TRANSCRIPT OF PROCEEDINGS

**The attached transcript, while an accurate recording of evidence given in the course of the hearing day, is not proofread prior to circulation and thus may contain minor**

**errors.**

2015/16 HAZELWOOD MINE FIRE INQUIRY

MORWELL

TUESDAY, 1 SEPTEMBER 2015

THE HONOURABLE BERNARD TEAGUE AO - Chairman

MRS ANITA ROPER - Board Member PROFESSOR JOHN CATFORD - Board Member MR PETER ROZEN - Counsel Assisting

MS RUTH SHANN - Counsel Assisting

MR RICHARD ATTIWILL QC - State of Victoria

MR ANTHONY NEAL QC - GDF Suez

MS MARITA FOLEY - GDF Suez

MR CHRIS BLANDEN QC - Dr Rosemary Lester

MS KATE BURGESS - Dr Rosemary Lester

MS MELANIE SZYDZIK - Voices of the Valley MS MEGAN FIZTGERALD - Voices of the Valley MR RAY TERNES - Voices of the Valley

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1 CHAIRMAN: Good morning and welcome to the opening day of public

2 hearings in Morwell. Today is the first of two, perhaps

3 three, days here and it marks the start of the second block

4 of hearings for the reopened Hazelwood Mine Fire Inquiry.

5 I acknowledge the traditional owners of the land on

6 which we are gathered, the Gunai Kurnai, and I pay my

7 respects to their elders, past and present.

8 The Victorian Government has given the Board of

9 Inquiry a broad mandate to examine a number of areas.

10 Paragraph 6 of the terms of reference will be the focus of

11 attention of these public hearings. We are requested to

12 respond upon whether the Hazelwood Coal Mine fire

13 contributed to an increase in deaths having regard to any

14 relevant evidence for the period 2009-2014.

15 Through the written submissions that we have

16 received, and through our conversations with the local

17 community, we are aware that this is an issue that people

18 are concerned about, but we are also aware that there are

19 some people who wonder why the Inquiry has been reopened

20 and why we are here today. The 2014 Inquiry investigated

21 the origins of the Hazelwood Mine fire and how effectively

22 the mine operator and government responded, and that

23 included looking at the impact the fire had on people's

24 health and wellbeing.

25 Following the submission of the Inquiry's 2014

26 report, further concerns were raised by the community about

27 the potential health impacts the fire was still having on

28 people's lives in the community and the Victorian

29 Government reopened the Inquiry on 26 May of this year.

30 During these hearings, we will hear from a number of

31 parties and we hope to have an open public exposure of many

1 things.

2 The evidence will be presented by counsel assisting,

3 Mr Rozen, and Ms Ruth Shann, board member Professor John

4 Catford, Mrs Anita Roper and I will be listening today and

5 tomorrow to the evidence.

6 We place great emphasis on openness. Our website

7 reflects that. We encourage all to go to our website to

8 look at the written submissions and, from tomorrow, the

9 statements of witnesses and a transcript of their

10 testimony. Today we just plan to listen with an open mind.

11 I now introduce Professor John Catford to say a few words.

12 PROFESSOR CATFORD: Thank you, Justice Teague. Good morning.

13 Let me add my welcome and thanks to you all for attending

14 these public hearings. As we will hear from counsel

15 assisting the Inquiry, Mr Peter Rozen and Ms Ruth Shann,

16 our focus today is reviewing the background and chronology

17 of events following the closure of the previous Hazelwood

18 Mine Fire Inquiry and that has led us here today.

19 Tomorrow we will hear from experts about their views

20 on the data about rates of death in Latrobe Valley over

21 2009-2014 and whether the data indicates whether the fire

22 did indeed have an impact on the rates of death in the

23 Latrobe Valley.

24 We extend our thanks to the many people who have been

25 involved in the Inquiry to date, providing information and

26 evidence, and we also recognise the many members of the

27 community taking time to participate by providing

28 submissions, attending community consultations and

29 listening to the materials presented as part of the

30 hearings.

31 So commencing today, the focus of the Inquiry, held

1 by counsel assisting, Mr Rozen and Ms Shann, will be on the

2 background to show how the issue was raised by Voices of

3 the Valley, the data that has been obtained by the Inquiry

4 from the Registry of Births, Deaths and Marriages, the

5 response of the Department of Health and Human Services and

6 relevance of the long-term health study being conducted by

7 Monash University.

8 So for us, as mentioned by the Chair, we will be

9 listening with open minds. Mr Rozen.

10 CHAIRMAN: Is it appropriate that I take appearances and then

11 just indicate what you will be doing?

12 MR ROZEN QC: Yes. I was going to suggest that. I do have some

13 brief opening remarks, but I should indicate that I appear,

14 together with Ms Shann, to assist the board.

15 MR ATTIWILL QC: I appear on behalf of the State of Victoria.

16 MR NEAL QC: I appear with my learned friend Ms Foley on behalf

17 of GDF Suez Australian Energy.

18 MR BLANDEN QC: I appear with Ms Burgess on behalf of Dr

19 Rosemary Lester.

20 MS SZYDZIK: I appear with Ms Fitzgerald and Mr Ternes on behalf

21 of Voices of the Valley.

22 CHAIRMAN: I understand that it has been arranged that there

23 will be short openings - a longer one by you and then short

24 openings on behalf of those who choose to make short

25 openings. Thank you, Mr Rozen.

26 MR ROZEN: Thank you, Chairman. Members of the board, the

27 Hazelwood Coal Mine fire burned for 45 days in February and

28 March of 2014. The first Hazelwood Mine Fire Inquiry

29 report, in August 2014, concluded that on many of those

30 days, people in Morwell breathed in air that contained high

31 levels of pollutants, including PM 2.5 and carbon monoxide.

1 There were three periods in February 2014 when pollution

2 levels were described by the report as particularly high,

3 including one day, on 16 February 2014, when the daily

4 average of PM 2.5 in the air was approximately 700 parts

5 per million, some 28 times the advisory standard of 25

6 parts per million.

7 The first Inquiry heard that because of the minute

8 size of PM 2.5, the particles can settle deep within the

9 lungs. They are small enough to be absorbed into the

10 bloodstream through the alveolar capillary membrane. Those

11 members of the community who are particularly at risk from

12 PM 2.5 inhalation include the very young, the elderly,

13 smokers and those with pre-existing respiratory or

14 cardiovascular conditions.

15 The Inquiry concluded, in its first report, that the

16 potential adverse health effects of inhalation of PM 2.5

17 for such people could include exacerbation of their

18 conditions, hospital admissions, stroke, heart attack and,

19 in severe cases, death. The first Inquiry also concluded

20 that the actual adverse health impact of the fire on the

21 Latrobe Valley community were significant and were

22 described as distressing.

23 The board made the following finding, based on the

24 expert health evidence it heard, "The board recognises that

25 the local community suffered extensive short-term adverse

26 health impacts. The board agrees with Professor Campbell

27 that the probable cause of these adverse health impacts was

28 the smoke and ash produced by the Hazelwood Mine fire. The

29 long-term adverse effects of exposure to the smoke and ash

30 from the mine fire are unknown and are of great concern to

31 the community."

1 From the consultations that the inquiry staff have

2 conducted in the past two months, it continues to be the

3 case that the local community are deeply concerned about

4 the long-term health effects of the fire. This hearing

5 will hear evidence that anecdotes in the first half of 2014

6 about there being more deaths than normal in the Latrobe

7 Valley led the local group, Voices of the Valley, to try

8 and find out if there was an actual increase, and if so,

9 whether the mine fire had played a role. The group

10 examined death reports in the local paper and asked the

11 Registry of Births, Deaths and Marriages to provide the

12 data it had about deaths in the Latrobe Valley in the

13 relevant period. The first Inquiry was contacted by Voices

14 of the Valley in late August 2014 about its concern that

15 the February/March fire at Hazelwood may have caused an

16 increase in deaths in the Latrobe Valley compared to

17 previous years. Unfortunately, the first Inquiry board was

18 unable to investigate that issue, as it was not contacted

19 until after the evidence had concluded and when its report

20 was being finalised.

21 In late August 2014, the board's legal adviser wrote

22 to Voices of the Valley, advising them of this, and

23 indicating that the material Voices of the Valley had

24 provided to the Inquiry had been forwarded to the

25 Department of Health and the Coroner's Court. The

26 Department of Health was asked by the Inquiry to include

27 the material that Voices of the Valley had provided in the

28 proposed long-term health study. The coroner was asked to

29 consider whether to make further inquiries into the matter.

30 The first Inquiry reported to the governor on

31 29 August 2014. Soon after that, the issue of whether the

1 fire had in fact caused an increase in deaths in the valley

2 attracted significant media attention, particularly in

3 September 2014. The ABC 7.30 Report ran a story about it

4 on Friday, 12 September 2014. The story referred to the

5 work done by Voices of the Valley and included a brief clip

6 in which the then Deputy Premier of Victoria, Peter Ryan,

7 was asked if he could rule out that people had died because

8 of air pollution caused by the fire. He responded, "There

9 have not been deaths and no indications of such." He

10 added, "By the same token, we are concerned, of course, to

11 undertake the health studies the Inquiry has recommended

12 and we will do that."

13 The evidence before this hearing will show that the

14 Victorian Department of Health provided a statement to that

15 7.30 Report program, in which it said that it had just

16 received the material from Voices of the Valley and was

17 analysing it. The statement also said that the department

18 had received data from the Registrar of Births, Deaths and

19 Marriages concerning deaths in the Latrobe Valley in the

20 years 2009-2014, and the statement went on, "The data shows

21 no increase in deaths in Morwell during the period of the

22 Hazelwood Open-Cut Coal Mine fire compared with the same

23 period in previous years. The official data from the

24 Registry of Births, Deaths and Marriages shows no

25 significant pattern. The reasons for individual deaths can

26 have many explanations, including age, an individual's

27 disease profile and external factors such as heatwave."

28 Over the following five weeks, in September/October

29 2014, the Department of Health published three brief

30 reports on its website about the issue of any link between

31 the mine fire and an increase in deaths in the Latrobe

1 Valley. The reports referred to the data about deaths in

2 the Latrobe Valley and broadly concluded that the data do

3 not support a suggestion that the fire led to an increase

4 in deaths. The last of the three Department of Health

5 reports, in October 2014, referred to an analysis by

6 experts at the University of Melbourne, which the report

7 said had concluded that although there was a small increase

8 in the number of deaths for the first six months of 2014 in

9 the Latrobe Valley, the University of Melbourne could not

10 conclude that this was due to any single cause or whether

11 it had occurred by chance alone. The Melbourne University

12 report found that there were 7.4 additional deaths per

13 month in January/June 2014 compared to earlier years but

14 that those results were statistically inconclusive.

15 As part of preparing the 7.30 Report story in

16 September 2014, the ABC had obtained the services of

17 Associate Professor Adrian Barnett of Queensland University

18 of Technology. Associate Professor Barnett examined the

19 data from the Registry of Births, Deaths and Marriages in

20 four Latrobe Valley postcodes in the years 2009-2014 using

21 recognised statistical analysis techniques and after

22 adjusting for monthly temperatures, he concluded that it

23 was probable that the fire had resulted in 11.2 additional

24 deaths over the months of February and March 2014.

25 This hearing will hear that in 2015, Associate

26 Professor Barnett conducted a further analysis of mortality

27 data over a 10-year period, 2004-2014, and he also looked

28 at two additional postcode areas and in his 2015 report, he

29 concluded that the mine fire was estimated to have

30 increased mortality by 10 per cent during February-March

31 over the six postcodes he examined.

1 The Department of Health asked Dr Flander of the

2 University of Melbourne to conduct a critical appraisal of

3 the work of Associate Professor Barnett and in a report

4 dated 28 April 2015, Dr Flander concluded that the

5 conclusions reached by Associate Professor Barnett were not

6 supported by the results in his two papers.

7 In May of this year, the Victorian Government

8 announced that the Hazelwood Mine Fire Inquiry would be

9 reopened, in part to try and resolve this controversy, and

10 that brings us to what we hope to achieve during these

11 public hearings.

12 As the Chair has noted, paragraph 5 of the Inquiry's

13 new terms of reference, dated 26 May 2015, notes that since

14 the Inquiry's first report on 2 September 2014, further

15 concerns have been raised about the potential health

16 impacts of the fire on Latrobe Valley communities. This is

17 clearly a reference to the sequence of events that I have

18 just been summarising. Paragraph 6 of the terms of

19 reference requires the board to inquire into and report on

20 whether the Hazelwood Coal Mine fire contributed to an

21 increase in deaths having regard to any relevant evidence

22 for the period 2009-2014. And finally, under paragraph 12

23 of the terms of reference, the board is able to inquire

24 into and report on any other matter that is reasonably

25 incidental to paragraph 6.

26 The board's terms of reference necessarily confine

27 its examination to the period 2009-2014. It is not

28 permitted to look, for example, at deaths in 2015. It is

29 also asked to look at whether objectively there has been an

30 increase in deaths and whether the fire contributed to that

31 increase. Answering these questions involves an

1 examination of relevant data to see if there was an

2 increase, and if so, reaching a conclusion about what

3 contribution, if any, the fire played.

4 It is important to appreciate that the Board of

5 Inquiry is not established to examine individual cases of

6 people who think that their loved ones may have died

7 prematurely because of the mine fire. There have been

8 reports of such instances in the media and the Inquiry's

9 staff have met with the affected people privately to listen

10 to their concerns and to explain the Inquiry process to

11 them. It is important to note that the Inquiry does not

12 supplant other legal processes, such as the inquest process

13 in the Coroner's Court. That court is established and

14 equipped to examine individual cases and to determine cause

15 of death.

16 The approach the board has taken to the conduct of

17 this Inquiry has involved the following steps: the board

18 and its staff have consulted with the local community and

19 received submissions from them. The board has obtained all

20 of the reports that have been prepared by Associate

21 Professor Barnett and Dr Louisa Flander. The board has

22 gathered the raw data concerning mortality in the Latrobe

23 Valley over the relevant period from the Registry of

24 Births, Deaths and Marriages and from the Coroner's Court.

25 The board has provided this data, and the reports of

26 Associate Professor Barnett and Dr Flander, to Professor

27 Bruce Armstrong, an eminent epidemiologist and public

28 health physician at the University of Sydney, and the board

29 has obtained a report from Professor Armstrong.

30 In his detailed report, dated August 2015, Professor

31 Armstrong's conclusions include that, one, there is

1 moderate evidence for a higher mortality from all causes

2 and from cardiovascular disease in Latrobe Valley in 2014

3 than in 2009-2013; two, there is weak evidence that the

4 increases in mortality in February to March 2014, the

5 period of the mine fire, were greater than those in the

6 longer period, February to June 2014; three, it is very

7 likely that particular air pollution during the mine fire

8 caused an increase in mortality, realised perhaps more

9 after the period of the fire than during it.

10 Professor Armstrong's report, along with the reports

11 of all of the other experts that have considered these

12 issues, will, of course, be tendered in full in the hearing

13 and will be the subject of questioning tomorrow.

14 The board has also received a further expert report,

15 commissioned by Voices of the Valley, from Professor Ian

16 Gordon of the University of Melbourne. Professor Gordon

17 also examined the mortality data and he concludes that if

18 one examines the period in 2014 beyond the actual fire,

19 that is to May 2014, there is a statistically significant

20 excess of deaths.

21 The four experts who have expressed opinions on the

22 question of whether there is a link between Latrobe Valley

23 mortality figures and the mine fire were brought together

24 earlier this week to see if they could reach agreement on

25 any of the questions before the Inquiry. Before they met

26 on Monday of this week, they were all provided with each

27 other's reports. They spent several hours together in a

28 meeting that was facilitated by a member of the Inquiry's

29 staff. It was a productive process. The experts have

30 prepared a joint report, in which they agree on a number of

31 conclusions, drawing on the conclusions in Professor

1 Armstrong's report. In respect of other conclusions, some

2 of the experts have expressed their reservations,

3 particularly because, in the case of Associate Professor

4 Barnett and Professor Gordon, they had not had the

5 opportunity to look at all of the data. That data has now

6 been provided to them and it is hoped that before they give

7 their evidence tomorrow, they will have had an opportunity

8 to consider it.

9 As has been noted by the Chair, I understand that

10 representatives of a number of the other parties also wish

11 to make opening statements and now may be an appropriate

12 time to hear them.

13 MR NEAL: We do wish to take a brief opportunity to say

14 something on behalf of our role in this Inquiry. Firstly,

15 let me say on behalf of our client that it is grateful for

16 the leave that's been granted by the board to participate

17 in this proceeding. It is clearly an important hearing,

18 bearing, as it does, upon the health of the Latrobe Valley.

19 It will be known to most that Hazelwood has been part

20 of the Latrobe Valley and part of the local community for

21 over 50 years. Between the Hazelwood mine and the Loy Yang

22 B mine, GDF Suez Australian Energy employs about 700 staff

23 and more than 300 contractors and that number increases by

24 some hundreds when major maintenance works are being

25 undertaken. It should go without saying that those

26 employees and contractors are themselves, of course,

27 members of the local community.

28 It will be therefore apparent that our client has a

29 very real and direct interest in the outcome of the matters

30 before the board today and will seek to assist the board in

31 whatever way it can. GDF Suez Australian Energy re-affirms

1 its commitment to the Latrobe Valley and to working with

2 its community as it faces what is seen as a challenging

3 time for the energy industry.

4 Our client is also pleased to inform the board that

5 since the time of the last Inquiry, substantial work has

6 been undertaken in terms of the recommendations and

7 affirmations that emerged from the board's first report.

8 The monitors are due to report to parliament, I'm

9 instructed, on 31 October and the information from our

10 client will be that the overwhelming majority of the

11 recommendations have been implemented. As we are not, as

12 such, leading evidence, those are the only matters we wish

13 to raise at this stage.

14 CHAIRMAN: Yes, thank you, Mr Neal.

15 MR BLANDEN: If the board pleases, we would wish to take the

16 opportunity of briefly addressing the board prior to

17 evidence commencing.

