provided to DH did not indicate any potential risks to public health.
- 59. The data received by DH for carbon monoxide is set out in <u>Attachment 10</u> [DOH.0006.001.0001].

#### Particulate Matter

- 60. Particulate matter, or fine particles, can be breathed deeply into the lungs and are a key component of concern for public health protection.
- 61. The standard measurement of particulate matter in Victoria is  $PM_{10}$  (particles with a diameter of 10 micrometers or less). However,  $PM_{2.5}$  (particles with a diameter of 2.5 micrometers or less) provides the best information about risk to public health.
- 62.  $PM_{2.5}$  measurements of air quality are not generally available across Victoria. However, as the EPA did not have permanent air monitoring equipment in the southern part of Morwell, a mobile laboratory was moved to this location. This mobile laboratory had the capacity to measure  $PM_{2.5}$  data.
- 63. Due to the complex nature of the Hazelwood Coal Mine Fire, on 25 February 2014, following significant work to ensure that the community was provided with timely and accurate health information (for example, see paragraph 58 above and section I), DH began developing a PM<sub>2.5</sub> Health Protection Protocol (as an appendix to the Bushfire Smoke Protocol) (PM<sub>2.5</sub> Protocol) (<u>Attachment 11</u>) [DOH.0005.001.0151]. The PM<sub>2.5</sub> Protocol provided a decision-making tool to assess the risks, and appropriate responses, to high levels of PM<sub>2.5</sub>. The cautionary advice and actions are based on five air quality categories: good; unhealthy sensitive; unhealthy all; very unhealthy; hazardous and extreme. The PM<sub>2.5</sub> levels, averaged over a 24 hour period, for each air quality category broadly correlate to the PM<sub>10</sub> levels set out in the Bushfire Smoke Protocol. The cautionary health advice is commensurate to the applicable air quality category, and is used to inform the basis of any additional advice that I may provide. The cautionary advice and actions are summarised in in Table B of the PM<sub>2.5</sub> Protocol.
- 64. In order to ensure that the PM<sub>2.5</sub> Protocol represented an appropriate decision-making tool, on 4 March 2014 DH engaged Toxikos to undertake a peer review. The Report provided by Toxikos is set out in <u>Attachment 12 [DOH.0005.001.0157]</u>. I also received advice from the EnHealth Standing Committee of the Australian Health Protection Principal Committee (AHPPC), and the AHPPC itself. A copy of this advice is provided in <u>Attachment 13 [DOH.0005.001.0163]</u> and [DOH.0005.001.0169].
- 65. From 16 February 2014, DH received  $PM_{2.5}$  reports from the EPA for the eastern part of Morwell. From 22 February 2014, DH received  $PM_{2.5}$  reports from the EPA for the southern part of Morwell.
- 66. I relied on the daily information provided by the EPA to inform the level of smoke advisory, and therefore the level of health advice.
- 67. The data received by DH for PM2.5 is set out in <u>Attachment 14</u> [DOH.0005.001.0001]. I issued public health advice regularly throughout the incident which reflected the air quality data available to me.

#### I. Advice of the Chief Health Officer during the Hazelwood Coal Mine Fire

#### Public Health Advice

68. The public health advice I provided during the incident was based on the information available to me at the time. 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 paragraphs 59 and 65 above.