18 It is a matter of concern to us that the joint expert

19 report process was one about which we were not aware until

20 after the event yesterday. The process of a joint report

21 we applaud, we think that is a very good idea in the

22 circumstances, but the process involved in obtaining it

23 seems, with respect, a little unusual, in terms of the

24 normal fashion in which joint reports are produced.

25 The report, and no doubt the members of the board

26 have seen it, is relatively short, three and a half pages

27 or thereabouts. It is difficult to know precisely the

28 views of the authors from reading that report and clearly

29 enough, the points made by Professor Armstrong have been

30 used as, as it were, a template for whatever discussions

31 occurred between those experts. The report as such has

1 various additional notes and added comments and it is not

2 apparent, at least to us, who added those comments to the

3 report and we note that, very unusually for a joint report,

4 there was another person present, Ms Kelly, who was

5 described, at least in the correspondence, as a

6 facilitator. It is not entirely clear what her role was in

7 the discussions either and we're just a little concerned

8 that whilst on the one hand advocating the openness of the

9 process, the way in which this was done was not entirely

10 clear and it is not obvious from a reading of the report,

11 we would suggest, of the joint experts. So can we just

12 voice a concern at this stage about that. It may well be

13 that those issues can be dealt with adequately in due

14 course.

15 We also note that missing from that joint report was

16 another gentleman who may have had something to add to the

17 discussions. We provided counsel assisting last week with

18 a report from Professor John McNeil, professor and head of

19 department of the Department of Epidemiology and

20 Preventative Medicine at Monash. Professor McNeil had

21 taken the opportunity of reviewing all the various reports

22 then in existence, including Professor Armstrong's report.

23 We have provided his assessment of those reports to counsel

24 assisting. As I understand it, that's still a matter for

25 discussion, as to where that goes and whether that evidence

26 is actually presented to the Inquiry or not but, with

27 respect, we would suggest that it would be a valuable

28 addition to the views already obtained.

29 The other matter that we have a little concern about

30 is that Professor Abramson, who, as the board will know,

31 has figured both in the last sets of terms of reference and

1 is on the witness list for this reference as well, we, with

2 respect, would have thought it might have been appropriate

3 to involve him in the joint expert report process. True it

4 is that he hadn't had the opportunity of reviewing the raw

5 data, but it is apparent from Professor Armstrong's report

6 that he didn't have that opportunity either and he's relied

7 on the assessment of that data by others informing his

8 views.

9 We suggest, with respect, that Abramson might well

10 have been useful because, as the board will be aware, he

11 provided what I might call a predictive report

12 contemporaneously with the fire occurring as to the likely

13 effect of the fire and we say for that reason certainly

14 he's had an interest in the matter from the outset and may

15 have been also a useful participant. And I suppose if

16 we're having a whinge, we just say had we known about all

17 this when the original correspondence went out for the

18 joint expert report provision, then perhaps steps could

19 have been taken to involve those gentlemen as well.

20 So we simply take the opportunity at this stage of,

21 with great respect, cautioning the board against, as it

22 were, a wholesome acceptance of the joint report as being

23 the last word on the issue. We would suggest that there

24 are other views as relevant and as important as those

25 expressed by the joint expert report which the board should

26 consider as well. And it seems to us, on the material that

27 so far has been adduced, that the question for the board in

28 terms of this term of reference is really a two-part

29 question. The first part of that, obviously, goes to

30 whether or not there's been an increase in deaths in the

31 relevant time. The second part of the term of reference

1 relates to the causative element, so whether statistically

2 or not there's been an increase in deaths - and could we

3 say by way of comment only at this stage that seems, at

4 best, equivocal on the material - whether any of those

5 deaths are causally related to the fire does not seem to be

6 the subject of any significant evidence in the material

7 that's to be presented before the board and we would

8 perhaps see that as a shortcoming in the process, if

9 there's not to be a real investigation into the cause of

10 the deaths, because it doesn't really advance anybody's

11 knowledge simply to make a comment on a statistical

12 situation that applies without cause to be relevant, thank

13 you.

14 CHAIRMAN: Thank you.

15 MS SZYDZIK: Voices of the Valley are grateful for the board

16 granting leave to the group to appear today to provide

17 evidence before the board and also to have made the

18 submissions.

19 Voices of the Valley have very real concerns as they

20 have expressed throughout this process to help the

21 residents as a result of the Hazelwood fire both following

22 the fire and following it going into the future. That has

23 been confirmed by the expert material that has been put

24 before this board and in particular the joint report and

25 the conclave before the board experts. Most notably in

26 that regard in answer to the question, "Was there an

27 increase in mortality in Latrobe Valley during the coal

28 mine fire in 2014?", it was agreed by all: "There is

29 moderate evidence from all causes and from cardiovascular

30 disease in Latrobe Valley in February to June 2014 than in

31 the same period 2009 to 2013."

1 Voices of the Valley have been disappointed

2 throughout this process by the response of the Government

3 in relation to the concerns they have raised and expressed

4 with the Government at the time of the fire, following the

5 fire and on an ongoing basis. We are comforted that the

6 issue is being dealt with by the board thoroughly,

7 comprehensively and the board will investigate these issues

8 and the evidence in support of them.

9 We are very interested to ensure that the concerns

10 that are raised before this board have taken into account

11 in particular the long-term study that has taken place

12 being undertaken by the Department of Health. The issues

13 that arise here under terms of reference 6, and also later

14 in terms of reference 7 we hope are going to be instructive

15 in relation to that ongoing study and that it will be

16 informed by that and we look forward to how those two

17 interact together. Those are the submissions.

18 CHAIRMAN: Thank you.

19 MR ROSEN: If the court pleases. I wouldn't normally seek to

20 respond to an opening remark but a couple of matters been

21 raised by my learned friend Mr Blanden which do require

22 some response.

23 Firstly in relation to the report of Professor

24 McNeill which was indeed provided to the solicitor to the

25 Inquiry on Friday afternoon. At 3.51 p.m. on Friday, 28

26 August it was provided under cover of a letter that said it

27 was being served on the board and nothing more. No notice

28 had been given in advance of that, that any such report was

29 coming. Having said that I will discuss with Mr Blanden

30 whether or not the report ought to form part of the

31 material before the Inquiry and that's a matter I indicated

1 to him that counsel assisting will consider and get back to

2 him on. As I understand it, it's not sought for Professor

3 McNeil to be called as a witness but rather what's proposed

4 is his report be tendered and that's a matter that

5 consideration will be given to.

6 Secondly, in relation to whether or not Professor

7 Armstrong had the data or relied on others' assessment of

8 it, the evidence will be Professor Armstrong had the data

9 and I would suggest that's clear from the contents of his

10 report that was provided to the Inquiry.

11 With those matters placed on record and an indication

12 there will be an ongoing dialogue with Mr Blanden about the

13 situation of Professor McNeil's report, if we can attend to

14 a couple of brief housekeeping matters before Ms Shann

15 calls the first witness.

16 The first issue concerns the order of witnesses

17 today. Some notice has been given of the order of

18 witnesses but there has been one change which I should

19 alert the parties to. So we will as advertised hear from

20 Mr Ipsen from the Voices of the Valley, Ms Dawn Sims from

21 the Registry of Births, Deaths and Marriages and Ms Linda

22 Cristine for the Department of Health and Human Services.

23 Despite the indication that has been given Dr Danny

24 Csutoros will not be called today. Dr Csutoros was sought

25 by counsel assisting as a witness. The response from

26 counsel for the State of Victoria was that Ms Cristine is

27 more senior within the department and better placed to

28 answer questions particularly about communications between

29 the department and University of Melbourne about various

30 draft reports the university provided. On that basis we

31 are content to call Ms Cristine and to explore those

1 matters with her. In the event she's not able to

2 adequately deal with the entirety of those issues I

3 understand Dr Csutoros is available tomorrow and could be

4 called if the board consider it would benefit from hearing

5 his evidence.

6 In addition, Dr Rosemary Lester will give evidence

7 today. She is of course the former chief officer of the

8 Department of Health and Human Services and the final

9 witness for today, although we might also seek to interpose

10 him because he has to be away today is Professor Abramson

11 of Monash University.

12 The only other housekeeping matter I should attend to

13 now concerns Dr Flander, the witness from the University of

14 Melbourne. Dr Flander was summonsed to attend and give

15 evidence today by the board under the Inquiries Act but we

16 have been advised she is unwell and unable to travel and a

17 medical certificate has been provided to that effect. So I

18 would merely ask that the board excuse her in terms of

19 attendance in response to the summons which is returnable

20 today and I would ask that the parties and the board note

21 that arrangements are being made to see if we can have

22 Dr Flander's evidence by videolink tomorrow and I will

23 inform the parties on the state of that later today.

24 With those matters being attended to I can indicate

25 Ms Shann will call the first witness.

26 MS SHANN: Thank you, I call Ron Ipsen.

27 <RONALD CHARLES IPSEN, sworn and examined:

28 MS SHANN: Thank you, Mr Ipsen. Could you give the board your

29 full name again please?---Ronald Charles Ipsen.

30 And you're a resident from just outside Moe?---I'm a valley boy,

31 yes.

1 Born and bred?---Born and bred yeah, born in the Open Cut.

2 I'm just going to firstly take you back to the day that the fire

3 broke out last year in 2014. You were in the

4 valley?---Yes, yeah.

5 And you were on your property just outside Moe?---Yes, I was,

6 yeah.

7 I understand that now you're a member of the Voices of the

8 Valley and we will come to that but there was no Voices of

9 the Valley back on the day the fire broke out, is that

10 right?---That's right, yes.

11 When did you first yourself start to become concerned about

12 health effects on people in the valley?---Friends through

13 social media began posting that their children were sick

14 and then they posted that they were sick and that their

15 spouses were sick and they all appeared to be sick with the

16 same kind of things.

17 All right. And when was that in terms when the fire broke out

18 that you started to see that on your social media?---That

19 was only a few days later.

20 You have prepared a submission for this Inquiry which is dated

21 10 August 2015?---Yes.

22 And the board will find that behind tab 1 of the materials. You

23 also prepared a submission last year for the first Inquiry,

24 is that right?---Yes, three of them, I think, yes.

25 And that's also contained behind tab 1 as well. After you

26 started to become aware of this information on social media

27 what did you do as a result?---Can you expand on the

28 question?

29 Sure. Did you start to make some enquiries or try and collect

30 some information about health effects of the fire?---Yes, I

31 did. What was coming through social media was a lot of

1 people were reporting different symptoms. When we went

2 into Morwell, I went into Morwell with my partner into

3 Medicare just to do some Government paperwork and the

4 effect in there of the smoke was quite considerable. They

5 became disorientated and all that sort of stuff was

6 happening. Once we got back out again, back out into the

7 Moe area it was okay. Can you say the question again,

8 please?

9 Yes, sure. Did you start to try and reach out to some people in

10 the valley to see whether or not there was information

11 about people who were getting sick or health

12 effects?---Yes.

13 How did you go about doing that?---I put a questionnaire on

14 social media, I built an on-line questionnaire and ran that

15 questionnaire from about the 5th to the 17th.

16 Of February last year?---Of March - February - no, March.

17 All right. And was that the data that you collected from that,

18 that was part of what you submitted to the first Inquiry

19 last year?---Yes, yes.

20 Okay. Around the middle of February was there a rally which was

21 organised by an organisation called Disaster in the

22 Valley?---That was March, the first one was on the 2nd and

23 the Disaster in the Valley people did questionnaires and

24 took names of the people that were there. They asked them

25 health questions.

26 Again, that was directed to whether there were health effects

27 from the fire?---Yes, that's correct, yes.

28 Did you obtain information from them?---Yes, I did, I obtained

29 those and I obtained them from a further rally on the 23rd

30 and correlated those and submitted them to the last

31 Inquiry.

1 Voices of the Valley, can you explain to the board what that

2 organisation is?---Well, we're an incorporated body, sort

3 of like born out of the mine fire. It started off with the

4 Disaster in the Valley people, at the last Inquiry I think

5 Simon gave you a pretty broad basis on how that formed,

6 it's been ongoing ever since. They are just a group of

7 local residents that are concerned and just following up

8 what needs to be done really.

9 So it started off as a Disaster in the Valley that merged into

10 Voices of the Valley?---Yes.

11 Which is still going today?---Yes, that's correct.

12 And you became a member of Voices of the Valley during the

13 fire?---Yes.

14 When was the first time that you yourself and other members of

15 Voices of the Valley started to discuss this issue of

16 whether or not the fire was leading or had led to an

17 increase in deaths?---That would have been in about mid

18 May, in a meeting in mid May.

19 2014?---In 2014, yes. We asked Births, Deaths and Marriages, we

20 sent somebody to approach them through emails and somebody

21 was allocated that job.

22 Just taking you back, what was it that led you and other members

23 to start talking about that issue?---We had put together

24 the three health surveys and other data that we had and

25 presented it to the Department of Health when they came up

26 to do the - to tell us about the long-term health study, to

27 do the public consultations then.

28 Are you able to say when that was approximately?---I think that

29 was 6 May.

30 Okay. And at that stage was there information that you and

31 other members were receiving about any community concerns

1 around the issue of deaths?---Not so much about deaths,

2 there were people that spoke about it, there was little

3 bits and pieces popping up, people were questioning whether

4 their relatives that had died was because of that.

5 Would it be fair to say anecdotal evidence?---Anecdotal is a

6 good word, yes.

7 So there were some general suggestions you were hearing about on

8 the grapevine?---Yes.

9 You mentioned Births, Deaths and Marriages?---Yes.

10 Was that the first step that was taken in terms of trying to

11 obtain some information about whether or not there were

12 deaths?---Yes, the committee decided that's what they would

13 do, we would ask Births, Deaths and Marriages.

14 What was it you asked Births, Deaths and Marriages for?---We

15 asked them for five years, four postcodes, just numbers of

16 deaths.

17 And when you say five years, can you explain what it was that

18 you were specifically asking for?---We wanted deaths per

19 month by the postcodes, by the four postcodes that were

20 immediately surrounding the mine fire.

21 And I will just ask if something could be put up on the screen.

22 This is part of the material you collated towards the end

23 of 2014?---Yes, made that graphic, yes.

24 For the board's assistance it's SUBM.0001.002.0070 in the

25 materials behind tab 1.

26 CHAIRMAN: Can I ask you when giving the numbers to take it a

27 little more slowly because other people will be trying to

28 trace the particular page, so if you enunciate a little

29 more clearly, thank you.

30 MS SHANN: I will say that again. Behind tab 1,

31 SUBM.0001.002.0070. Can you explain what it is we're

1 seeing on the screen there Mr Ipsen?---They are the full

2 postcodes we asked for the initial data for.

3 And that's Morwell, Traralgon, Moe and Churchill?---That is

4 correct, yes.

5 Why were those four selected?---They have large population bases

6 within 10 to 15 kilometres of the mine fire.

7 Can we actually see on that picture a little fire just next to

8 the 3840?---Yes, that's correct, that's to indicate where

9 the mine fire was on the map.

10 You mentioned you asked Births, Deaths and Marriages for data

11 from the years 2009 to 2014?---Yes.

12 Why were those years selected?---We just wanted a reasonable

13 spread so we just thought five years is good enough, we had

14 a bit of a bash at that, yeah.

15 Okay, and you mentioned May as the timeframe for making this

16 Inquiry?---Yes.

17 27 May 2014, does that sound right?---Yes, that's about right,

18 yes.

19 So that's the first request to Births, Deaths and Marriages from

20 the Voices of the Valley?---I believe so, yes.

21 What was the response from Births, Deaths and Marriages?---We

22 didn't hear anything.

23 Did you end up receiving this data on 2 September 2014?---4

24 September, it was extracted on the 2nd and we received it

25 on the 4th.

26 In the meantime the first Board of Inquiry is taking

27 place?---Yes, that's correct.

28 And did you try to obtain or think about a different way in

29 which you could work out the answer whether or not there

30 were deaths, an increase in deaths?---Yes, we did, question

31 plagued us, it was sort of like a big question hanging over

1 what we were doing. So some of our members volunteered to

2 go through the local newspaper, the local newspaper is the

3 Latrobe Valley Express roughly covers that area and a

4 little bit more here and there. So we figured that if we

5 looked for unique deaths that just happened once within

6 that period we would get an indicating result.

7 So can you say what was it you were actually comparing, was it

8 the same spread of years?---We compared the mean or the

9 average of the previous five years to what happened in

10 2014.

11 What was it you were actually obtaining from the

12 newspaper?---Just deaths, just numbers.

13 So you were looking at the death notices in the paper?---Yes, we

14 searched the death notices locally at the newspaper's

15 office and we went through the library in - the big

16 library, the State library and searched the archives and

17 ended up doing all five years there.

18 In terms of the results that you obtained, how long did it take

19 you to put all of that information together?---Until 14/8,

20 or would have been 10/8, 10 August by the time we had all

21 that information collated, we had several people working in

22 different areas so when all that stuff came back we put it

23 together.

24 I will just ask another page from some work you have done be put

25 up with a particular graph, and this can be found behind

26 tab 1 at SUBM.0001.002.071. I should tender the first

27 diagram which was put up.

28 CHAIRMAN: What's the most convenient way in terms of exhibits?

29 MS SHANN: Your Honour, there are four graphs or diagrams which

30 I will show the witness. If they could perhaps be tendered

31 separately but they are all then found within the

1 submissions.

2 #EXHIBIT 1A - SUBM.0001.002.0070.

3 #EXHIBIT 1B - SUBM.0001.002.0071.

4 MS SHANN: Do you recognise this graph?---Yes, I do, yes.

5 Can you explain to the board what that represents?---That was

6 our first analysis of the statistics we obtained from the

7 newspapers.

8 And what did it show to you?---We were quite alarmed at the

9 increase of 2004/14 above the average and the fact that it

10 was above 2009 where we had people (indistinct)

11 So if we just look at the graph, we have got over on the

12 left-hand side the number of deaths, and looking the bottom

13 the months running from January to June?---Yes, that's

14 correct.

15 And could you just take the board through the three different

16 coloured lines which are on that graph and what those

17 mean?---Okay. 2014 is the orange graph, that's the ones

18 that died that year and they are just raw figures, just the

19 numbers of people that died that we counted in the

20 newspaper. 2009, I subtracted them from the - extracted

21 that as a figure for what happened that year because it was

22 a high (indistinct) and we wanted to show how 2014 compared

23 to that. We did a mean of all the years and that's the

24 grain across there, they are only very rough statistics but

25 it was indicative and alarming, and that particular graph I

26 suppose is the one that really sparked it within us. We

27 produced the graph on the Tuesday, we had a meeting on the

28 Wednesday.

29 This is mid August 2014?---Yes. We had a meeting on the

30 Wednesday, we decided unanimously to ask the board what to

31 do and the last Inquiry we had, to be honest nobody else we

1 trusted so we asked the board at that time what do we do.

2 Were you present when Mr Rozen gave some opening remarks at the

3 start of this morning?---Yes, I was yeah, they were pretty

4 good actually, by the way.

5 Thank you, he's growing in his seat. So there was a description

6 of receiving some information from Voices of the Valley at

7 the point in time that the report for the first Inquiry was

8 being written in August?---Yes.

9 This information about the death notices, is that what was

10 provided to the board at that time?---Yes, absolutely,

11 there is a letter we wrote, yes.

12 At this stage you still hadn't received any of the data from

13 Births, Deaths and Marriages?---No, we were aware though -

14 the Inquiry did make us aware that they wouldn't be able to

15 include it and reassured us they would send it - forward it

16 on.

17 Shortly after the board published or finalised its report,

18 within a few days you received the Births, Deaths and

19 Marriages data you requested?---Exactly, yes, exactly - not

20 within a few days, yes, that day.

21 And if I can ask for another chart to be brought up and this is

22 found at SUBM.0001.002.0072, do you recognise - -

23 -?---Totally sick of looking at it.

24 Can you tell the board what that is?---That's the information we

25 received from Births, Deaths and Marriages extracted on 2

26 September that we requested.

27 Okay, and it's pretty small font but if we can just work through

28 it and zoom into any part as needed. So we have along the

29 left-hand side the years?---Yes.

30 And that goes from 2009 to 2014?---Yes, that is correct.

31 And we have the months January to June?---That's right, it was

1 only six months is what we asked for the first time.

2 And we have it broken into postcodes going along the top of the

3 chart?---That's correct, yes.

4 And then numbers as against each month?---Yes, that's right, the

5 numbers that - they are the Births, Deaths and Marriages

6 data on people that died within that postcode by the usual

7 place of residence?---Yes.

8 I tender that, Your Honour.

9 #EXHIBIT 1C - 0001.002.0072.

10 This is after the first Board of Inquiry has finished; what did

11 you do with this data having received it?---Well, we

12 analysed it and stewed it and worried about it.

13 What did it tell you?---Well, it told us what we had found with

14 the newspapers was not only right but the figures were

15 worse. We did send them to - I think we read a community

16 health report or a community report from the Government and

17 took it up to Parliament to present and say we're having

18 trouble here. We also ended up working with the media on

19 it.

20 Was that the 7.30 report with the ABC?---Yes, that's correct,

21 yes.

22 And it was a 7.30 report which dealt with this issue of whether

23 or not there was an increase in deaths on 12 September

24 2014?---Yes.

25 That was a program you had some involvement with?---Yes.

26 And had you provided this data to that program?---Yes, we did,

27 yes.

28 We heard from Mr Rozen this morning that as part of that program

29 they have made contact with a Professor Barnett in

30 Queensland?---Yes, that's correct, they wanted some

31 credible statistics rather than, you know, just from me.

1 You're not a statistician yourself?---No, I'm not a

2 statistician, no, I'm just a hack.

3 You're not here giving expert evidence about statistical

4 analysis?---No.

5 No, shortly after the 7.30 program did you make another request

6 to Births, Deaths and Marriages for some additional

7 data?---Yes, we did. As the year went on with our six

8 monthly stuff we noticed it was still increasing and there

9 wasn't any sign of it knocking back, so we asked if we

10 could have the 12 months instead of six and the 2014 year

11 to date because it was only November, I think, mid-November

12 when we contacted them and asked them for the new stuff.

13 We asked them for a more substantive set in that we asked

14 for six postcodes instead of the four.

15 So taking that bit by bit, the first thing you asked for was all

16 of the months of the year?---Yes.

17 As opposed to just January to June?---Yes, that is correct, yes.

18 And the second thing you were asking for is essentially can we

19 have up until now, and now was November?---Yes.

20 Okay?---That is correct.

21 And two additional postcodes?---Two additional postcodes.

22 And that was Yinnar and Boolara South?---Yes, that's correct.

23 Was there any additional data you asked for?---Yes, we asked for

24 the whole state figures for the same period for each month

25 for each year, yes.

26 What was the reason behind that?---If there were any particular

27 trends within the whole of the state we wanted to compare

28 them just as a baseline, to have some kind of baseline that

29 wasn't Latrobe Valley.

30 Did you also extend out the number of years that you wanted some

31 data for?---Yes, we centred it to ten years.

1 Going back to 2004?---Yes, because in the five year period we

2 had four of the hottest years on record so it was a bit

3 kind of skewed.

4 When did you receive that data?---I didn't write that down,

5 actually.

6 Was it around the start of 2015?---Yes, December-ish, yes.

7 Did you then get some additional data to complete the 2014 year

8 after that?---Yes, we did, after that we asked for can we

9 have the last little bits and pieces and we got that and

10 that was cool.

11 Voices of the Valley paid for that?---We had $600 mate, we are

12 not a very rich organisation, that we had gained from just

13 people - we had a little bucket there and had people but a

14 dollar or two in and we had our membership fees, you know,

15 a $1, and we collected $600 and spent $550 of that buying

16 these statistics.

17 And that was to give to Births, Deaths and Marriages?---Yes.

18 For them to print the data out for you?---They do the search and

19 that's what costs the money.

20 When you received that second lot of data did you provide that

21 to Professor Barnett?---I believe so, yes.

22 Essentially is that the end of your involvement in terms of

23 obtaining data and providing it and analysing it?---I had

24 to write it up for this one, a ten year one for this lot.

25 I think, Your Honour, I would prefer that we looked at the

26 ten years instead of the five years, I know you might be

27 restricted but as much as you can get helps.

28 And in terms of Voices of the Valley and you, is it still your

29 feeling that there is concern in the community about

30 whether or not there is an increase in deaths?---Yes, there

31 is, yeah, I think it's ongoing.

1 Thank you.

2 CHAIRMAN: I thought you were going to give me four but you

3 have only given me three.

4 MS SHANN: I have, what has gone missing?

5 CHAIRMAN: I'm not pressing you, I'm just enquiring.

6 MS SHANN: Please remain there for a moment.

7 <CROSS-EXAMINED BY MS SZYDZIK:

8 MS SZYDZIK: Mr Ipsen, if I could take you through a couple of

9 aspects of the evidence you have given so far and clarify a

10 few matters. You gave evidence right at the beginning

11 about where you were when the fire in the mine broke

12 out?---Yes.

13 And I just wanted to clarify whether you were at home or whether

14 you were somewhere - your home is in the outskirts of Moe

15 somewhere, is that right?---Yes.

16 And were you at your home when the fire in the mine broke

17 out?---When it actually - when the bushfire hit the mine,

18 is that the point you're talking about at the time?

19 Yes, or when it took hold?---When the bush fire broke out I was

20 at home which is sort of like - officially it's Tanjil

21 South because nobody really admits from coming from Moe,

22 but when the bushfire broke out I was there, when it hit

23 the mine I was up at Hernes Oak, my uncle who lives up

24 there, and this property was threatened up there so my

25 uncle and - well, all hands on deck basically. We went up

26 there, the family went up there and we were looking after

27 him in that place and that sort of stuff, so that's where I

28 was when it hit the mine itself.

29 Are you able to say about how many days you had been at Hernes

30 Oak dealing with the bushfire?---It was only the two, only

31 - the bushfire start on the 9th, I think, and then it

1 cracked into the mine the next day.

2 And are you able to say anything about the quality of the fire,

3 the smoke from the bushfire as compared with the smoke from

4 the mine fire?---They are quite different, the burning coal

5 is quite acrid, leaves a taste in your mouth. The bush

6 fire smoke which everybody knows almost has a smell of

7 eucalypt about it, but the mine fire smells like

8 briquettes.

9 You gave some evidence about going into Morwell and experiencing

10 the smoke there, and you said it was better in Moe?---M'mm.

11 Can you say whether you experienced any smoke effect in Moe from

12 the mine fire?---They weren't as noticeable as they were in

13 Morwell, the disorientation and the headaches and EGI and

14 that sort of stuff was very noticeable, that was almost

15 immediate whereas in the Moe area it wasn't quite as

16 pervasive or as strong.

17 You were referred to the submission you filed on behalf of

18 Voices of the Valley for this particular term of

19 reference?---Yes.

20 Have you got a copy of that there with you?---Probably.

21 It's behind tab 1 in the folder I'm told. Just to make sure

22 we're dealing with the same document, have you got a

23 document there where the heading is, "Submission to

24 Hazelwood Mine Fire Inquiry, re terms of reference

25 6"?---Yes, I have, submission 0001.001.0002.

26 In a number of the documents that Voices of the Valley have

27 provided to the Board of Inquiry there has been a comment

28 about people leaving Morwell or being evacuated from

29 Morwell. Are you able to provide any insight into how many

30 people left Morwell or didn't leave Morwell?---Not really,

31 there was a figure bandied around of about 60 per cent but

1 I'm not sure that is an actual figure, my guess is it's

2 probably may be ten, 15 or something.

3 No further questions, thank you.

4 PROFESSOR CATFORD: Mr Ipsen, thank you very much for your

5 evidence and your enterprising actions on behalf of the

6 community, you clearly were quite concerned about these

7 increase in deaths?---Yes.

8 Can I ask you when you forwarded on your first piece of

9 information and subsequently as you were gathering for the

10 Commission did the Department of Health contact you?---No.

11 Did you have any contact communication with the Department of

12 Health at all?---No.

13 When the fact sheets appeared on the website from the Department

14 of Health concerning the deaths were you sent those so you

15 knew they were available, for example?---No, I learned

16 about them on social media though, it was a bit of a joke

17 some of them.

18 What was your attitude towards those fact sheets?---There was

19 one particular fact sheet which said that there was a

20 decrease in deaths and they highlighted the Morwell

21 postcode. We responded to that because of the very

22 selective use of stats and I responded saying that I

23 believed that it was because there had been such a - I

24 believe there was a harvesting effect from the heatwave in

25 January, and subsequently they rose again as they did and

26 continued to increase as we got more months, it just got

27 worse but only through social media really.

28 And did those fact sheets in any way reassure you of the

29 situation, were they useful at all?---To be honest we had -

30 we lost faith in the Department of Health very early in the

31 piece and it became a running joke about the Department of

1 Health, DOH was a very - the running joke was the Homer

2 Simpson thing, have you seen Homer Simpson? And he goes

3 'doh', that was the Department of Health right, DOH, so

4 that's anything from the Department of Health was just -

5 I'm sorry that was just how we felt.

6 Thank you. It was quite enterprising to engage an

7 epidemiologist for a statistician, how did you choose

8 Associate Professor Adrian Barnett?---One of the

9 community's organisers already knew of his work I think,

10 but we didn't sit down as a community group and choose him,

11 that was something that was done very quickly by the ABC.

12 So had you considered any other people that might be able to

13 help you at all?---We weren't really looking that far into

14 what we would need that we would need that kind of -

15 credibility.

16 Did you think of anyone more local in Victoria to help you with

17 this?---I - during the time we did make contact with

18 several people and we tried to email various professors,

19 various universities basically asking for help. What we

20 felt was happening was that they were unable to help

21 because of the tender for the long-term health study that

22 they would view it as, that's just what we felt, they

23 didn't get back to us so that's what we thought.

24 Thank you very much.

25 MRS ROPER: Just one question, thank you very much for your

26 evidence. You mentioned that you extended from four

27 postcodes to six?---Yes.

28 Why was that?---When I looked at the geography, the smoke was

29 moving around and when I looked at the various areas, it

30 was that community there, where the wind direction was and

31 (indistinct) in a bit of a valley there and smoke there.

1 We formed the opinion that that smoke and the toxins from

2 within the smoke would settle at night so that would affect

3 areas in (indistinct). So we looked at postcodes that were

4 within the range and were susceptible.

5 Okay. Thank you?---In the end we discarded them as the numbers

6 were too small.

7 MS SHANN: Thank you. I call Dawn Sims.

8 <DAWN ALVINE SIMS, sworn and examined:

9 MS SHANN: Ms Sims, if you could give the board your full name

10 again?---Dawn Alvine Sims.

11 Your professional address is 595 Collins Street,

12 Melbourne?---That's correct.

13 You are an enterprise data and intelligence consultant?---That's

14 correct.

15 At Victorian Registry of Births, Deaths and Marriages?---Yes.

16 You've made a statement in preparation for today's hearings; is

17 that right?---Yes.

18 If you just turn to tab 3 of that folder. It is already

19 open?---It is already there.

20 The fantastic work of the instructors here. I think the first

21 page of that is coming up on the screen as well. That is

22 located behind tab 3 and the number on it is 002.001.0001.

23 Is that the statement that you made for this Inquiry?---It

24 is, yes.

25 And is that an accurate and correct document?---It is, yes.

26 And the contents of it are truthful?---They are truthful.

27 I tender that.

28 #EXHIBIT 2 - Statement of Ms Sims.

29 Feel free to refer to your statement if you need to. I'll take

30 you to a number of dates and if you need to check that,

31 that is absolutely fine. What I'd like to do just to start

1 with is ask you some questions to explain the role of the

2 Victorian Registry of Births, Deaths and Marriages, or

3 Births, Deaths and Marriages, and to explain what their

4 data is which is collected there. In relation specifically

5 to collecting death data or data about the number of deaths

6 in Victoria, can you explain what the role of the registry

7 is?---The registry registers all deaths that take place in

8 Victoria. The deaths are registered on the basis of two

9 pieces of information, one being a death registration

10 statement lodged by a funeral director and the second being

11 a medical certificate cause of death, or MCCD, which is

12 supplied to us by the medical practitioner who is

13 determining the cause of death for the individual.

14 When a person dies, there's two pieces of formal paperwork which

15 need to be completed; is that right?---That's correct.

16 And both of those then go to the registry?---Yes.

17 And data is then drawn from those?---Data is drawn from those

18 and facts are crossed checked, like make sure they have

19 both got the same date of birth, the same name for the

20 individual and that sort of thing and provided everything

21 is correct and there's no reason to delay the registration,

22 the registration takes place. There is also potential for

23 deaths to be referred on to the coroner and that will delay

24 the registration.

25 We'll just break that down a little bit. The first source of

26 information that you referred to is a document the death

27 registration statement?---That's correct.

28 Completed by a funeral director?---Yes.

29 What type of information is that recording?---The name, the

30 personal details of the individual, their residential

31 address, it will have things like next of kin, who's

1 informed the death, that sort of thing.

2 Who is giving that information to the funeral director?---It is

3 usually family members of the deceased.

4 So in terms of, if we take residential address, when you receive

5 that information, and by "you" I'm really

6 meaning - - -?---BDM.

7 Yes, BDM, Births, Deaths and Marriages, do you have a way of

8 knowing how accurate or what criteria it was that the next

9 of kin used to decide what the address was that they'd

10 give?---No, we just take it on face value that if that is

11 what has been provided, that is the residential address of

12 the deceased - was the residential address.

13 So you don't know whether it is the next of kin indicating that

14 that is where the person lived for the last two weeks

15 before their death or whether it is for the last 20 years

16 before their death?---Potentially it could be the last two

17 weeks if they, for instance, went into aged care, yes.

18 So you've got that information from the funeral director in

19 terms of the death registration statement and you also

20 mentioned receiving information from a medical

21 practitioner?---That's right.

22 And that's the medical certificate of cause of death?---M'mm.

23 Is that always completed by a medical practitioner?---Yes.

24 It is. And do you always receive that information on cause of

25 death?---Yes, we have to before we can complete a death

26 registration.

27 Are there occasions where you receive the medical certificate of

28 cause of death but actually the medical practitioner

29 indicates they are undecided or they are not sure and

30 they've referred it on to the coroner?---Yes. A lot of

31 deaths are referred on to the coroner by the medical

1 practitioner. Some are referred by the registry.

2 And that is you, Births, Deaths and Marriages?---Yes.

3 So there is two ways in which cause of death can be referred to

4 be considered by the coroner?---Yes.

5 When there is some uncertainty about cause of death and the

6 coroner is considering that, what does that mean in terms

7 of your ability to enter that data about that death into

8 your system?---We can't complete the registration. If it

9 is pending because it has gone to the corner, we can issue

10 an interim death certificate to the family so that things

11 can sort of get rolling in terms of disposing of the body

12 and that sort of thing, but the registration won't be

13 completed until we have the cause of death from the

14 coroner.

15 How long does that take?---Sometimes it is a matter of days,

16 sometimes it is a lot longer.

17 By "a lot longer"?---I've known them be years being with the

18 coroner. That would be an aberration, though. Normally it

19 is a reasonably quick turnaround.

20 All right. You've mentioned that until you receive the final

21 position on cause of death, it is not a completed

22 registration?---That's right.

23 In terms of your data storage, do you have a database which

24 stores completed registrations?---We have the one database

25 that stores death registrations. Whether the registration

26 is complete or pending for some reason, it is still sitting

27 in that same database, just the status will indicate that

28 it is not a complete registration as yet.

29 So a death could have a status as "pending"?---It will be

30 "pending" something, "pending coroner", "pending

31 investigation".

1 Or it could be "complete"?---Yes.

2 They are the two status options?---No, there is about 12

3 different statuses, but the majority will be "pending

4 coroner", "pending investigation" or "complete".

5 In terms of the information that you would receive from the

6 medical practitioner, would one of the categories of

7 information be where the death occurred?---Yes. That is

8 another mandatory field that - or mandatory information we

9 have to have, where the death occurred.

10 In terms of the postcode field?---That is not a mandatory field.

11 We need a place of death but postcode specifically isn't a

12 mandatory field.

13 So what do you mean when you refer to place of death?---We need

14 at least the suburb or something because we have to have a

15 place of death, even if the postcode isn't provided.