- 69. On 28 February 2014, DH also commissioned the Monash University School of Public Health and Preventive Medicine to undertake a Rapid Health Risk Assessment (RHRA) to provide information on the short term health effects which might be expected from the event. The purpose of a RHRA is to assist rapid and defensible decision-making for events that pose a risk to human health. The RHRA found that low birth weight in babies has been described after exposure to PM<sub>2.5</sub>, including from exposure to bushfire smoke. It found that no additional deaths would be expected even if the level of exposure to the measured level of air quality continued for six weeks. A copy of the Rapid Health Risk Assessment is provided in <u>Attachment 15</u> [DOH.0005.001.0002].
- 70. DH also received reports and data during the incident from the Latrobe Regional Hospital, general practitioners in the area, Ambulance Victoria, Nurse-On-Call and the Community Health Assessment Centre about the level of demand on their services, and the types of conditions that people were presenting with. This data indicated that general practitioners experienced an increased demand for consultations including for respiratory conditions and anxiety, and Nurse-On-Call reported increased calls relating to respiratory conditions. No increase in demand relating to the fire was reported from Ambulance Victoria or Latrobe Regional Hospital. Data from the Community Health Assessment Centre recorded multiple attendances of people with non-life threatening symptoms, however it did not suggest serious medical concerns in relation to the fire. This information added to my understanding of the health effects of smoke and ash being experienced by the people of Morwell and the Latrobe Valley. A summary of the data I received is set out in the Hazelwood Coal Mine Pit Fire - February - March 2014: Assessment of Short Term Health Impacts in Morwell and the Latrobe Valley provided in Attachment 16 [DOH.0005.004.0005].
- 71. The public health message provided during the Hazelwood Coal Mine Fire was escalated according to the public health risk created by the smoke from the fire:
  - (a) on 13 February 2014, the CHO Alert advised that everyone, particularly those in at-risk groups (people over 65, pre-school aged children and those with preexisting heart or lung conditions) should avoid prolonged or heavy physical activity outdoors;
  - (b) on 14 February 2014, the Community Fact Sheet distributed at the Community Meeting, advised that during extended, very smoky conditions, those people in at-risk groups should consider temporarily staying with a friend or relative living outside the smoke-affected area;
  - (c) on 17 February 2014 the CHO Alert was updated to include pregnant women in the at-risk groups (due to specific risks set out in paragraph 40.4 above);
  - (d) on 25 February 2014 those in at-risk groups were advised to consider temporarily staying outside the smoke-affected area, and others should consider a break away from the smoke. It was also recommended that outdoor physical activity should be avoided;

- (e) on 28 February 2014, those in at-risk groups living or working in the southern part of Morwell were recommended to temporarily relocate.
- A summary of the health advice provided by me, or on my behalf, to the community about the health effects of exposure to smoke and ash is set out in <u>Attachment 17</u>
   [DOH.0006.002.0001]. A copy of the advice is provided in <u>Attachment 18</u> [See Schedule 1].
- 73. The EPA issued smoke advisories containing advice from me, in accordance with the Bushfire Smoke Protocol, throughout the Hazelwood Coal Mine Fire.
- 74. In addition to the media releases issued by the EPA referred to in paragraph 72 and those Alerts and Advisories listed in paragraph 68, I issued regular Chief Health Officer Alerts and Advisories providing specific advice to the community about the health impacts of the Hazelwood Coal Mine Fire. Health Alerts and Advisories are emailed to health professionals and agencies, for example to the Royal Australian College of General Practitioners, Medicare Locals and health services. The Health Alerts and Advisories are also published on the DH website.
- 75. The Alerts and Advisories were complemented by a series of fact sheets which provided specific information about health issues arising from the smoke from the Hazelwood Coal Mine Fire. The fact sheets were available from the DH website, as well as in print, from the Respite Centre, Community Health Assessment Centre, and the Community Engagement Bus.
- 76. I participated in 21 press conferences during the Hazelwood Coal Mine Fire. From 11 February 2014, I also undertook a significant number of media interviews with radio, television and print media agencies throughout the incident.
- 77. Representatives from DH attended the community meetings held on 14 February 2014 and 18 February 2014.
- 78. DH contributed to the whole of government communications response to the Hazelwood Coal Mine Fire coordinated by the Department of Premier and Cabinet. This allowed key health messages to be included in paid advertising in local media. DH also provided key health messages for inclusion in local community newsletters.
- 79. DH also engaged in public messaging using social media. The #minefire team (which included DH staff) published 115 posts to the Health Facebook page, and 107 tweets.
- 80. On 25 February 2014, DH established a specific website for the Hazelwood Coal Mine Fire. Prior to this date, all information about the incident was made available on the CHO website. These websites received 11,717 visits, with 17,926 page views.
- 81. In conveying any public health message, there is always a challenge to ensure that complex medical and scientific information is presented in an understandable format. It is also critical that the information is accurate. At times during the incident, DH faced challenges in ensuring that the public health message was conveyed accurately by all involved in the incident, and in a manner that ensured the authority of the message was maintained.