16 In terms of then this issue of there being completed

17 registrations and pending registrations, there's an example

18 which is set out at paragraph 7 of your statement. Could

19 you just read that out, please, just as an example to

20 explain the situation?---"The total number of deaths

21 recorded with a 'complete' status for a specified period

22 can alter over time depending on when the data is extracted

23 from RBDM's system."

24 Just stopping you there for a moment, what does "extracted"

25 mean? Is that just the downloading date?---Yes, we put in

26 the information we're searching for, the parameters that

27 we're searching for. For instance, in the example given,

28 we'd look for completed deaths for 02/2014 and if we're

29 looking for a specific postcode, we'd put that postcode in,

30 the usual residence and then the system would spit out a

31 number for us.

1 And the spitting out of the number is the extraction?---Yes.

2 All right. Thank you. If you could just detail that

3 example?---"For example, if data of the number of deaths

4 with a 'complete' status in February 2014 was extracted in

5 September 2014, there may have been a number of pending

6 deaths which would not be recorded in that data. Some of

7 these pending matters may have become completed by, for

8 example, July 2015, so an extraction at that time might

9 have a slightly higher number of deaths recorded."

10 Just breaking that down, the date of extraction can alter the

11 number which comes out if what you're asking for is how

12 many completed deaths are there?---Yes.

13 And the later in time that the data is extracted, there could be

14 an increase from it being extracted a year earlier, for

15 example?---Yes.

16 And that's because the coroner, for example, may have finalised

17 cause of death and therefore you would have transferred it

18 from a "pending" status to a "completed" status?---That's

19 correct.

20 I'm now just going to ask you about some requests and contact

21 you've had with various organisations or entities about

22 data in relation to the Latrobe Valley and number of deaths

23 in 2014 and other relevant years?---Okay.

24 Is the first request that you received on 27 May 2014?---Yes,

25 that was the first request from Tara Dean from Voices of

26 the Valley.

27 That was a request for data showing the number of deaths for the

28 months February/June 2014 for four postcodes?---Four

29 postcodes.

30 And a request also for some other years?---The same months but

31 for the five preceding years, for comparative purposes.

1 We've heard from Mr Ipsen this morning about that request. When

2 Births, Deaths and Marriages receives a request, there's an

3 ability to release that information to members of the

4 public?---Any data request we get is assessed. We've got

5 various pieces of legislation that we must work within and

6 in terms of data release, it is primarily the Privacy and

7 Data Protection Act, formerly the Information Privacy Act,

8 and the Health Records Act. So we have to make sure we're

9 abiding by those pieces of legislation when we determine if

10 and what information we're going to be giving out.

11 Okay. Is the next contact that Births, Deaths and Marriages had

12 from Voices of the Valley another request on 4 August 2014

13 from a Mr Gunter?---Yes. It was the same request but from

14 Mr Gunter.

15 Okay. Did he also request some comparison data?---Yes, he

16 requested in addition data for the same months for the

17 whole of Victoria.

18 17 August 2014 you contacted the Department of Health and Human

19 Services?---The registrar did, yes.

20 Whenever I say "you", I am meaning the registry in its

21 entirety?---Yes.

22 What was the purpose of that contact?---That is actually

23 paragraph 10 in the document, and that paragraph was

24 actually scripted by the registrar because it was her

25 communication, and it was essentially contacting them to

26 see whether it would be more appropriate that Mr Gunter get

27 the information from the public health record.

28 Did Births, Deaths and Marriages receive a response from the

29 department?---The registrar has reported that the

30 Department of Health declined that option.

31 On 25 August 2014 did Mr Gunter, who is, again, from Voices of

1 the Valley, write to Births, Deaths and Marriages

2 again?---Yes, he did.

3 And what was the subject of that?---It was essentially - like a

4 reiteration of the request. I think that was when he

5 mentioned the Victorian data.

6 If I just take you to paragraph 11. Was he asking for some

7 additional data to essentially complete the year?---Yes, to

8 complete the year.

9 So July to December?---Yes, rather than just January to June.

10 On 3 September 2014, did the registrar provide to Rosemary

11 Lester, and also Mr Neil Robertson from emergency services,

12 extracted data, which really was the response to the

13 request from Voices of the Valley?---Yes.

14 We've talked about these status differences of "pending" and

15 "completed". Is this really an extraction of completed

16 data?---Completed data only, yes.

17 Again, I might actually just ask if Exhibit 1C could be put up

18 on the screen. Ms Sims, this is quite small?---It looks

19 like my spreadsheet, though.

20 So let me know if there is a difficulty looking at it. That

21 looks like the data that we're talking about?---Yes.

22 This has the years, the months, January to June, and some

23 numbers against postcodes?---Yes.

24 Again, this is just the completed data?---Completed data, yes.

25 So these figures wouldn't pick up if there was still, as of the

26 date that this was extracted, if there was still some

27 enquiry outstanding, such as cause of death?---That is

28 correct, those deaths would not be included in those

29 numbers.

30 But this is the information that, on 3 September 2014, you

31 provided to Rosemary Lester and Neil Robertson?---That's

1 correct.

2 On 4 September 2014 was this provided to Mr Gunter?---It was,

3 yes.

4 Taking you a little further on, on 2 October 2014 was there a

5 further request from Voices of the Valley for additional

6 postcodes and additional years?---Yes, there was.

7 At that time, did Ms Dean also ask for details of the cause of

8 death from each person?---She did, yes.

9 What was the response from Births, Deaths and Marriages?---We

10 agreed to the additional information provision, with the

11 exception of providing cause of death, and that was due to

12 the sensitivity of it and the possibility of - we have to

13 be conscious of individuals being able to be identified.

14 So even if someone's name and birth date isn't part of that

15 information, there's a concern that the description of the

16 cause of death may actually reveal the identity to someone

17 who was familiar with the family, for example?---Correct,

18 yes.

19 On 9 October 2014 did Births, Deaths and Marriages inform

20 Ms Dean that that additional data, the additional years and

21 the additional postcodes, would be provided but, for

22 privacy reasons, not the cause of death?---That's correct.

23 On 8 September 2014, did the Department of Health and Human

24 Services make a request to Births, Deaths and Marriages for

25 data?---They did.

26 What did they ask for?---They requested deaths for the same four

27 postcodes for each month between 2009 and 2014, with cause

28 of death, as well as comparative data from the whole of

29 Victoria.

30 On 12 December 2014 was Ms Dean, from Voices of the Valley,

31 provided with that additional data that she had asked

1 for?---She was, yes.

2 Again, that data was just completed death data?---Only completed

3 death data.

4 And taking the chronology then into 2015, on 15 January did

5 Births, Deaths and Marriages then provide the Department of

6 Health and Human Services with the data that they'd

7 requested?---Yes, we did.

8 So that included now, for the first time, information about

9 cause of death?---That's correct.

10 Why was the distinction drawn between what was given to Voices

11 of the Valley in that regard and the department?---When we

12 do any assessment of what we release and to whom - it came

13 down, I guess, to Department of Health as opposed to a

14 citizen, even though that citizen was representing a

15 community group.

16 So in terms of the privacy and sensitivity concerns, you didn't

17 hold those in relation to the department?---Well, they are

18 beholden by the same privacy legislation that we are, so we

19 were assured that the data would be treated accordingly.

20 Again, though, in terms of the data provided to the department,

21 it was just the completed death data?---Again, it was just

22 complete, yes.

23 And following and set out in your statement, was there some

24 updates in terms of data provided to Voices of the Valley

25 over the subsequent months?---There was. The December 2014

26 data was incomplete because of when the data was extracted

27 from our system, so we provided full data for December 2014

28 and then do you want me to move through to July this year?

29 And in July this year there was some further - - -?---It was

30 discovered that there was a discrepancy with the November

31 data, so we re-provided November as well and some of the

1 numbers went up.

2 In February 2015, on the 11th, did the department make a further

3 request to Births, Deaths and Marriages, essentially

4 extending the years?---They did.

5 So asking for 2004 onwards?---2004-2008, just to complete the

6 data set, so that they had the same as Voices of the Valley

7 had.

8 On 12 March 2015 was there permission given to the department

9 for them to be able to provide that data to the University

10 of Melbourne?---There was, yes.

11 Again, on 8 July 2015 was permission given by Births, Deaths and

12 Marriages for the department to provide that data to

13 Dr Rosemary Lester?---Yes, that's correct.

14 Again, with all of this data, we're just talking about completed

15 death data?---That's right.

16 Coming then to the Board of Inquiry and the interactions between

17 Births, Deaths and Marriages and the board, on 17 June this

18 year, did Births, Deaths and Marriages receive a request

19 from the Inquiry?---Yes, we did.

20 What was that request?---That was a request for number and cause

21 of death by month from 2004 until the most recent month

22 available at 17 June 2015, and there was eight postcodes

23 listed.

24 Was there also a request for the cause of death?---Yes, cause of

25 death was included.

26 And comparison data for the state of Victoria?---We had

27 conversations with the Board of Inquiry to see if they

28 wanted comparative data as well. So, yes, we provided the

29 whole Victorian data as well.

30 You detailed a little earlier this process of extraction. The

31 extraction date of the data that was provided to the board,

1 10 July 2015?---That's correct.

2 And that was then provided by way of email?---Yes.

3 So in terms of that data - and just for the board's assistance,

4 it won't be brought up on the screen because it does have

5 that cause of death identifying data, but it is before the

6 board and has also been provided to all experts who are to

7 give evidence tomorrow - if I can just ask you a few

8 questions about that data. Firstly again, it is the

9 completed death data?---That's correct.

10 So it's really 10 July, which is the date of extraction. If

11 there were any pending deaths that had that status attached

12 to them, they wouldn't come up in the data which was

13 provided to the board?---That's correct, it would only be

14 complete registrations.

15 If I can ask for the attachment to Ms Sims' statement to be put

16 up on the screen, and this appears at WIT.0002.001.0006 of

17 the materials. Ms Sims, again please indicate if we need

18 to zoom in in some way?---I've got it in the book.

19 You've got it in front of you?---Yes.

20 Perhaps if we could just zoom in a little bit so we can see

21 those headings. This is, in essence, a redacted version or

22 a blacked-out version of the individual registrations on

23 what one page of what was provided to the board looks

24 like?---Yes.

25 If I can just take you through what the headings represent.

26 Firstly, Registration Date, what does that tell us?---That

27 is the date that the death was first registered or the date

28 that any amendments that were made to make it a more

29 accurate record were completed.

30 For the majority of cases, would that indicate the date that you

31 had all of the completed information?---Yes, but

1 potentially there can be - it will be completed, a

2 certificate will be released and the family might come back

3 and say the person had a middle name or there's a child

4 missing that is not listed on the death certificate. That

5 correction of that information would then alter the

6 registration date.

7 We've then got Date of Birth - pretty self-explanatory - and

8 Date of Death and Sex. Postcode of Usual Place of

9 Residence, that is the information that would have been

10 drawn from that document from the funeral director that you

11 gave evidence about earlier?---That's correct.

12 Again, you can't say how accurate that might have been or what

13 the criteria were that the next of kin used to provide that

14 information?---No. We assume it is correct.

15 And Postcode of Place of Death, you gave some evidence earlier

16 about obtaining that from the medical practitioner but it

17 not being a mandatory field?---That's right.

18 Is it in fact the case that for the majority of the

19 registrations which were provided for at least the 2014

20 data, that that wasn't actually a field that was

21 completed?---The spreadsheet would certainly indicate that,

22 yes.

23 Just moving across, we then have a field for Primary Cause of

24 Death and Secondary Cause of Death?---That's right.

25 Is it the case that a medical practitioner, or indeed a coroner,

26 essentially writes as much or as little information as they

27 see fit?---That is correct, yes.

28 And some complete a Secondary Cause of Death field and some

29 don't?---And some don't, yes.

30 But there isn't a set amount of information which forms part of

31 those fields?---No, only that there has to be at least one

1 cause of death. Sometimes there will be one. They might

2 have five or six things listed.

3 Just coming back then to the issue of how complete, if I can use

4 that term, this information is that the board received and

5 that issue of completed status and pending status, is it

6 possible that these materials and data that the board

7 received on 17 July this year don't actually show us all

8 the deaths for, for example, the start of

9 2014?---Potentially, yes, because if there's any that are

10 still "pending coroner" or "pending investigation" for some

11 other reason, they wouldn't be included in the data that's

12 been provided so far.

13 And is that now something that the board has asked Births,

14 Deaths and Marriages to follow up, to provide that complete

15 picture?---Yes, they have.

16 And I understand you have to gain some assistance from an

17 external IT consultant?---It is quite a complex request

18 because we're not just looking at one status, namely

19 "complete", we're looking at a whole range of statuses of

20 where that death is sitting in the system, so, yes, we have

21 to engage someone to do that for us.

22 When is it expected that you'd be in a position to provide that

23 full picture to the board?---We would be able to have that

24 to you by mid-October.

25 And, in fact, that's put in your statement as 14 October, as

26 being a date that is manageable from the perspective of

27 Births, Deaths and Marriages and the IT consultant?---Yes,

28 that's correct.

29 When that data is provided, that fuller picture, that will be

30 able to tell the board whether, for example, there's any

31 additional deaths which had "pending" status which ought be

1 added to the number which is already obtained by the

2 board?---Yes, you have the number you've got now and we'll

3 be providing a number - because my understanding is it is a

4 count only, this additional information, so you'd be able

5 to work out January 2014 we've got whatever number and the

6 new number is this, so the difference is the deaths that

7 are not complete at this stage.

8 Thank you very much.

9 PROFESSOR CATFORD: I wonder if I could just follow that up,

10 just so I'm clear about this. In 2014 there may well be

11 some additional deaths that haven't been included in the

12 analyses that we've undertaken or

13 commissioned?---Potentially, yes.

14 And given that we're referring back to 2009-2013, are there

15 likely to be unincluded deaths in that data set or would it

16 be less likely?---Less likely. The further you get away

17 from a date, the less likely it is that there is going to

18 be additional data.

19 So the 2009-2013 data set is probably much more likely to be

20 fully complete more than the 2014 data set, where we may

21 still have some additional deaths to include?---That's

22 right, and whilst potentially there can still be some

23 additional ones in those earlier years, the likelihood is

24 less than the more recent deaths.

25 Thank you very much.

26 <CROSS-EXAMINED BY MR NEAL:

27 I just have a couple of matters if I could clarify with you,

28 Ms Sims. The attachment 1 document that you've been

29 referring to that was up on the screen, I think the body of

30 your statement says that is a first and a last page, so it

31 is a much bigger document?---Yes.

1 And it wasn't purposeful to give the whole version because it is

2 redacted anyway?---That's correct.

3 Can I ask you this, if you're able to answer me: where the

4 column headed Postcode Place of Death appears, the pages

5 that we have, and I think your evidence already indicated

6 this, mostly don't show that information?---That's correct.

7 Is it fair to ask you if we were looking at the whole redacted

8 document, we'd see lots of blanks in that same column, it

9 is a fairly representative - - -?---If that is

10 representative of the whole document, then yes.

11 I think my question was can you tell me whether or not you think

12 it is representative. On the two pages that we see, to be

13 fair to you, it seems it is much the exception to the rule

14 that we get the information?---The postcode, yes.

15 My question was simply if we look through the whole redacted

16 document - - -

17 MS SHANN: If I can assist. We've got that redacted data here.

18 MR NEAL: I'm grateful for the offer. If the witness would like

19 to proffer whatever she can, I'll take that for the

20 moment?---All I can say is if those two pages are

21 indicative, then - - -

22 Okay, I understand your answer. In the unredacted form, if I

23 understand correctly, the Postcode of Usual Place of

24 Residence is the information that you say the funeral

25 director might have got from a next of kin very

26 often?---Frequently, yes.

27 And that would be a residence but what we would have had here,

28 if this document were not redacted, would be a postcode,

29 ,not a residence?---Sorry, I don't understand the question.

30 A residence might be such-and-such a street in such-and-such an

31 area, with postcode X on it. I understand the heading here

1 indicates to us you would see a postcode, a number?---Yes.

2 In the instances where the document does give us the actual

3 place of death, is it fair to understand that there is, on

4 the document itself, no way of understanding when the

5 person might last have been at their usual place of

6 address?---That's correct, yes, we wouldn't know that.

7 Thank you.

8 MS SZYDZIK: No questions.

9 CHAIRMAN: Thank you, Ms Sims. You are excused.

10 <(THE WITNESS WITHDREW)

11 (Witness excused.)

12 CHAIRMAN: You'll have an idea of the time, whether we can

13 afford to take a break.

14 MR ROZEN: I think we probably can.

15 CHAIRMAN: In that case, you nominate the time that we resume.

16 MR ROZEN: Can we say 10 past 12.

17 CHAIRMAN: 10 past?

18 MR ROZEN: Yes.

19 CHAIRMAN: Yes, we'll resume at 10 past 12.

20 (Short adjournment.)

21 MR ROZEN: The next witness is Linda Cristine.

22 <LINDA CRISTINE, affirmed and examined:

23 Ms Cristine, make yourself comfortable there. Just to repeat,

24 your full name is Linda Cristine?---Yes, my full name is

25 Linda Cristine.

26 And we spell your surname C-r-i-s-t-i-n-e, no H?---That is

27 correct.

28 And you're currently a director of the Inquiry response team for

29 the Department of Health and Human Services?---Yes.

30 And your current work address is 50 Lonsdale Street,

31 Melbourne?---That is correct.

1 For the purposes of the Inquiry have you made two witness

2 statements?---Yes.

3 If you open the folder, it's probably open already behind tab 4,

4 do you have there the first of those statements dated 18

5 August 2015?---Yes.

6 And that is a copy of the statement that you made, and have you

7 had a chance to read through that before coming along to

8 give evidence today?---Yes, I have.

9 Is there anything you wish to change?---No.

10 Are the contents of the statement true and correct?---Yes.

11 #EXHIBIT 3 - Witness statement of Linda Cristine, dated

18/8/2015

12

13 More recently, Ms Cristine, if you can turn to tab 5, please in

14 the folder. You will see a statement, the document ID is

15 VGSO.1012.002.0001?---Yes.

16 That is headed, "Supplementary witness statement of Linda

17 Cristine", dated 31 August 2015?---Yes.

18 Once again have you had an opportunity to read through the

19 supplementary statement?---Yes.