#### Advice to Agencies and Organisations

- 82. On 18 February 2014, I was contacted by the Department of Education and Early Childhood Development (DEECD) about the measures to be put in place for schools. I advised DEECD that ideally it would be best for children to take regular breaks from the smoke. This was consistent with the health protection advice I was providing at the time that people should consider taking regular breaks away from the smoke. It was agreed that this was best achieved by temporary relocation of schools in the southern area of Morwell.
- 83. I also met with the Australian Medical Association on 4 March 2014, and met with local General Practitioners on 4 and 5 March 2014, to provide them with an update about the incident and the current health advice. I met with leaders of local health organisations on 4 March 2014 and 26 March 2014.

#### J. Temporary Relocation Advice

- 84. On 28 February 2014, following advice from the Fire Services Commissioner that the fire in the Hazelwood Open Cut Mine was unlikely to be controlled within the next 10 days, and because of the cumulative exposure of sensitive groups to the ongoing poor air quality, I issued temporary relocation advice. I had become increasingly concerned about at-risk groups remaining in the southern part of Morwell for an extended period of time, which was then expected to continue for at least two more weeks. This concern was heightened following a significant decrease in air quality on 26 February 2014 and 27 February 2014.
- 85. I discussed my intention to issue the temporary relocation advice at the State Crisis and Resilience Council meeting, which included the Fire Services Commissioner, on 27 February 2014.
- 86. I consulted with Associate Professor Louis Irving a Respiratory Physician, Dr Fay Johnston a Public Health Physician working at the Centre for Air Quality and Health Research and Evaluation, and the Environmental Health Standing Committee (enHealth) on 27 February 2014, prior to issuing the Temporary Relocation Advice.
- 87. As a precautionary measure, I recommended that people aged over 65, pre-school aged children, pregnant women and anyone with a pre-existing heart or lung condition living or working in the southern area of Morwell should consider temporary relocation (Temporary Relocation Advice). A copy of the Temporary Relocation Advice is provided in <u>Attachment 19 [DOH.0001.002.0025]</u>.
- 88. The Temporary Relocation Advice was directed to vulnerable people living or working in the southern area of Morwell as the air quality data provided to me by the EPA indicated that the air quality in this area was significantly worse than other areas. The southern area of Morwell was agreed to be south of Commercial Road. This area is situated closest to the Hazelwood Coal Mine, and is most susceptible to smoke exposure from the Hazelwood Coal Mine due to density of the smoke, wind speed and direction, topography and the influence of inversion. A diagram explaining the behaviour of smoke from the Hazelwood Coal Mine is provided in Attachment 20 [DOH.0005.001.0077].
- 89. The Temporary Relocation Advice was lifted on 17 March 2014. A copy of the decision to lift the Temporary Relocation Advice is provided in <u>Attachment 21</u> [DOH.0005.001.0078].

# K. Long Term Health Study

- 90. During the incident, the community became increasingly concerned about possible long term health effects of exposure to the smoke.
- 91. The complex features of this fire, set out in paragraph 48, meant that there were no Australian or international comparisons to provide guidance to me to base and scale my advice on the potential for adverse health effects and the associated public health protection messages.
- 92. As set out in paragraph 38 above, there is a gap in medical understanding about the long term health effects of relatively short term exposure to smoke and ash from a brown coal fire. In order to address this gap, and to fully understand the impacts of the Hazelwood Coal Mine Fire, DH has committed to undertake a long term health study. This study will also:
  - 92.1 benefit the local community who have been exposed to the smoke by monitoring any potential long term adverse health effects; and
  - 92.2 assist health authorities, environment protection agencies and emergency services to inform and improve future policy and planning in the event of future similar events.
- 93. DH has prepared an indicative scope of the long term health study using both internal environmental health and epidemiology expertise, as well as consulting external environmental epidemiology expertise through Dr Guy Marks of the Woolcock Institute of Medical Research. On 6 and 7 May 2014, DH conducted a number of community consultation sessions in Morwell about the long term health study. The sessions provided the community and health professionals with an opportunity to have input into the scope of the long term health study, include the types of conditions which the study should focus on. The public was also provided with the opportunity to provide feedback about the long term health study online.
- 94. The scope of the long term health study will address the following questions:
  - 94.1 is there evidence that people in general, and susceptible sub-populations in particular, who were exposed to emissions from the Hazelwood fire, compared with otherwise similar people who were not exposed to emissions from the fire, currently have clinical or sub-clinical cardiovascular or, respiratory conditions that could be associated with clinically important adverse health consequences in the future?
  - 94.2 is there evidence that people in general, and susceptible sub-populations in particular, who were exposed to emissions from the Hazelwood fire, compared with otherwise similar people who were not exposed to emissions from the fire, over time develop clinical or sub-clinical cardiovascular or respiratory conditions that could be associated with clinically important adverse health consequences in the future?
  - 94.3 is there evidence of any difference in birth weight of babies born to mothers exposed to emissions from the Hazelwood fire, compared to babies born to otherwise similar mothers who were not exposed to emissions from the fire?

- 94.4 is there evidence that people who were exposed to emissions from the Hazelwood fire, compared with otherwise similar people who were not exposed to emissions from the fire, have a higher prevalence and persistence of psychological distress?
- 94.5 what socio-demographic factors and exposure levels are associated with higher levels and persistence of psychological distress?
- 94.6 is there evidence that people who were exposed to emissions from the Hazelwood fire, compared with otherwise similar people who were not exposed to emissions from the fire, have a higher incidence of malignant disease over a prolonged period of follow-up?
- 95. The proposed duration of the study is ten years. If a need is identified at a later date to extend the long term health study, DH will consider all appropriate options to ensure that the scope and objectives of the study are fulfilled. The draft Request for Tender is provided in <u>Attachment 22</u> [DOH.0005.001.0079]. It is anticipated that the Request for Tender will be published shortly. A procurement process will then be completed to identify an independent research organisation to undertake the study.
- 96. The successful tenderer will be required to form an advisory committee, which will include the Chief Health Officer. The advisory committee will meet regularly in order to advise the Chief Health Officer about the status of the study.

# L. What worked well, what did not work well and what could have been done better?

## Relationship with EPA

97. DH's relationship with the EPA resulted in cooperation from the outset of the incident. The Bushfire Smoke Protocol meant that public health messaging commenced immediately. If a similar incident occurred in the future, it may be beneficial for agencies that are reliant on sharing information to establish a senior technical advisory and risk management team that meets regularly (eg daily) to ensure co-ordinated advice and data requirements are met.

#### **Communications**

- 98. The communication of health information to the community always presents a challenge in any emergency situation. There is a need to convey complex medical and scientific information in an accurate, timely and easily understandable format. This was complicated by the fact that different hazards were posed by carbon monoxide and PM 2.5. Carbon monoxide is an immediate hazard, and it was necessary to inform the community that the levels of carbon monoxide were safe for them. Exposure to PM 2.5 is more dangerous the longer it continues, and hence increasingly stringent public health advice was issued through the event.
- 99. At times during the incident, DH faced challenges in ensuring that the public health message was conveyed accurately by all involved in the incident, and in a manner that ensure the authority of the message was maintained.
- 100. DH also faced challenges in ensuring all members of the community received and understood the public health message. The initial focus for communicating public health messages was through mass media, in order to achieve the fastest and broadest

reach for the messages. As the incident continued, and more was understood about the demographic profile of the Morwell community, a more targeted approach was adopted.

101. DH worked with the Chair of the Community Advisory Committee at the Latrobe Regional Hospital to tailor the health messaging to the Morwell community. This tailored approach could have been adopted earlier in the incident to ensure the public health messages were able to be understood by the community.

#### Health Response

- 102. A key achievement for DH in response to the Hazelwood Coal Mine Fire was the establishment of the Community Health Assessment Centre (CHAC) at a time when the fire had clearly escalated. The CHAC allowed the community to easily access health assessments, providing additional reassurance about the health impacts of the smoke. The success of the CHAC has been recognised by the Association of Public-Safety Communications Officials Australia which awarded DH the Public Safety Award for this initiative.
- 103. DH was also able to leverage its relationships with health service providers to receive information about demand on health services. This provided me with valuable information about the real time impact of the Hazelwood Coal Mine Fire.