20 And is there anything in it you wish to alter?---No.

21 And the contents of that are true and correct?---Yes.

22 #EXHIBIT 4 - Witness statement of Linda Cristine dated

31/8/2015.

23

24 Whilst we have the supplementary statement there, if we could

25 scroll down to the attached doc ID, VGSO.1012.002.0003.

26 Can you briefly tell us what it is we're looking at?---This

27 is one subcomponent of the division of the Department of

28 Health and Human Service and it covers the area of health

29 protection regulations and emergency management. This

30 shows the staff in the health protection branch and the

31 office of the chief health officer, and in yellow in the

1 middle is the deputy secretary, Amanda Cattermole of that

2 division and left and right of that is a box, myself in the

3 acting role at that time as the director of health

4 protection, and on the right the acting chief officer. You

5 can see there is a smaller branch under the office of chief

6 officer with specialist position and a vast majority of the

7 staff, about 140 reporting through line management to the

8 director of health protection.

9 We see two lines leading ultimately to the deputy secretary

10 Ms Cattermole, one from the right-hand side of the page, in

11 the acting chief health officer's column?---M'mm.

12 And the other is from the column that had you as head acting

13 director of health protection, is that right?---Yes.

14 Whilst we're on that page we might just identify a couple of

15 other people whose names appear in the material. Firstly

16 if we look down the right-hand side of the page leading up

17 towards the acting chief officer, Danny Csutoros?---Yes.

18 Dr Csutoros is there described as a senior medical advisor with

19 a direct line to the acting chief officer?---That is

20 correct.

21 And then in turn answering to Dr Csutoros is a Mr Brett Sutton,

22 public health officer?---Dr Brett Sutton, yes.

23 Then going back up to the yellow box directly under and slightly

24 to the right of that we see a box with the name Sandra

25 Falconer, manager, environmental health?---That is correct.

26 And within that branch we see Vikki Lynch and Christy Boucher,

27 can you briefly describe to us what the environmental

28 health - is it a division or a branch?---You can call it a

29 unit, that might help.

30 What is the role of that unit, just tell us briefly?---They

31 provide expert advice and assistance in working through and

1 addressing what might be environmental risks that have an

2 impact on health. They work very strongly with other

3 agencies so in partnership with the EPA in particular and

4 they respond to incidents or alerts and assist in making

5 sure we can mitigate any risks.

6 We know from the evidence of the first Inquiry, and I know you

7 weren't involved, but we know from evidence that Ms Lynch

8 in particular was involved in responding to concerns about

9 raised carbon monoxide levels during the course of the

10 Hazelwood fire, that is consistent with the role you have

11 just described?---Yes.

12 If we leave the organisation chart for a moment noting it is as

13 at 20 March 2015, you commenced to hold the position of

14 acting director of health position, is that right?---Yes.

15 If we can go back to just clarify briefly the different roles

16 that you held which are of relevance to the Inquiry. As I

17 understand it from the statements, you have been with the

18 department from February 2011?---Yes. If I can clarify

19 that, the Department of Health and Human Services has been

20 an iteration post a machinery Government change that

21 involved the Department of Human Services, the Department

22 of Sport and Recreation and the Department of Health, so

23 I'm referring to the department generally as the entire

24 Department of Health and Human Services as it is now.

25 I understand. Just for the record, when did the name change

26 from health to Health and Human Services?---Now someone's

27 going to correct me, it's either November or December, post

28 the election.

29 Late 2014?---Yes.

30 Thank you. Using that general description of the department

31 which I think for our purposes is fine, since joining in

1 February 2011 you have had several roles, and your current

2 role is as you have told us a moment ago, you're the

3 director of the Inquiry response team, that is the response

4 team that has been put together to respond to this

5 particular Inquiry, is that right?---Yes.

6 Significantly for our purposes, before you assumed that role you

7 were the acting director of the health protection branch

8 which is the role we have just looked at on the

9 organisation chart?---That is correct.

10 And am I right I saying you assumed that role on 20 March

11 2015?---Yes.

12 Attached to your first statement which is exhibit 3, and I don't

13 think I need to take you to these, there are a number of

14 fact sheets for want of a better expression, released by

15 the department in September and October of 2014, are we to

16 assume you had no role in their preparation?---No, no, I

17 didn't.

18 Would Dr Lester be a better person to ask about those documents

19 and how they came into existence?---Dr Lester had a role,

20 yes.

21 The contact between the department and University of Melbourne

22 which we know from your statement was engaged ultimately to

23 provide three reports to the department concerning the

24 broad issue of any relationship between the Hazelwood coal

25 mine fire and an increase in deaths in the Latrobe

26 Valley?---Yes.

27 And for completeness, and once again I don't need to go to these

28 now, but the completed reports for the board are behind

29 tabs 10, 11 and 12 of the hearing book. Perhaps if I just

30 clarify it with you, the first report provided by the

31 university was on 26 September 2014?---Can I check that?

1 You certainly can, I was going to ask you to take my word for it

2 but I won't push my luck?---If it's what's in the

3 statements it's correct.

4 If you look at your first statement, exhibit 3, in paragraph

5 15.10 you say: "On or about 26 September 2014 the

6 University of Melbourne provided the department the

7 report", which you then set out the title of?---Yes, that's

8 right, the date's correct.

9 That was the first report received by the department from the

10 University of Melbourne. As you explain in paragraph 16 of

11 your statement there was a further request of the

12 department to provide two things, an updated version in a

13 sense of that first report was informed by some additional

14 data which had become available?---Yes.

15 And at the same time to provide a critical analysis of two

16 unpublished papers that were prepared by Associate

17 Professor Adrian Barnett of the Queensland University of

18 Technology?---Yes.

19 And you attach to your first statement the project briefs that

20 were prepared by the department and sent to the University

21 of Melbourne requesting those reports?---Yes.

22 Can I ask you about the first of those project briefs that you

23 attach, and I know this is before your time in the relevant

24 position and so you may or may not be able to help us with

25 this, but can you turn to attachment 5A of your statement

26 which is on page VGSO.1012.001.0015 and for your

27 assistance, Ms Cristine, you will see those numbers in the

28 top right-hand corner of the page, they are the last four

29 digits and sequential if that makes sense; go to a page

30 where the last two digits are 15 in the right-hand corner,

31 you should have a second page of attachment 5A to your

1 statement?---Yes.

2 Look towards the bottom of that page with a heading of

3 "deliverables", and that was what was expected to be

4 provided by the consultant, are you able to assist the

5 Inquiry in understanding how it was that the University of

6 Melbourne and in particular Dr Flander were chosen to

7 provide this and later reports?---No, sorry, I'm unable to

8 determine why Dr Flander in particular was chosen except

9 from conversations that she and her team had relevant

10 expertise but that's all I can provide.

11 Is that something that once again perhaps it would be better

12 broached with Dr Lester?---Yes, maybe.

13 The project brief required a preliminary assessment to be

14 provided, do you see that under the heading,

15 "Timeframe"?---Yes.

16 In your experience is that a normal process for these sorts of

17 reports when they are requested by the department?---In my

18 experience it's not unusual when we engage consultants of

19 any type to ask for preliminary or draft documents.

20 And what purpose is served by doing that? Why are preliminary

21 or draft documents requested by the department?---When we

22 engage external consultants to ensure we're trying to get

23 what the money we invest in that it's fit for the purpose

24 we're charged with, having a draft or preliminary

25 assessment allows us to make sure it's being delivered,

26 it's probably within the context of contract management.

27 Yes. And I think we can accept as a general practice it's

28 certainly not unusual within the public service?---No, it's

29 not unusual.

30 Do you agree?---Yes.

31 The process that was followed here, was that feedback that was

1 provided by the department upon receipt of the preliminary

2 assessments, do you agree with that as a general

3 proposition?---Yes.

4 And I will take you to one example, one specific instance of the

5 feedback in a moment, but if I can ask you some general

6 questions. Feedback in that setting can vary from minor

7 things, so identify typographical errors, for example,

8 might be one end of the spectrum, then at least in theory

9 the feedback could go right back to we don't like the

10 conclusion you have reached in paragraph 2, can you change

11 it so it reads as follows? I'm not suggesting that's what

12 has happened here but do you agree as a general proposition

13 that's the broad spectrum of comments that might be

14 provided in response to a preliminary report or

15 assessment?---I don't agree that it would be that broad but

16 there is a breadth of scope, there is no rule book for us

17 as public servants in providing feedback to consultants or

18 those that are engaged in a range of comments.

19 There is no rule book; is there some acceptable practice, so for

20 example, a response of, please change the conclusions on

21 page 2 would be an unacceptable comment?---In the context

22 of engaging people independently to come up with an

23 independent conclusion, that would be inconsistent. So no

24 rule book, I concede that, but there will be a variety of

25 comments that are provided with the expectation that their

26 comments and feedback and the expertise we engage would

27 make a call for it to meet to project brief about an

28 outcome that needs to be met.

29 You said a moment ago that where an independent consultant is

30 engaged to provide an independent report, a comment to

31 change a conclusion would be inconsistent with that. That

1 was the scenario here, wasn't it, the University of

2 Melbourne was engaged because of its independence of the

3 department?---Yes.

4 Had there been a pre-existing relationship between the

5 department and Dr Flander, do you know had she briefly

6 provided reports to the department?---I don't know that,

7 sorry.

8 In relation to the request for the University of Melbourne to

9 provide a medical analysis of Associate Professor Barnett's

10 work, are you able to assist the Inquiry into why that was

11 considered to be appropriate?---My understanding from

12 making enquiries within the team has been that that

13 particular report had a profile in the media and so it was

14 a consideration for us to have a look at that particular

15 material that did get, if you like, media coverage and

16 quite a level of interest to see what was there really.

17 I want to take you to the point at which Dr Lester retired as

18 chief health officer which I think I'm right in saying was

19 late February this year?---Yes.

20 And was Mr Ackland then put in the position as acting chief

21 health officer immediately after Dr Lester retired?---Yes,

22 he was.

23 An email has been provided to the Inquiry amongst a number of

24 emails that the Department of Health provided in which

25 Dr Lester who had up until that time been in communication

26 with the University of Melbourne about these consultancy

27 reports identified Dr Csutoros as the point of contact.

28 I'm not sure if they are the precise words used but

29 identified Dr Csutoros as the person to contact by the

30 University of Melbourne; can you explain to us whether what

31 Dr Lester was saying was Dr Csutoros is now filling the

1 role I have hitherto performed, or was she saying something

2 else, or once again is that something we need to ask

3 Dr Csutoros?---I can explain that. Again within general

4 good contract management we do like our consultants to have

5 somebody they can email or ring, not to leave that as a

6 vacuum. So that's my understanding, he was provided as a

7 point of contact for the principal researcher and was not

8 taking on the full role and responsibilities as an acting

9 chief officer. I would explain that in terms of I think

10 the email was the day before Dr Lester's last day with the

11 department, that's probably in the context of wrapping up

12 affairs, you're obviously very welcome to check that.

13 That's all right. Thank you. So just so I can understand that,

14 who did fulfill the role of Dr Lester in relation to the

15 oversight of management of these contracts once she

16 departed?---The general oversight of those three pieces of

17 work then rested back in the health protection branch, so

18 that chart I referred to earlier, the director of health

19 protection signed the contract. There is a team within

20 that strand which is strategic projects so we were

21 searching for an appropriate staff member in the strategic

22 projects team to make sure they could do the project

23 management of that amongst any others as well.

24 And who was that person that was - - -?---Dr Andrew Neil and

25 hopefully he's in the chart at that point in time.

26 Perhaps going back to the chart, that is the third page of the

27 supplementary statement?---It's in a green shaded box, the

28 third column across down the bottom, it says Miranda is the

29 manager of the health protection strategic projects. So

30 slightly to the left of the screen and down.

31 Down?---And third from the bottom is Andrew Neil, senior policy

1 and project officer, it did take us a little while.

2 And the relationship between Dr Neil and Dr Csutoros and the

3 reason I ask is we see Dr Csutoros' names on several emails

4 as providing comment, what was the relationship between

5 Dr Csutoros and Dr Neil?---Dr Danny Csutoros is one of two

6 senior medical advisors in the office of the chief health

7 officer. My understanding is that the senior medical

8 advisors will take primary responsibility for a group of

9 teams about particular public health risks and issues.

10 Danny Csutoros was taking responsibility for the

11 environmental health portfolio and Dr Romanes was taking a

12 large responsibility in communicable diseases amongst other

13 things, and so Danny's role as a senior medical advisor is

14 to provide that senior advice as a practitioner to anyone

15 in the team dealing with environmental health issues and a

16 good person to provide comment or feedback or review for

17 any projects that are related to environmental health.

18 I will see if I can short circuit this, we have already

19 identified the first report provided on 26 September

20 2014?---Yes.

21 And we know there were two further reports provided by the

22 University of Melbourne, one was the critical analysis of

23 the work of Associate Professor Barnett and the other was a

24 more detailed analysis of the data. The first of those,

25 the critical analysis, the final report was provided in

26 April 2015?---That's correct.

27 And the second came in June 2015?---M'mm.

28 The initial project brief, I wonder if you would agree,

29 envisaged there would just be one further report that would

30 address both of those issues, that is the critical analysis

31 and the further analysis of the data?---I'm not sure that's

1 correct.

2 Probably doesn't need to trouble us?---Okay.

3 I suggest what happened is both aspects were expected but there

4 was a delay in the provision of further data to the

5 University of Melbourne, so they said we will provide you

6 with a critical analysis of Barnett first and then when we

7 get the further data we will provide you with a later

8 report?---That is correct, yes.

9 Thank you. So I want to ask you about the provision of that

10 first report, the critical analysis. And if you turn to

11 the second folder behind tab 34, DHHS.1008.001.0060. Do

12 you see this is an email from Dr Flander at the University

13 of Melbourne to Danny Csutoros of the health

14 department?---Yes.

15 DHHS. And this is dated 13 March 2015 which of course is

16 subsequent to Dr Lester's retirement?---Yes.

17 So consistent with the arrangement for Dr Csutoros to be the

18 point of contact, he's the recipient of this email, is that

19 right?---Yes.

20 And you will see half-way down the page it reads: "Dear Danny,

21 attached is our final draft report on the Barnett

22 statistical analyses and ... (reads) ... required by the

23 project brief." Do you see that?---Yes.

24 And again that's consistent with this splitting of the two parts

25 of the outstanding work?---Yes.

26 Right. If you go behind tab 33 in the folder to a page that is

27 coded DHHS.1008.001.0504, you should have a draft report

28 provided dated 13 March 2015?---I must.

29 Have you got tab 33?---I'm in the wrong tab, 005?

30 0504?---Yes, I have it, thank you.

31 And it should be a draft report altered by Louisa Flander and

1 Anthony Ugoni dated 20 March 2015?---Yes.

2 I have certainly had some difficulty working out which draft

3 report was attached to which email, I understand you also

4 have been engaged in a similar exercise over the last few

5 days?---Yes.

6 Do you agree that the draft report which I have just drawn your

7 attention to dated 13 March 2015 was the draft report

8 attached to the email of the same date?---Yes, that's my

9 understanding.

10 Perhaps I might ask you if I can to remove the draft report from

11 the folder. My instructing solicitor's eyebrows have just

12 been raised but I think it would be the easiest way to do

13 this, so have you taken out the four page draft

14 report?---M'mm.

15 And immediately after it I hope you have a further draft of that

16 report dated 9 April 2015?---Yes.

17 DHHS.1008.001.0508?---That's correct.

18 That's a slightly longer five page report, can I ask you to take

19 that out of the folder as well, please, and put the two of

20 them to the side. Then keeping same folder in front of you

21 can you go to tab 34?---Yes.

22 If you go to page DHHS.1008.001.0066?---Yes.

23 Thank you. Do you see there an email from Danny Csutoros to

24 Louisa Flander dated Friday, 27 March 2015?---Yes.

25 And the main part of the email reads: "Hello Louisa, great

26 report. As discussed please find attached comments, speak

27 soon, cheers Danny"; do you see that?---Yes.

28 Do you agree with me that the comments that were attached to

29 that email were comments on the first of those draft

30 reports, that it is the one dated 13 March 2015?---Yes,

31 they are.

1 And then just to complete the picture, can you turn back a

2 couple of pages to a page DHHS.1008.001.0062?---Yes, that

3 it one.

4 Do you see that's headed DH feedback to Louise Flander of

5 Melbourne?---Yes.

6 Do you agree they are the comments that were attached to the

7 email from Dr Csutoros that was responding to the draft of

8 13 March?---Yes, they are.

9 Having done all of that if you keep those open, please. Do you

10 agree with me that the comments that are there - and take a

11 moment to read them if you need to, they are quite detailed

12 and there is a degree of technical complexity about the

13 comments that were made; is that a fair general

14 statement?---I probably don't agree, I think the comment -

15 I don't think the comments are technical per se, I read

16 most of the comments as asking questions that it would be

17 good to have answered, i.e., "Can you please clarify", "it

18 would be good if you could", "does this relate to". Many

19 of them, or most of them, are framed as questions.

20 I see. Do you see comment number 2, that starts with reference

21 to the statement, "Although the fire's effect on mortality

22 is a plausible hypothesis, the data presented do not

23 suggest strong evidence for this hypothesis", do you see

24 that?---Yes.

25 It goes on then and refers to Barnett's analysis?---Yes.

26 And then there is a paragraph, "It is suggested that references

27 be included to explain why this hypothesis would be

28 plausible." Then if you look at the next paragraph, almost

29 in the middle of the page, "Alternatively, is it possible

30 that the conclusion could be drawn instead that the data

31 presented do not suggest strong evidence for the author's

1 hypothesis that the fire had an effect on

2 mortality"?---Yes, I see that.

3 That is a suggestion, is it not, that a different conclusion be

4 drawn by the consultant, do you agree?---No, I don't. I

5 think it is a question. There is a suggestion that says

6 the previous one, the references - it would be good in a

7 reference to explain that and then question posed, is it

8 possible that something else could be drawn, it is a

9 question. It doesn't have a question mark at the end, I

10 notice, in the feedback, but - - -

11 We're not marking the grammar?---No.

12 I'm not so concerned about that. So you don't read - let's call

13 it a question - "Is it possible that the conclusion could

14 be drawn instead that the data presented do not suggest

15 strong evidence for the author's hypothesis that the fire

16 had an effect on mortality", you don't read that as a

17 comment that an alternative conclusion be reached by the

18 consultant to the one in the draft report?---No, I do not

19 read it as a conclusion should be reached, I read it as a

20 question, "is it possible".

21 So you stand by the proposition, do you, Ms Cristine, that you

22 wouldn't describe these suggestions as ones that have a

23 degree of technical complexity about them?---Most of them

24 are posed as questions rather than - so, yes, the answer to

25 the question is yes, I do think that they are posed more as

26 questions than suggestions.

27 All right. A moment ago I asked you about the email that

28 attached those comments. Can you please turn to page 65,

29 that is DHHS.1008.001.0065?---Yes.

30 And as is the case with email communications, we've got to read

31 the pages backwards, do we not?---M'mm-hmm.

1 So we see at the bottom of the page there, I suggest, the

2 response that was received by the department, Dr Csutoros,

3 from Louisa Flander on the same date that the comments were

4 sent, do you see that, on 27 March 2015, 12.59?---Yep.

5 If I've got my maths right, that was a little more than half an

6 hour after the email of Dr Csutoros was sent, I think 38

7 minutes, do you agree with that?---Yes.

8 And the response was, "Hi, Danny. Many thanks for these useful

9 comments. We will incorporate all the suggestions and

10 return the report to you by Wednesday." Do you see

11 that?---Yes.

12 And just to complete the chain, some 22 minutes later

13 Dr Csutoros wrote back, you'll see at the top of the page,

14 "Hi Louisa. Just for the record, they are comments given

15 to prompt discussions and thinking and we will leave final

16 judgment of inclusion completely to yourself"?---Yes.

17 I know you weren't the author of this, Dr Csutoros was, but I

18 suggest to you that it looks like, firstly, Dr Flander was

19 very keen to give effect to all of the comments - - -

20 MR BLANDEN: If the board pleases, can I object to this line of

21 questioning. It seems to us that counsel assisting is

22 clearly cross-examining the witness and not leading

23 evidence from her, for a start, and it is hard to see how

24 questions that relate to email correspondence between the

25 department and Dr Flander of the university in relation to

26 the first report go to the question that the board is

27 considering and the term of reference, which essentially,

28 one would have thought, was a factual exercise in

29 determining whether deaths were there or not and what the

30 causation of those deaths were.

31 CHAIRMAN: I'm not prepared to stop the questioning, but if it

1 went on into a series of matters, I certainly would be

2 prepared to do so. At this stage I'm prepared to allow

3 this questioning.

4 MR ROZEN: If the board pleases. I should add I'm trying to do

5 this in as focused a way as I can but equally I need to

6 refer to all of the material - - -

7 CHAIRMAN: Some specifics, yes.

8 MR ROZEN: - - - in fairness to everyone involved.

9 (To witness): Would you like me to repeat the last

10 question that I asked you, Ms Cristine?---Yes, please.

11 I'm really asking you to comment on this observation: it would

12 appear that Dr Flander very promptly responded to what I

13 suggest to you were quite detailed comments in a manner

14 which suggests that she was prepared to adopt them without

15 perhaps detailed consideration?---I can't comment about

16 Dr Flander's state of mind when she wrote the comments

17 back. It seems really polite, it seems really suggesting,

18 "thanks for the useful comments", "we'll take on board your

19 suggestions", I don't think it says anything other than

20 "here they are", and Dr Csutoros has also confirmed that

21 these are comments to prompt discussion and thinking and

22 leaves the final judgment about the conclusions to

23 Dr Flander.

24 I suggest that Dr Csutoros' response is consistent with him

25 perhaps being surprised at the speed with which Dr Flander

26 responded and her preparedness to adopt all the suggestions

27 and incorporate them. Do you want to comment on

28 that?---No.

29 Do you disagree with that proposition, Ms Cristine?

30 MR BLANDEN: If the board pleases, the witness has just said she

31 doesn't want to comment on it and this is clearly

1 cross-examination.

2 MR ROZEN: I withdraw it.

3 CHAIRMAN: This is not a court of law. We are interested in

4 hearing questions that are testing. I'm prepared to put a

5 limit on them, but I'm not going to, at this stage, say

6 that it should not be allowed to go up to a point.

7 MR BLANDEN: I understand that, if the board pleases, but it

8 simply isn't helpful to the board for the witness - - -

9 CHAIRMAN: I think it is helpful to the board - I'll just

10 consult. We're in agreement it is helpful to the board.

11 MR BLANDEN: Thank you, Your Honour, but it is difficult to see

12 this witness' opinion of what another witness might have

13 thought, based on a short email, how that can be of

14 assistance to anyone.

15 MR ROZEN: Ms Cristine, do you still have the two draft reports

16 that I asked you to extract from the folder, that is the

17 one of 13 March and the one of 9 April?---Yes, I do.

18 If you could also have regard, please, to the comments that were

19 sent by Dr Csutoros and particularly the second comment

20 that I asked you about briefly a moment ago?---Yes.

21 I think I'm correct in identifying the relevant passage of the

22 draft report that was the subject of those comments is at

23 the bottom of page 2. The doc ID is

24 DHHS.1008.001.0504?---Yes.

25 If you look towards the bottom of that page, you'll see a

26 paragraph that starts, "There is no statistical

27 interpretation"?---Yes.

28 We see that the paragraph in the draft report read, "There is no

29 statistical interpretation of evidence for any particular

30 effect on the observed differences in reported mortality

31 across the Latrobe Valley postcodes for the period of the

1 Hazelwood Coal Mine fire", and then it went on, "Although

2 the fire's effect on mortality is a plausible hypothesis,

3 the data presented do not suggest strong evidence for this

4 hypothesis." Do you see that?---Yes.

5 Then if we go back to the comment that was sent from

6 Dr Csutoros, comment number 2, and this is on page 0062,

7 the third complete paragraph of the comment reads, "It is

8 suggested that references be included to explain why this

9 hypothesis would be plausible. This may be because

10 prolonged smoke exposure has been linked to increased

11 mortality and 'plausible hypothesis really means a

12 supposition worthy of investigation'." Do you see

13 that?---Yes, I do.

14 Then if we go to the draft report of 9 April, the one that was

15 provided after these comments were received, and that's

16 page 0509 - apparently we can have these on a split screen,

17 if the board pleases, and that might make it easier for a

18 comparison to be made. So on the left side of the screen

19 we have the draft report of 13 March and on the right side

20 we have the draft report of 9 April. We see, do we not,

21 Ms Cristine, that, at the second sentence in that

22 paragraph, the phrase "a plausible hypothesis" has been

23 replaced by "a supposition worthy of investigation". Do

24 you see that?---Yes, I do.

25 And that was the precise suggested change in the comment that

26 was sent by Dr Csutoros, was it not?---Yes.

27 And it weakens the report, does it not?---I don't know. I don't

28 know if it weakens it or not.

29 What is being said in the draft report is that Associate

30 Professor Barnett's work consists of a plausible hypothesis

31 and we now see in the later draft that that has been

1 reduced to "a supposition worthy of investigation". That

2 is a weakening, is it not, of the description?---I don't

3 know. I don't know whether those phrases are stronger or

4 weaker, one or the other. I do know that, as you can see

5 in that feedback, it does say - it is suggested, and it was

6 a suggestion, that "references be included to explain why a

7 hypothesis is plausible". I'm not sure that I can see that

8 on these versions, but, yes, I can see that some words have

9 been changed. I do not know if it makes it stronger or

10 weaker, I'm just not in a position to comment.

11 That is fine. Just one final matter about comment number 2. I

12 have already asked you about the sentence that reads in the

13 middle of the page, "Alternatively, is it possible that the

14 conclusion could be drawn instead that the data presented

15 do not suggest strong evidence for the author's hypothesis

16 that the fire had an effect on mortality." Do you see

17 that?---Yes.

18 And that, of course, was the central hypothesis in Associate

19 Professor Barnett's work, that the fire had an effect on

20 mortality, would you agree?---I'm not 100 per cent sure of

21 Dr Barnett's central hypothesis.

22 MR NEAL: Could I rise at this stage to say that that is also a

23 dangerous hypothesis for the witness. I would have read

24 what is a correct understanding of Associate Professor

25 Barnett's document as saying there may be a temporal

26 correlation.

27 CHAIRMAN: I think it is enough detail. The evidence from the

28 witness has made it clear she is not sure. I don't think

29 we need to go into the matter further.

30 MR ROZEN: Just one final question, if I could be permitted,

31 about this sequence of events. If you look at the 9 April

1 report, draft report, towards the bottom of page 2, so if

2 we can go back to 0509, please. Do you have that

3 there?---Yes.

4 The very expression - or very close to word for word as

5 suggested in the comment appears in the later draft, does

6 it not, "The data presented in these papers do not suggest

7 strong evidence for the author's assertion of a significant

8 effect of the period of a fire on mortality at that

9 time"?---Yes.

10 That is almost word for word with the suggested insertion in the

11 comment, isn't it?---Yes.

12 I note the time, members of the board, and I'm about to go on to

13 a new topic, so perhaps it might be an appropriate time.

14 CHAIRMAN: Yes. We'll adjourn now and resume at 2 o'clock.

15 <(THE WITNESS WITHDREW)

16 LUNCHEON ADJOURNMENT

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1 UPON RESUMING AT 2.00 P.M.:

2 <LINDA CRISTINE, recalled:

3 MR ROZEN: Ms Cristine, I think before the luncheon adjournment

4 I'd been asking you some questions about the communication

5 between the department and the University of Melbourne

6 about the report which was the critical appraisal of

7 Associate Professor Barnett's work. Do you recall

8 that?---Yes.

9 And I think you agreed with me earlier that there was a third

10 report that was ultimately provided by the university and

11 the department has provided us with a communication which

12 was between Dr Neil and Dr Flander about that report. I

13 think you're aware of those communications?---Yes, I am.

14 You told us earlier that Dr Neil in effect stood in the shoes

15 vacated by Dr Lester in terms of the principal role

16 communicating with the university. Maybe that is not a

17 fair characterisation of what you said to us earlier?---I

18 would qualify that to say Dr Neil stood in the role of

19 project manager to make sure the project is complete. He

20 didn't take on the responsibilities that would usually be

21 part of a chief health officer's role.

22 That probably leads to my next question. Why didn't Dr Ackland,

23 who was the acting chief health officer, why didn't he just

24 step into that role, do you know?---No, I'm not sure. I

25 would be speculating, but I actually think it is because

26 the project had moved into really clear written project

27 briefs, deliverables, come-back, it is not in the early

28 days of formation - that is a speculation.

29 Thank you. If I can change topic somewhat and ask you a couple

30 of questions about the long-term health study, please.

31 What role do you presently have in relation to the

1 management of the Monash University contract for the

2 long-term health study?---What role did I personally have?

3 Yes, if any?---I don't have a key role in that. Again, it is

4 considered now a project, it is a long-term project, and

5 the project management team, so Dr Andrew Neil again, is

6 just being a point of contact for that particular project.

7 My question goes to a specific issue, and that is the scope of

8 the study and whether it extends beyond residents of

9 Morwell to, for example, firefighters who visited Morwell

10 during the fire. We understand the position to be that it

11 is the former, that firefighters are excluded from the

12 scope?---Yes. Perhaps it would help that my current role

13 as a director in that team is to ensure that all of the

14 related projects that enable us to implement the

15 recommendations from the first report, the 2014 report from

16 the Hazelwood Mine Fire Inquiry, that they get completed,

17 so I'm driving a range of projects and that we are well

18 served to provide as much information as we can to assist

19 the Inquiry, the reopened Inquiry. The long-term health

20 study is one of those, so I have been asked that question

21 on clarifying the scope of the study and I can clarify that

22 the scope of the study is for the communities in Latrobe,

23 with focus on the community in Morwell.

24 Can you tell us why, for example, firefighters are excluded from

25 the scope, that is firefighters who are not resident of

26 Morwell?---That's correct. If a firefighter or a responder

27 is a resident of Morwell, they would be included. In those

28 deliberations, my understanding is that firefighters and

29 responders who are outside the area or interstate might

30 have their own, and I know in the view of the CFA, have

31 their own program or study about monitoring health impacts

1 and the purpose of this particular long-term health study

2 was about residents.

3 The Inquiry has been provided with a letter from the government

4 dated 28 August 2015. It is behind tab 36 in the hearing

5 book. I don't have a doc ID?---It is only two pages.

6 I do now. VGSO.1014.001.0001. Do you have that letter in front

7 of you?---Yes.

8 And it is on the screen?---Yes.

9 As you'll see, it is headed Scope of the long-term health study

10 and it starts, "We confirm that the DHHS carefully

11 considered the scope of the Hazelwood long-term health

12 study and determined the focus be on identifying potential

13 public and community outcomes for Latrobe Valley residents

14 impacted by the Hazelwood Mine fire"?---Yes.

15 And that is consistent with what you've just said to us, is it

16 not?---Yes.

17 If you could turn to the second page, please, the second

18 complete paragraph?---Yes.

19 You'll see it starts, "In relation to emergency responders in

20 particular, DHHS believe there would be significant

21 methodological issues to include non-resident firefighters

22 in the study." Is that a view that you hold?---Yes.

23 Can you explain what those significant methodological issues

24 are, from your perspective?---My understanding about

25 firefighters or responders is that there may be multiple

26 fires over an occupational lifetime that would mean that a

27 different study would need to be designed. I'm not an

28 expert in study design. I think it would be different

29 compared to a community that might be compared to a

30 different control community.

31 I would assume that the department would take some advice from a

1 consultant from Monash University about such methodological

2 issues?---We might take advice from a range of sources, but

3 included in particular, given paid firefighters and CFA

4 have a range of programs, I'd also take advice from other

5 government agencies and other providers who work in

6 partnership with the CFA and we would need to consider what

7 other programs are in place and there may be a range of

8 experts who could provide some information or advice about

9 methodology as well.

10 Do you know if there has been any discussion with Monash

11 University about whether those methodological concerns

12 could be overcome?---No.

13 You don't know whether there's been any conversation?---Not to

14 that specific question, about whether those methodological

15 issues could be overcome within the existing mine fire

16 study, no.

17 Just so I understand your answer, are you saying you don't know

18 whether there have been those discussions or there have not

19 been those discussions?---I don't know if there have been

20 those discussions in relation to the very specific question

21 of whether methodological issues could be overcome within

22 the scope of the existing long-term health study.

23 Do you think it would be helpful to have those discussions with

24 Monash University?---I think it would be helpful to have

25 those conversations with a range of people, and I have

26 mentioned the CFA, but there might be others. But yes, I

27 think it would be helpful to have further conversations

28 about this and to work through what is existing.

29 I should tender that letter, if the board pleases, that is the

30 letter of 28 August 2013, behind tab 36.

31 #EXHIBIT 5 - Letter dated 28/8/2013, VGSO to HMFI.

1 Just before I end my questioning of this witness, there are a

2 number of documents which I reflected to tender - that is

3 the draft reports and the email communications. I've got

4 the document identifications but I don't have the

5 descriptions in front of me. If it is acceptable to the

6 board, I'll put together a list and tender those documents

7 first thing tomorrow.

8 CHAIRMAN: Yes, that probably is a better way. It will take up

9 less time.

10 MR ROZEN: That concludes my questioning of Ms Cristine.

11 PROFESSOR CATFORD: Could I just ask a few questions. Thank you

12 very much, Ms Cristine, for your evidence. Can you just

13 explain what your current role is about. I'm not quite

14 clear about that?---My current role is I'm one of many

15 executives in the department - it is a large department -

16 and I'm nested in the team to specifically ensure that we

17 provide as much information, as open as we can, to the

18 reopened Inquiry, for this one, and to ensure that the

19 deliverables and the commitments that we made from the

20 recommendations and affirmations and proposals for further

21 consideration in the first report, that they progress in as

22 rapid a way as we can.

23 I wonder if I could just refer to communications. We've heard

24 some evidence from Ron Ipsen earlier on today about very

25 minimal - no contact with Voices of the Valley over the

26 issue around deaths. Do you think that was the appropriate

27 strategy for the department, basically not to communicate

28 with Voices of the Valley?---I don't agree that we haven't

29 communicated, but if I can make the comment, and I'm going

30 way beyond just answering a straight question here, testing

31 whether communications are adequate or not is usually about

1 the receiver, and whether the level of engagement has been

2 adequate or not, then that's from the receiver. So I don't

3 agree that we haven't made attempts to communicate.

4 Can you explain to us what attempts have you made to communicate

5 with them about their concerns about excess deaths?---I

6 wouldn't be precise if I wanted to give you a quantity or

7 numbers or attempts, so I'd have to take that on notice.

8 What sort of things, broadly? Did anyone actually meet with

9 them from the department?---I would have to check who has

10 met with them, but I understand there have been meetings

11 between agencies and Voices of the Valley or with

12 government, but I would have to get you the details, the

13 dates and who they were, to represent that accurately.

14 I think that would be very helpful because we heard earlier that

15 there had been no communication with Voices of the Valley

16 and clearly there has been a lot of anxiety in the

17 community about this, to the point that they're actually

18 fundraising to buy data from the Registrar of Births and

19 Deaths, quite an unusual step. So clearly they weren't

20 feeling that the department was supporting them in trying

21 to understand what was going on in terms of deaths, would

22 that be fair?---I think we have heard that and, as I said,

23 how communication or engagement is received is actually

24 what matters, so I think that is fair.

25 And we still basically don't know what engagement the department

26 had then and you're not able to help us any further?---I

27 can find out the details. I know there has been some, but

28 I think you want it to be as accurate as possible.

29 Yes. The point behind this is just a few weeks before this was

30 occurring, the state presented advice to us in the former

31 Inquiry that they were committed to improve communications

1 with the local community and it was one of the actions that

2 the state mentioned, and I just quote from our first

3 report, on page 35. The Victorian Government said, "The

4 state will improve local engagement on health issues."