Dated

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**DR. ROSEMARY LESTER** 

# Schedule 1: Attachment 18

Document Id	Main Date	Title
[DOH.0001.001.0001]	17/03/2014	Chief Health Officer Advisory Update on the Hazelwood Open Cut Coal Mine Fire
[DOH.0001.001.0003]	20/03/2014	Chief Health Officer Advisory Update on the Hazelwood Open Cut Coal Mine Fire
[DOH.0001.001.0005]	4/03/2014	CHO Health Advisory Hazelwood Coal Mine Fire Update - Tuesday 4 March 2014
[DOH.0001.001.0007]	21/02/2014	CHO ADVISORY - Health issues from the Morwell Mine fire - 21 February 2014
[DOH.0001.001.0009]	17/02/2014	Chief Health Officer Alert High Level Smoke Warning for Latrobe Valley
[DOH.0001.001.0011]	13/02/2014	Chief Health Officer Alert High Level Smoke Warning for Latrobe Valley

Document Id	Main Date	Title
[DOH.0001.002.0001]	13/03/2014	Air Quality Testing in Morwell Volatile Organic Compounds - Number 1
[DOH.0001.002.0003]	12/03/2014	Ash Fall-Out Hazelwood Open Cut Mine Fires Updated 12 March 2014
[DOH.0001.002.0005]	25/02/2014	Ash Fall-Out - Hazelwood Open Cut Mine Fires
[DOH.0001.002.0007]	12/03/2014	Carbon Monoxide - Hazelwood Open Cut Mine Fire Updated - 12 March 2014
[DOH.0001.002.0009]	25/02/2014	Community Information - Carbon Monoxide - Hazelwood open cut mine fire
[DOH.0001.002.0011]	24/02/2014	Cleaning Up A Smoke and Ash Affected Home - Hazelwood Open Cut Mine Fire
[DOH.0001.002.0013]	11/03/2014	Cleaning Up after the Hazelwood Coal Mine Fire 12 March
[DOH.0001.002.0015]	20/03/2014	Cleaning Up after the Hazelwood Open Cut Mine Fires
[DOH.0001.002.0017]	7/03/2014	Hazelwood Open Cut Mine Fire Health Update for the Community 7 March 2014
[DOH.0001.002.0019]	12/03/2014	Face Mask Q&A Updated 12 March 2014
[DOH.0001.002.0021]	24/02/2014	Face Masks Questions and Answers - Hazelwood Open Cut Mine Fire
[DOH.0001.002.0023]	17/03/2014	Hazelwood Open Cut Mine Fire - Community Update - 17 March 2014
[DOH.0001.002.0025]	28/02/2014	Hazelwood Open Cut Mine Fire Community Update 28 February 2014
[DOH.0001.002.0027]	12/03/2014	Rainwater Tanks - Hazelwood Open Cut Mine Fire Updated 12 March 2014
[DOH.0001.002.0029]	24/02/2014	Rainwater Tanks - Hazelwood Open Cut Mine Fire Community Information February 2014
[DOH.0001.002.0030]	24/02/2014	Smoke and Your Health - Hazelwood Open Cut Mine Fire Community Information February 2014
[DOH.0001.002.0032]	12/03/2014	Smoke and Your Health - Hazelwood Open Cut Mine Fire Updated 12 March 2014
[DOH.0005.001.0064]	28/2/2014	Media Release- New Health Advice for Morwell South Residents

Document Id	Main Date	Title
[DOH.0001.003.0003]	20/02/2014	Media Release - Minister Visits Latrobe Valley Respite Centre
[DOH.0001.003.0005]	20/02/2014	Media Release - Health Assessment Centre to Open in Morwell
[DOH.0001.003.0007]	3/03/2014	Media Release - Premier Announces Business Assistance for Morwell
[DOH.0001.003.0009]	11/03/2014	Media Release - Premier Announces Independent Inquiry into Hazelwood Mine Fire
[DOH.0001.003.0011]	18/03/2014	Media Release - New \$2 Million Clean-Up Package for Morwell
[DOH.0001.003.0013]	27/02/2014	Media Release - Health Assessment Centre in Morwell Expanded
[DOH.0001.003.0015]	17/03/2014	Media Release - Hazelwood Open Cut Mine Fire - Update