5 Well, clearly, if a number of people are really concerned

6 about excess deaths, that is a pretty important health

7 issue, so local engagement would be very important, would

8 you agree?---Absolutely, and I can say from that first

9 report that one of the strategies that we put in place was

10 to source funds - you don't do that very quickly - so that

11 we could recruit in particular a community engagement

12 officer specifically for Morwell, and I understand that

13 that is under recruitment, so that we can improve it, but

14 we resource the improvement as well. So I know that that

15 is in train.

16 I think perhaps, looking at our counsel, we could gain some

17 information on what the level of engagement was with Voices

18 of the Valley and other community members about this

19 concern about deaths?---Yes, certainly.

20 Just finally can I ask you about Dawn Sims' evidence, and I'm

21 referring, if someone could find this, it is the second

22 submission, WIT.0002.001.0001 and it is on the second page.

23 You might be able to find that?---Is that the first folder?

24 It is the first folder, tab 2.

25 MRS ROPER: 3.

26 PROFESSOR CATFORD: Tab 3?---Yes.

27 If you would turn to the second page. At the top, in para 10,

28 it says, "The registrar contacted DHHS to confirm whether

29 it was appropriate to refer Dr Gunter to the public health

30 unit to assist him with his request for data. DHHS

31 declined this approach." So on the basis that you had

1 already committed to engage locally on health issues, do

2 you know why the department didn't follow up that lead from

3 Births, Deaths and Marriages to engage with Dr Gunter and

4 other members of Voices of the Valley about their

5 concerns?---I'm not 100 per cent sure. I read that as

6 would we provide the data that we have on and my

7 understanding from internal enquiries is that best they get

8 the data from the source rather than through us, so I'm not

9 sure the question was on engagement, I thought it was

10 simply about would we provide data that we might have.

11 So certainly on 17 August obviously the department knew that

12 there were enquiries coming and so that would have given a

13 good indication it was a good time to engage with the

14 community on this, so perhaps we'll wait for that further

15 information to see how the department did respond?---Okay.

16 Thank you very much. Thank you.

17 CHAIRMAN: Any questions?

18 <CROSS-EXAMINED BY MR TERNES:

19 Ms Cristine, if I could take you to document ID - you were asked

20 a number of questions by counsel assisting in relation to

21 communications between your department and Dr Flander. I'd

22 like to take you to a couple of documents in that respect.

23 If I can take you to document DHHS.1008.001.0072. That is

24 at tab 34 of your folder?---I just need a reminder. Was it

25 0032?

26 0072, tab 34?---I have that.

27 Do you have that document there?---It is an email, yes.

28 So that is an email. For the board's reference, that is 0072.

29 Can you identify that document? It appears to be an email

30 from Dr Andrew Neil to Dr Flander; is that right?---That's

31 correct.

1 Dated 28 April 2015; is that right?---Yes.

2 If I can take you down to the second substantive paragraph of

3 that email. I can see that is on the screen as well. I'll

4 just read a section of that. It says, "Given that this is

5 a key finding of the paper", so a reference to no

6 additional deaths rather than the 0.8 deaths per postcode,

7 "we wonder if it could be included in the executive

8 summary." Then the email goes on to say, "If you're happy

9 to make this change, would it be possible to have the

10 finalised document back." Can you see that there?---Yes.

11 I take you next, if I could, to 0062, so still at tab 34. Do

12 you have that document there?---Yes.

13 That is entitled DH feedback to Louisa Flander, University of

14 Melbourne. Would you agree that this is a document that

15 was provided to Dr Flander in order for her to finalise one

16 of her reports?---Yes. I might just check what you mean by

17 "finalised". I think there was some other iterations, but

18 it was provided in order to provide comment and feedback in

19 the finalisation of the report, yes.

20 If I can take you to paragraph 6 of that document - that is in

21 fact on 0063. Under the second paragraph of document 6

22 there, at the end of that paragraph it reads, "This

23 statement has been used by the media", and "this statement"

24 is a reference to work by Associate Professor

25 Barnett?---M'mm-hmm.

26 "This statement has been used by the media and has been the

27 de facto conclusion akin to 10 per cent more deaths due to

28 fire and 9.6 deaths caused by fire, so needs to be

29 challenged more directly"?---Yes.

30 You can see that there?---Yes.

31 There is two more examples I'd like to take you to. If you

1 could go to 0077, please?---Yes.

2 That is a document that begins, "Hello Dr Flander", but I can't

3 see a date to that document. Have you got that there,

4 0077?---Yes, I do.

5 In paragraph 3 of that document is found words to the effect

6 that the department wonders if the issue of small data sets

7 could be discussed in more detail. "We wonder if more

8 emphasis could be given to the fact that all-cause

9 mortality should not be considered a good indicator of

10 exposure to smoke or particular matter compared to

11 cardiovascular and respiratory mortality." You can see

12 that there?---Yes.

13 And you agree that feedback was provided to Dr Flander?---That's

14 correct.

15 There is just one remaining one. If I can take you to

16 0083?---I'm there.

17 And paragraph 1 of that document. That is a document entitled,

18 "Comments on age standardised mortality and cause of death

19 in the Latrobe Valley", et cetera, it goes on. Under

20 General Issues, (1) - you can see that there?---Yes.

21 The question there is, "Could a context or background section be

22 included, the following content may be helpful", and then

23 there is a paragraph containing various information, which

24 I suggest to you goes to the unusually hot weather that was

25 surrounding the time of January/February 2014; is that

26 right?---Yes.

27 You used the word "project management" several times in your

28 evidence and I'm going to suggest to you that the

29 Department of Health took an adversarial approach in

30 obtaining the Flander reports, and particularly the

31 critique of Associate Professor Barnett's work. Do you

1 agree with that suggestion?---No, I don't.

2 Notwithstanding the documents that I have taken you to, which

3 "need to challenge more directly" was one of those

4 references?---No, I don't think we took an adversarial

5 approach.

6 I don't have further questions. Thank you.

7 MR ROZEN: There's just one matter that arises from the

8 questions of Professor Catford, if I could be permitted.

9 <RE-EXAMINED BY MR ROZEN:

10 This is in the context of the communication with Births, Deaths

11 and Marriages and the provision of data. Is it the case

12 that the data that the Health Department obtained from the

13 Registry of Births, Deaths and Marriages, the department

14 doesn't have to pay for that data; is that right?---I don't

15 think we do. I don't think we have to pay for it.

16 Whereas a member of the public, such as Voices of the Valley,

17 they do have to pay for data, don't they?---That was

18 personally a surprise to me too. You'd have to ask Births,

19 Deaths and Marriages about that, I'm sorry.

20 The reason I ask you is that if the department had provided the

21 data, rather than Voices of the Valley having to go to the

22 Registry of Births, Deaths and Marriages, then they would

23 not have had to pay for it, do you agree with that?---I'm

24 not sure. You'd have to ask Births, Deaths and Marriages

25 whether there are exceptions to being paid for. I wouldn't

26 know.

27 Thank you. That is the conclusion of my questions.

28 PROFESSOR CATFORD: Can I just ask I thought the department

29 passed data to Dr Lester. Was that free of charge or was

30 that charged?---Yes, that is my understanding, that was

31 provided free.

1 So in some ways you have answered your question, haven't you,

2 that you could have provided the data to Voices of the

3 Valley at no charge?---I misunderstood the question. I

4 thought the question was whether Births, Deaths and

5 Marriages could have provided it free of charge. I thought

6 the question to me - I'm just clarifying - was did Births,

7 Deaths and Marriages ask us to pass on data so it would be

8 free. I didn't read the request that way. I thought the

9 question that you asked me was about engagement, I think it

10 was simply would we pass on data we had. I think under

11 those circumstances we said they should probably go to the

12 source and you must understand this is in a context where

13 people, and it sort of plays out a little bit, are not

14 trusting that the data that we provide is as is, so for

15 simplicity, go to the source to provide that, I think, but

16 I don't know the answer about whether it costs or not costs

17 and what circumstances are applied there, I couldn't answer

18 that.

19 I mean, the situation here is the community is desperate for

20 information, they have very few resources, they're trying

21 to get some clearance. The Department of Health, it would

22 seem, is not engaging with them and, you know, they're

23 finding it difficult to get hold of data from Births,

24 Deaths and Marriages and eventually having to use their own

25 funds to provide that. Would you agree it comes back to

26 this whole thing about building trust and community

27 engagement. Do you think that is the right way to treat a

28 community like this?---Do I think it is the right way about

29 not passing on information from Births, Deaths and

30 Marriages?

31 I'm talking about this whole question of engagement. We have

1 got a community who is clearly distressed about the

2 concerns about excess deaths, to the point they're actually

3 counting up deaths from newspapers because they can't get

4 any understanding here and, you know, it doesn't seem to me

5 the Department of Health is particularly helping them in

6 that process, where they might have engaged, and certainly

7 provided the data that they had from Births, Deaths and

8 Marriages?---Perhaps I can answer it this way: at the

9 earliest outset that we had the data available to us at the

10 time, that information was put on the website as much as

11 possible - that may be contested, but it was put on the

12 website, and I think we have supplied that in attachments

13 about public statements we have made about the data

14 available, to help people understand and to really express

15 for us how open we want to be, just as we are in this

16 process with the Inquiry, to give as much information as

17 possible. So your point is valid, I agree with your point,

18 that we need to do more.

19 Are you satisfied with this story to date about the information

20 that you had available, the engagement process with the

21 community, trying to, you know, build some trust from a

22 situation which was not good just a few weeks before, when

23 our report came out?---We're not satisfied, no, we're not

24 satisfied, and that is because at the point in time we may

25 make decisions, but there is always room for us to improve,

26 there is always room for us to do better and learn from

27 that and we're open to that.

28 Thank you.

29 MR ATTIWILL: I don't have any questions but I do wish to say

30 this, and I will have a discussion with Mr Rosen after the

31 hearing.

1 CHAIRMAN: About the loose ends.

2 MR ATTIWILL: I have already indicated to Mr Rosen we will look

3 at the community consultation and letters and meetings in

4 particular, and we will also look carefully at this BDM

5 data issue and endeavour to provide a response at the

6 earliest responsibility, hopefully tomorrow.

7 CHAIRMAN: Thank you, that is appreciated.

8 THE WITNESS: Thank you.

9 <(THE WITNESS WITHDREW)

10 MS SHANN: I call Professor Michael Abramson.

11 <MICHAEL JOHN ABRAMSON, sworn and examined:

12 MS SHANN: Thank you, professor. Could you just repeat your

13 full name again for the board, please?---Michael John

14 Abramson.

15 And your professional address?---So I'm a professor at Monash

16 University, I'm based at the Alfred Centre, 99 Commercial

17 Road, Melbourne.

18 And could you outline for the board your professional

19 qualifications and experience by way of overview?---I'm a

20 medical graduate from Monash University having graduated

21 with a Bachelor of Medicine, Bachelor of Surgery and

22 Bachelor of Science with honours in 1979. I hold a doctor

23 of philosophy from the University of Newcastle awarded in

24 1990. I'm a fellow of the Royal Australasian College of

25 Physicians and Australasian Faculty of Public Medicine.

26 And in terms of your connection with Monash University

27 currently?---I'm a professor of clinical epidemiology, I

28 was first appointed as a senior lecturer at Monash

29 University in 1989.

30 You have made a statement in relation to this Inquiry and that

31 statement is in the folder in front of you behind tab 7 and

1 it's also at WIT.0003.001.0001, so it should be on the

2 screen at the moment; is that your statement?---Yes, it is.

3 And have you read over that recently?---Yes.

4 Are the contents of it true and correct?---They are.

5 Anything you wish to change?---Not at this stage.

6 I tender that.

7 #EXHIBIT 6 - Statement of Professor Abramson.

8 Professor, I'm going to ask you questions under a few topic

9 headings. The first topic is in relation to the Hazelwood

10 mine fire health study also known as the long-term health

11 study and really what that is, and then coming to how it

12 might connect with solving the question did the fire

13 contribute to an increase in deaths. So firstly, could you

14 just explain what your connection to that study is?---So

15 I'm the principal investigator of that study which was

16 awarded as a tender by the then Department of Health to

17 Monash University.

18 And what is the study?---The Hazelwood health study is a complex

19 program of research potentially extending over ten or more

20 years and it basically attempts to answer the question as

21 to whether exposure to the smoke from the Hazelwood mine

22 fire has had health effects on the exposed community.

23 And health effects include whether or not people die?---That is

24 one effect, but we were asked particularly to focus on

25 long-term effects such as effects on heart and lung

26 disease, effects on mental health, the effect on the health

27 and development of children and also whether there was any

28 increased risk of cancer.

29 So just coming back then, Monash was awarded the contract in

30 October 2014, is that right?---Yes.

31 And in terms of the funding arrangements, can you just describe

1 how that works?---I understand it's a fairly typical state

2 Government contract. I perhaps should also explain that

3 the vast bulk of my research has been funded by extensive

4 grants such as those from the Medical Research Council so I

5 have been on a learning process about this but the contract

6 has associated with the timeline and milestones and

7 deliverables, and there are payments that are made on

8 satisfaction of those deliverables.

9 And it's funded through the Department of Health and Human

10 Services?---As it's now called, yes.

11 It's conducted by a team including yourself and the research

12 group?---Yes, we're an independent research group and we're

13 doing this in collaboration with the School of Rural Health

14 of Monash University which is based own here in the Latrobe

15 Valley and a number of other academic collaborators.

16 You spoke about the study really being about what might be the

17 long-term health effects from the Hazelwood mine fire, what

18 are the potential health effects that the study is starting

19 to look at and was really designed around?---So we will

20 shortly launch an adult survey and this is a survey of the

21 adult population of Morwell and a comparison population

22 which we have chosen to be in Sale and that will allow us

23 to answer the question as to whether symptoms and the

24 effects on mental health are more common amongst those who

25 are exposed compared to those who are not exposed. We also

26 have a school study already underway having been

27 successfully piloted in other schools and that will address

28 the question as to whether the smoke and exposure and

29 disruption that was associated with the fire has an effect

30 on children's ultimately educational end points. We

31 commenced a policy review looking at older people and

1 trying to inform future responses should another situation

2 of this type arise. We have a subcontract with the

3 Federation University of Australia which of course has a

4 campus here in Latrobe Valley, and they are undertaking a

5 study of community resilience and they commenced some focus

6 groups with what are called key informants. We have a

7 subcontract with the University of Tasmania who are leading

8 what's now called the early life follow up, or ELF study,

9 and they are hoping to shortly start recruiting mothers and

10 babies particularly of those children who were either in

11 the womb at the time of the fire or up to 2 years of age,

12 and they will undergo a series of assessments to see if

13 there is any difference in their health and development

14 compared to children who were not so exposed. I think they

15 are the major components of this very large program of

16 research that is currently underway.

17 You referred to them as substreams?---Our nomenclature has

18 changed a little as the program has developed. Certainly

19 we refer to them as streams, some of them now have simpler

20 names, so for example, the child health and development

21 stream has become the early life follow up or ELF study.

22 In any event within the long-term health study or the study

23 there are different components?---Absolutely, it isn't just

24 a single study because we were asked a series of questions

25 and each of those needed a study in its own right.

26 And each component has a different methodology?---There are some

27 methods in common but broadly speaking things like the

28 adult survey, the school study and the early life follow up

29 are epidemiological studies and they are using quantitative

30 methods where we're collecting data and analysing data.

31 Can you explain as you go the terms you're using?---Certainly.

1 So quantitative study is basically dealing with numerical

2 data, we're surveying people, asking them questions and

3 we're going to report that in terms of proportions and do

4 statistical tests, and then some of the other streams I

5 referred to are using a more qualitative approach, using

6 focus groups, interviewing people, and that qualitative

7 data has to be analysed in a different way but the two are

8 really complimentary and answer different questions.

9 In terms of looking at the study overall, the potential health

10 effects which are sort of encompassed by, include

11 cardiovascular and respiratory disease?---Absolutely, and

12 these will be specifically addressed by substudies once we

13 have completed the adult survey.

14 So the data will encompass what the adult survey is but the

15 adult survey will cover cardiovascular and respiratory

16 disease?---It will obtain some data on those particularly

17 the sort of things of which people are aware. So we will

18 ask them about pre-existing conditions such as whether they

19 have had a heart attack or if they've had chronic lung

20 disease but the substudies will contain more objective

21 information conducted such as samples of participants.

22 The potential health effects covered by the study overall also

23 includes low birth weight, psychological impacts,

24 development of cancer?---Yes.

25 We have heard quite a bit this morning about the issue of

26 community engagement, how is the Monash study dealing with

27 that issue of engaging with the Latrobe Valley community in

28 the study?---We take it very seriously and I would

29 particularly like to acknowledge the contribution of the

30 principal co-investigator for Gippsland, Professor Judi

31 Walker from the School of Rural Health. So as an example,

1 we have a community advisory committee that she chairs in

2 which the chief health officer is represented as are a

3 number of the other health services within the Latrobe

4 Valley, and we have three community members. So they are

5 involved in consultations about the design of the study and

6 how to conduct various aspects of it. We are also required

7 to hold community briefings and in fact the last time I was

8 here in Kernot Hall was to deliver one of those briefings

9 where we invited people to attend, we had a reasonable

10 attendance and there was certainly some very lively

11 discussion and I anticipate we will be holding more of

12 those in the future. I do know that Professor Walker

13 conducted another community consultation in Sale once we

14 announced the selection of that community as the comparison

15 group. The final aspect of community engagement involves

16 actually approaching community groups. I know Professor

17 Walker and our colleague, Dr Matthew Carroll also from the

18 School of Rural Health have attended a number of meetings

19 of Probus Club and senior citizens and various other groups

20 within the Latrobe Valley and that is something that will

21 continue as the study develops.

22 In terms of the aims of the study, in your statement at

23 paragraph 7 you set out four questions which the study aims

24 to answer over its duration?---M'mm.

25 Can you just detail what those questions are for the board?---Do

26 you wish me to read them or explain them in greater detail?