#### EPA Media Releases

Document Id	Main Date	Title
[EPA.0001.001.0001]	12/02/2014	Further Low Level Bushfire Smoke Advisory Wednesday 12 February 2014
[EPA.0001.001.0002]	13/02/2014	Low Level Bushfire Smoke Advisory Thursday February 13 2014
[EPA.0001.001.0003]	14/02/2014	Low Level Bushfire Smoke Advisory Friday 14 February 2014
[EPA.0001.001.0004]	15/02/2014	Low Level Bushfire Smoke Advisory Saturday 15 February 2014
[EPA.0001.001.0005]	15/02/2014	High Level Bushfire Smoke Advisory Saturday 15 February 2014
[EPA.0001.001.0006]	16/02/2014	High Level Bushfire Smoke Advisory Sunday 16 February 2014
[EPA.0001.001.0007]	17/02/2014	High Level Bushfire Smoke Advisory Monday 17 February 2014
[EPA.0001.001.0008]	17/02/2014	High Level Bushfire Smoke Advisory Monday 17 February 2014
[EPA.0001.001.0009]	18/02/2014	Low Level Bushfire Smoke Advisory 18 February 2014
[EPA.0001.001.0010]	19/02/2014	Low Level Bushfire Smoke Advisory 19 February 2014
[EPA.0001.001.0011]	20/02/2014	Low Level Bushfire Smoke Advisory 0930 Thursday 20 February 2014
[EPA.0001.001.0012]	20/02/2014	Low Level Bushfire Smoke Advisory 0930 Thursday 20 February 2014
[EPA.0001.001.0013]	20/02/2014	EPA Ramps Up Air Monitoring in Morwell Thursday 20 February 2014
[EPA.0001.001.0014]		High Level Bushfire Smoke Advisory Update 1830
[EPA.0001.001.0015]	21/02/2014	Low Level Bushfire Smoke Advisory 0845 Friday 21 February 2014
[EPA.0001.001.0016]	21/02/2014	High Level Smoke Alert - Morwell South and Morwell East Friday 21 February 2014
[EPA.0001.001.0017]	21/02/2014	High Level Bushfire Smoke Alert Friday 21 February 2014
[EPA.0001.001.0018]	22/02/2014	High Level Latrobe Valley Mine Fire Smoke Advisory Saturday 22 February 2014
[EPA.0001.001.0019]	23/02/2014	High Level Hazelwood Open Cut Mine Fire Smoke Advisory Sunday 23 February 2014
[EPA.0001.001.0020]	23/02/2014	High Level Latrobe Valley Mine Fire Smoke Advisory Sunday 23 February 2014
[EPA.0001.001.0021]	23/02/2014	Immediate Smoke Impacts Alert - EPA Advice 1130 Sunday 23 February 2014
[EPA.0001.001.0022]	23/02/2014	High Level Hazelwood Open Cut Mine Fire Smoke Advisory

Document Id	Main Date	Title
		1800 Sunday 23 February 2014
[EPA.0001.001.0023]	23/02/2014	EPA Launches Hazelwood Open Cut Mine Fire Community Website Sunday 23 February 2014
[EPA.0001.001.0024]	24/02/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 0900 Monday 24 February 2014
[EPA.0001.001.0025]	24/02/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 1830 Monday 24 February 2014
[EPA.0001.001.0026]	25/02/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 0900 Tuesday 25 February 2014
[EPA.0001.001.0027]	25/02/2014	High Level Hazelwood Open Cut Mine Fire Smoke Advisory 1900 25 February 2014
[EPA.0001.001.0028]	25/02/2014	Fine Particle PM2.5 Streams to Web Tuesday 25 February 2014
[EPA.0001.001.0029]	26/02/2014	High Level Hazelwood Open Cut Mine Fire Smoke Advisory 0845 Wednesday 26 February 2014
[EPA.0001.001.0030]	26/02/2014	Immediate Smoke Impacts Alert - EPA Advice 1630Hrs Wednesday 26 February 2014
[EPA.0001.001.0031]	26/02/2014	High Level Hazelwood Open Cut Mine Fire Smoke Advisory 2000 Wednesday 26 February 2014
[EPA.0001.001.0032]	27/02/2014	High Level Smoke Advisory -Latrobe Valley Thursday 27 February 2014
[EPA.0001.001.0033]	28/02/2014	High Level Smoke Advisory - Latrobe Valley 0900 Friday 28 February 2014
[EPA.0001.001.0034]	28/02/2014	Low Level Smoke Advisory - West Gippsland 0930 Friday 28 February 2014
[EPA.0001.001.0035]	28/02/2014	High Level Smoke Advisory - Latrobe Valley 1745 Friday 28 February 2014
[EPA.0001.001.0036]	1/03/2014	High Level Hazelwood Open Cut Mine Fire Smoke Advisory 0900 Saturday 01 March 2014
[EPA.0001.001.0037]	1/03/2014	High Level Hazelwood Open Cut Mine Fire Smoke Advisory 1730 Saturday 01 March 2014
[EPA.0001.001.0038]	2/03/2014	High Level Hazelwood Open Cut Mine Fire Smoke Advisory 0900 Sunday 02 March 2014
[EPA.0001.001.0039]	2/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 1830 Sunday 02 March 2014
[EPA.0001.001.0040]	3/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 0900 Monday 03 March 2014
[EPA.0001.001.0041]	3/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 1830 Monday 03 March 2014
[EPA.0001.001.0042]	3/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory Tuesday 03 March 2014
[EPA.0001.001.0043]	4/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 1800 Tuesday 04 March 2014
[EPA.0001.001.0044]	5/03/2014	High Level Hazelwood Open Cut Mine Fire Smoke Advisory 0900 Wednesday 05 March 2014
[EPA.0001.001.0045]	5/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 1800 Wednesday 05 March 2014
[EPA.0001.001.0046]	6/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 0900 Thursday 6 March 2014

Document Id	Main Date	Title
[EPA.0001.001.0047]	6/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 1800 Thursday 6 March 2014
[EPA.0001.001.0048]	7/03/2014	High Level Hazelwood Open Cut Mine Fire Smoke Advisory 1800 Friday 7 March 2014
[EPA.0001.001.0049]	7/03/2014	High Level Hazelwood Open Cut Mine Fire Smoke Advisory 1800 Friday 7 March 2014
[EPA.0001.001.0050]	7/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 0900 Friday 7 March 2014
[EPA.0001.001.0051]	10/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 0830 Monday 10 March 2014
[EPA.0001.001.0052]	10/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 1800 Monday 10 March 2014
[EPA.0001.001.0053]	10/03/2014	Morwell Air Quality Significantly Improves but EPA Monitoring to Remain Monday 10 March 2014
[EPA.0001.001.0054]	11/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 0900 Tuesday 11 March 2014
[EPA.0001.001.0055]	11/03/2014	Immediate Smoke Impacts Alert - EPA Advice Tuesday 11 March 2014
[EPA.0001.001.0056]	11/03/2014	High Level Hazelwood Open Cut Mine Fire Smoke Advisory 1745 Tuesday 11 March 2014
[EPA.0001.001.0057]	12/03/2014	High Level Hazelwood Open Cut Mine Fire Smoke Advisory 0845 Wednesday 12 March 2014
[EPA.0001.001.0058]	12/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 1800 Wednesday 12 March 2014
[EPA.0001.001.0059]	13/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 0900 Thursday 13 March 2014
[EPA.0001.001.0060]	13/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 1800 Thursday 13 March 2014
[EPA.0001.001.0061]	14/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 0900 Friday 14 March 2014
[EPA.0001.001.0062]	14/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 1745 Friday 14 March 2014
[EPA.0001.001.0063]	15/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 1745 Saturday 15 March 2014
[EPA.0001.001.0064]	15/03/2014	No Smoke Advisory Issued for Hazelwood Open Cut Mine Fire 0900 Sunday 15 March 2014
[EPA.0001.001.0065]	16/03/2014	No Smoke Advisory Issued for Hazelwood Open Cut Mine Fire 0900 Sunday 16 March 2014
[EPA.0001.001.0066]	16/03/2014	No Smoke Advisory Issued for Hazelwood Open Cut Mine Fire 1800 Sunday 16 March 2014
[EPA.0001.001.0067]	17/03/2014	Air Monitoring in Latrobe Valley to Continue Monday 17 March 2014
[EPA.0001.001.0068]	18/03/2014	Low Level Hazelwood Open Cut Mine Fire Smoke Advisory 0900 Tuesday 18 March 2014

# WOG Ads

Document Id	Main Date	Title
[DOH.0005.003.0001]	10/03/2014	Hazelwood Mine Fire Community Information - More than 330 Victorian Government and Latrobe City Council staff are working to help people affected by smoke and ash
[DOH.0005.003.0002]	13/03/2014	Hazelwood Mine Fire Community Information - Victorian Government and Latrobe City Council staff are working to help people affected by smoke and ash.
[DOH.0005.003.0003]	17/03/2014	Hazelwood Mine Fire Community Information - Victorian Government and Latrobe City Council staff are working to provide information and support to people affected by smoke and ash
[DOH.0005.003.0004]	18/03/2014	Hazelwood Mine Fire Community Information - Victorian Government and Latrobe City Council staff are working to provide information and support to people affected by smoke and ash
[DOH.0005.003.0005]	20/02/2014	Where to Find More Information - Smoke in the Latrobe Valley
[DOH.0005.003.0006]	24/02/2014	Government Information Billboard - Morwell Mine Fire
[DOH.0005.003.0007]	24/03/2014	Hazelwood Mine Fire Community Information - Victorian Government and Latrobe City Council staff are working to provide information and support to people affected by the Hazelwood Open Cut Mine Fire
[DOH.0005.003.0008]	27/02/2014	Government Information Billboard - Hazelwood Mine Fire
[DOH.0005.003.0009]	3/03/2014	Hazelwood Mine Fire Community Information - While Emergency Service Focus on Extinguishing the Hazelwood Mine Fire more than 160 Victorian Government and Latrobe City Council staff are working to help People Affected by Smoke and Ash
[DOH.0005.003.0010]	6/03/2014	Hazelwood Mine Fire Community Information - More than 330 Victorian Government and Latrobe City Council Staff are Working to Help People Affected by Smoke and Ash

# Radio Scripts

Document Id	Main Date	Title
[DOH.0005.001.0066]	17/02/2014	Radio - Smoke in the Latrobe Valley - 30 sec radio ad

# Community Newsletters

Document Id	Main Date	Title
[DOH.0005.002.0001]	14/02/2014	Community Information Newsletter - Latrobe Valley Open Cut Mine Fires
[DOH.0005.002.0004]		Community Information Newsletter Number 10 - Latrobe Valley Open Cut Mine Fire
[DOH.0005.002.0007]	1/03/2014	Community Information Newsletter Number 11 - Hazelwood Mine Fire
[DOH.0005.002.0011]		Community Information Newsletter Number 12 - Hazelwood Mine Fire
[DOH.0005.002.0014]		Community Information Newsletter - Latrobe Valley Open Cut Mine Fires
[DOH.0005.002.0016]	18/02/2014	Community Information Newsletter No 3 - Latrobe Valley Open

Document Id	Main Date	Title
		Cut Mine Fires
[DOH.0005.002.0018]	20/02/2014	Community Information Newsletter No 4 - Latrobe Valley Open Cut Mine Fires
[DOH.0005.002.0020]	1/02/2014	Community Information Newsletter No 5 - Latrobe Valley Open Cut Mine Fires
[DOH.0005.002.0022]	1/02/2014	Community Information Newsletter Number 6 - Latrobe Valley Open Cut Mine Fires
[DOH.0005.002.0024]	27/02/2014	Community Information Newsletter Number 7 - Latrobe Valley Open Cut Mine Fire
[DOH.0005.002.0026]	8/03/2014	Community Information Newsletter Number 8 - Latrobe Valley Open Cut Mine Fire
[DOH.0005.002.0029]	2/03/2014	Community Information Newsletter Number 9 - Latrobe Valley Open Cut Mine Fire
[DOH.0005.002.0032]	19/04/2014	Unite & Recover Mine Fire Recovery 2014 - Newsletter Edition 14
[DOH.0005.002.0034]	2/04/2014	Unite & Recover Mine Fire Recovery 2014 - Newsletter Edition 13