27 Either way, whatever you're comfortable with but you have them

28 down on the page if you need them?---Okay. So the first of

29 those questions is about the development of heart and lung

30 conditions in those who are heavily exposed, i.e. the

31 community at Morwell, and those who are much less exposed,

1 i.e. the community of Sale. So we will obtain some

2 information about that from the adult survey. For example,

3 we have questions specifically about respiratory symptoms

4 but it will also be necessary to link with routinely

5 collected data such as those collected from Victorian

6 hospitals. So you can see, for example, whether the rate

7 of hospital admissions for heart attacks is greater in

8 Morwell than it is in, say, the rest of Gippsland. We very

9 recently obtained approval from Victorian Ambulance to

10 access data from the Victorian Ambulance cardio arrest

11 inventory and also the Victorian Ambulance clinical

12 information system. So we will be able to use that to see

13 if there is a difference in call-outs for breathlessness or

14 chest pain in Morwell and Latrobe Valley compared with the

15 rest of Gippsland. So that's really how we're going about

16 answering that first question.

17 I might just stop you there, you have referred a few times to

18 the adult survey, can you just explain what is the adult

19 survey and how it's set up?---The adult survey is basically

20 a survey of the adult population in Morwell people who were

21 18 years or older at the time of the fire, and a comparison

22 community in Sale. Our proposal is to recruit a sample

23 utilising the Victorian electoral roll and I have applied

24 to the Electoral Commission for access to the roll.

25 Assuming we are, and we haven't yet been granted access to

26 the roll, we will then send out letters of invitation - I

27 should perhaps have said right at the outset the whole of

28 the Hazelwood program of research is under the ethical

29 oversight of the ethics committee, the human research

30 ethics committee is the participating - with all approvals

31 specifically from Monash University the human research

1 ethics committee to undertake the adult survey. So we then

2 send out a letter of invitation. We are currently in the

3 process of letting a tender to conduct what are called

4 CATI, computer assisted telephone interviews, this is a

5 very widely used method of obtaining population data, for

6 example, it's used in the Victorian population health

7 survey which is conducted for the Department of Health and

8 Human Services.

9 That's a way of reaching out to residents of Morwell?---Yes.

10 To try to engage them in the survey?---Absolutely, I mean this

11 survey cannot be done without their participation.

12 How many people are you intending to recruit as part of the

13 participation of the adult survey?---The target sample size

14 is about 7,500 which is about 70 per cent of the adult

15 population of Morwell, and about 4,000 people in Sale which

16 is a similar proportion. I would have to admit that is a

17 very ambitious target and we don't anticipate everybody

18 will agree to participate via computer assisted telephone

19 interview, so we also have options for on-line

20 participation and we will send out some postal

21 questionnaires where we only have an address and we don't

22 know the name of people who reside at that address.

23 In terms of the design of the adult survey, you referred a

24 number of times to Sale, that's the comparison

25 community?---Yes.

26 And explain how that works?---So it involves a fair bit of

27 consideration to identify a suitable comparison community.

28 The ideal comparison community would have almost exactly

29 the same population but not have been exposed to the smoke

30 from the mine fire. So we subcontracted to CSIRO in

31 relation to its atmosphere flagship and they did some

1 modelling looking at dispersion of smoke.

2 If I could perhaps stop you there and ask if the following could

3 be put up, WIT.0003.001.0006?---Thank you. I must

4 apologise it looks like we provided you with the low

5 resolution version, so there is a higher resolution

6 version. You would like me to talk to this figure?

7 Is that the figure you were mentioned in relation to

8 CSIRO?---Yes, so what you can see there is the

9 concentrations of PM 2.5, these are the fine particles less

10 than two and a half thousandth of a millimetre in diameter

11 which have been modelled by CSIRO utilising their model and

12 the technical details of that are not really in my area of

13 expertise but they are internationally recognised as

14 experts at doing this type of modelling. And you can see

15 the plume of smoke basically plume up and down the valley

16 in an easterly and a westerly direction, but the

17 concentrations were highest in Morwell which is why that's

18 the darkest colour. We realised after commissioning that

19 report that it wouldn't be possible to select another

20 community within the Latrobe Valley for the comparison, we

21 wanted the comparison community to also be a rural

22 community and the practical consideration for us was that

23 the School of Rural Health needed to have some

24 infrastructure so we could actually do the research in that

25 town. The other factor weighing on the consideration was

26 the socio-demographic make up of the community, and again I

27 would like to acknowledge the assistance of Dr Rebecca

28 Kippen who is a demographer who has been working with us on

29 this, and she obtained data from the Bureau of Statistics

30 2011 census, and in the end we decided Sale would probably

31 be the best choice. The community is not exactly the same

1 as Morwell but with some selection of a statistical area of

2 level 1 within that town and some statistical adjustments

3 we felt we could get a reasonably comparable population and

4 as the figures show there was virtually no exposure to

5 smoke from the mine fire.

6 Is the intention with the survey over time to essentially track

7 whether there are differences in adverse health effects in

8 Morwell residents as compared to Sale residents?---That is

9 certainly a big part of the analysis of the adult survey

10 and the follow up studies that I have started to describe.

11 Just again staying with the adult survey, and we will come to

12 talk about some of the other components, but the scope of

13 the adult survey is limited to residents of Morwell?---Yes,

14 at present it is, and a major reason for that is that to do

15 a valid epidemiological research we need a sampling frame,

16 and I suspect this isn't sort of generally understood in

17 the community, we faced a number of questions about that at

18 our community consultation. But with the probable

19 exception of the census in which almost everybody is

20 required to participate, almost all research studies rely

21 on a sample and we do have a sampling frame for Morwell and

22 for Sale if we can access the electoral roll, because in

23 Australia it's compulsory to register to vote and it's

24 compulsory to vote, and there are very few silent electors

25 who are not listed on that roll.

26 Thinking then about the adult survey and that particular issue,

27 taking emergency responders to the fire?---Yes.

28 And for example, fire fighters, police, would it be currently

29 unless they lived in Morwell they wouldn't be part of the

30 adult survey, is that right?---Yes, that's right.

31 Would it be possible to include them in the scope of the study

1 by having a substream which dealt with that particular

2 group?---It would be possible, I mean we're seriously

3 interested in the emergency responders and I do know that

4 some groups of them are very interested in participating

5 and in fact we have had an approach from Victoria Police

6 but currently - - -

7 Sorry, just to interrupt, what was that approach?---There is a

8 letter that I provided to you in which they expressed

9 interest in participating in the study and indeed a

10 representative of Victoria Police attended the community

11 consultation in Morwell and made exactly the same point.

12 Was that in relation to the police members who were stationed at

13 the Morwell Police Station during the fire?---Yes.

14 Have you had any contact from CFA or MFB, Melbourne Fire

15 Brigade?---No.

16 So in terms of how you would deal with obtaining a comparison

17 group for emergency responders, is that possible, and if so

18 how?---We haven't given this a great deal of thought

19 because it's beyond the scope of the present study. But my

20 immediate response would be that if it is possible for them

21 to participate, the exposed group would clearly be police

22 and fire fighters and other emergency responders deployed

23 to the fire, and a comparison group would be police and

24 other emergency responders who were not deployed to the

25 fire. And the reason that we would need that sort of study

26 design is the emergency services have quite stringent

27 screening procedures and their members would be healthier

28 than the general population. So if we were to compare,

29 say, a sample of fire fighters with the general community

30 we're likely to observe what's called the healthy worker

31 effect.

1 Similarly it might be the case that there are particular

2 features of being a fire fighter, for example, who attends

3 at fires regularly which may need to be controlled out of

4 the data, is that right?---Oh, absolutely, other fire

5 fighters would have been exposed to other fires.

6 But that is something that whilst not currently part of the

7 scope of the study, is of interest?---It's of genuine

8 interest to us as scientists because we view the emergency

9 responders in a sense as positive controls that are being

10 immediately observed. So if there are any side-effects

11 they would probably be more likely to be affected in that

12 group than the community at large.

13 So over time, over the long-term the study is run for, in terms

14 of the information that you're hoping to obtain about

15 health effects including whether or not there was an

16 increase in death, that might be helpful to actually have

17 information about emergency responders?---It would be very

18 helpful. My background is as a respiratory physician so I

19 have been particularly interested in effects on the

20 respiratory system which of course is how people were first

21 exposed to smoke, and one of the things we want to do as

22 part of a respiratory stream over the next nine years is to

23 make measurements of lung function in a sample of

24 participants. So I think it would be extremely valuable to

25 be able to compare the rate of decline amongst the

26 emergency responders with the rate of decline in the

27 exposed community as a comparison.

28 Just going back, you mentioned a number of streams or components

29 of the study and we have talked a bit about the adult

30 survey, in terms of some of the other areas they do cover a

31 broader range of at least geographical locations other than

1 Morwell residents?---Yes.

2 So for example, the school study will cover the entire Latrobe

3 Valley?---Yes, they have been recruiting schools throughout

4 the Latrobe Valley and the thinking there was the fire was

5 very disruptive to schools over quite a wide area and there

6 were some schools that were evacuated and the children had

7 to be transported by bus to other schools. So I think the

8 exposures of interest are broader than just the smoke.

9 Similarly in terms of the early life follow up study, that again

10 is Latrobe Valley in its entirety?---Yes, the main

11 comparison there is between the children who were in utero

12 or up to 2 years of age at the time of the fire and those

13 who were not exposed.

14 In terms of the start date, I understand the initial work took

15 place back in 2014?---Not really, we have been piloting

16 more recently than that because as I mentioned earlier we

17 needed to obtain ethics approval.

18 In terms of the commencement of the different research streams,

19 have some already commenced?---Yes.

20 And with the adult survey when is it expected the data will

21 start to come in?---We're hoping to start the survey later

22 this year, but there are really two things that need to be

23 achieved for that. The first is we need to be granted

24 access to the electoral roll and the second is we need to

25 award a tender to a company to undertake the CATI telephone

26 interviews.

27 And in terms of the length of the study, you have spoken about

28 ten years and beyond?---M'mm.

29 How is it actually set up in terms of length?---So we have been

30 awarded an initial three year contract and that will be

31 long enough to complete the adult survey and commence some

1 of the substudies. It will be long enough for the first

2 round of testing in the school study. Perhaps I should

3 have said earlier, because we're interested in educational

4 end points, the school study is very much coordinated with

5 NAPLAN testing. So selecting children in years 3, 5, 7 and

6 9, so the logical follow up period in that study is two

7 years, that will then extend over the next nine years. So

8 that's the plan for the first ten years of the program.

9 Coming to the specific questions that the board has to answer in

10 relation to this term of reference which is in essence did

11 the fire contribute to an increase in deaths, in the

12 long-term is that a question that the study hopes to be

13 able to answer?---We do hope that we will shed some light

14 on that and what we plan to do ultimately is to link the

15 responses in the adult survey to the national death index

16 and we can then see if there is a difference in the rates

17 of specific causes of death between participants in Morwell

18 and participants in Sale.

19 Can you explain what the national death index is?---The national

20 death index is a compilation of the death registrations in

21 the states and territories, it is maintained by the

22 Australian Institute of Health and Welfare in Canberra.

23 So that would include, for example, from Victoria the

24 information from Births, Deaths and Marriages?---Yes,

25 absolutely.

26 So going back then, in terms of the way in which long-term the

27 study may hope to answer that question, can you just detail

28 a little bit more about what the current learning is on

29 that and how the study hopes to answer it?---Well, the

30 analyses that have been conducted up until now have been

31 essentially ecological. They have compared people between

1 different areas and we would hope to undertake an

2 individual analysis, and the advantage of that is that it

3 allows us to adjust for individual confounders. So one

4 which was incredibly important for the sort of health end

5 points we have been discussing is cigarette smoking.

6 When you use the term confounder, what are you describing

7 there?---So a confounding variable is one which is

8 associated with the exposure of interest but can also cause

9 the outcome in its own right.

10 And by that do you mean to say if we're looking at

11 cardiovascular disease that smoking can cause

12 cardiovascular disease so you need to look at a way to

13 determine whether or not smoking is a contributor in a

14 particular case?---Absolutely, cigarette smoke is a very

15 well-established as a cause of cardiovascular disease so if

16 we can't adjust to the effects of cigarette smoking it will

17 be very difficult to determine if there is any extra

18 exposure to the smoke from a mine fire.

19 Looking at the studies which have been done to date that you're

20 aware of, and I will come a little bit later to the

21 research you have done trying to draw together that

22 literature, but in terms of published studies is it correct

23 there is a number which have shown an association between a

24 particular matter and deaths?---Absolutely, most of those

25 have looked at urban background pollution, the sort of

26 particles you find in major cities which are predominantly

27 from things like vehicle exhausts and road dust industry.

28 And I suppose that leads on to the issue have you been able to

29 find an event comparable to the Hazelwood mine fire to the

30 national or international studies?---To the best of our

31 knowledge there has never been a directly comparable event,

1 that is a fire in an open-cut brown coal mine immediately

2 adjacent to a major town. We have identified a fire in

3 Pennsylvania which erupted in an underground black coal

4 mine in 962 and apparently has burned ever since. At the

5 time we did that updated literature review we could not

6 identify any published study in the period of the

7 scientific literature, we have subsequently become aware of

8 two unpublished reports but they don't specifically address

9 the question of mortality.

10 In your statement at paragraph 19 you refer to having requested

11 copies of that research but not yet received it?---Yes.

12 Did you receive it in fact in the last few days since the

13 statement had been completed?---Yes, we have received the

14 reports.

15 And does it assist in terms of answering the question about

16 health effects or increases in mortality as a result of a

17 fire comparable to the Hazelwood mine fire?---Well, I'm

18 honestly not sure to what extent the Centralia fire is

19 comparable to the Hazelwood fire. I don't think these

20 reports provide any assistance at all in relation to deaths

21 because they didn't investigate that. They do provide some

22 information about morbidity or symptoms or diagnoses and we

23 really need to evaluate them in greater detail. I'm

24 hopeful they may provide some insights that will be helpful

25 in interpreting our adult survey, for example.

26 In terms of the Monash study which has been set up, you refer at

27 paragraph 18 of your statement to it being the first of its

28 kind, can you explain what's meant by that?---Well, simply

29 that we're not aware of any other group of scientific

30 researchers having done a similar study of this sort of

31 exposure. I mean, there are other studies looking at

1 environmental health events and one example that does come

2 to mind is the Fukushima study in Japan. I'm sure most

3 people would be aware there was a tsunami and the safety

4 equipment and the back up provisions at the nuclear power

5 plant failed and there was a release of radiation and the

6 Japanese authorities had to evacuate quite a large area,

7 and I am aware there is a health study underway of the

8 people who had to be evacuated but unfortunately I have not

9 yet been able to establish contact with those researchers.

10 Looking at the timeframe on the long-term health study being

11 able to contribute to the answer to the question the board

12 is faced with, when do you hope to be able to have some

13 data which can help to answer that question?---I'm sorry,

14 we're not going to have answers in the timeframe the board

15 has to consider this issue. We do have to provide annual

16 reports for the health department and as I said earlier we

17 also are required to do annual community briefings. I'm

18 hopeful by the time of our second annual report we will

19 have some data, some information from the adult survey and

20 from the school study and clearly by the end of the first

21 three years we will be in a position to say more. At this

22 time I'm not entirely certain when the mortality analysis

23 would be undertaken. We would certainly need to complete

24 the adult survey but the other thing we would need is we

25 would need better exposure data. So I have shown you a

26 figure from CSIRO, they are undertaking further modelling

27 and one of the reasons for the adult survey is we're asking

28 people where they were during the fire and we can then

29 match up the model concentration of PM 2.5 with their

30 location and that will give us individual exposure

31 estimates. So they are not currently available, it would

1 be wonderful to think we can do that analysis at some point

2 during the next year but I'm not yet entirely sure.

3 So certainly the board has to provide a report in relation to

4 this term of reference by 2 December this year, and it

5 sounds clear enough that the results that you're talking

6 about are well down the track after that?---Yes, I'm afraid

7 so.

8 In terms of really what the scope of the study and the adult

9 survey does and doesn't include, what about things which

10 have happened during the fire, deaths that may have

11 happened during the fire and up until the time that the

12 adult survey starts to collect data, will that be within

13 the scope of what you're collecting?---So clearly the

14 people who have died during that timeframe won't be

15 participating in the adult survey. It would be possible to

16 look at some of the collected data such as you have already

17 been hearing about in relation to death registrations but

18 we face the same problem that I described earlier and that

19 is we wouldn't be able to control for individual level

20 confounding factors like cigarette smoking.

21 Turning then to some previous work that you have undertaken - - -

22 PROFESSOR CATFORD: If you're moving onto the other study I

23 wonder if I might interrupt.

24 Mr Abramson, thank you very much, that was very helpful, I do

25 have a couple of questions. So were you looking at the

26 2009 to 2013 mortality data?---At this stage we don't have

27 a definite proposal to do that. We do have this substudy

28 which I call Hazel Link so it's about linked data, analysis

29 of linked data for the purpose of the Hazelwood health

30 study, and that includes things like the ambulance data I

31 mentioned earlier, and of course as you would be aware many

1 people in the community are not - the vast majority of

2 people who suffer a cardiac arrest in the community can't

3 be resuscitated and die at the scene. So those are sudden

4 cardiac deaths and that is something we will examine,

5 exactly how far that data set goes I'm not entirely sure.

6 I think your own study's probably not going to be able to help

7 us very much in our immediate future about answering this

8 question about whether there is excess deaths in 2014

9 associated with the fire as opposed to (indistinct)?---I'm

10 afraid not.

11 Just looking to our other terms of reference in terms of the

12 future health service and health improvement in the valley,

13 is it really three years from now that you might have some

14 more information about the health impact that might be

15 useful for health planning purposes, would that be fair or

16 do you think you might have it sooner than that?---I think

17 it's the minimum we would need to conclude the adult

18 survey. As an example I expect we may find quite high

19 rates of cigarette smoking, that's already been suggested

20 in the Victorian population health survey and there are a

21 number of interventions that could be targeted to the

22 community to assist with that.

23 I think it's true we already have quite a lot of information

24 about the health status of the population here?---Yes.

25 Can I ask a broader question about scientific integrity and

26 conflict of interest?---M'mm.

27 This study you're leading is going to be a very expensive study

28 potentially lasting many years and it's going to be really

29 important everyone has absolute confidence in the

30 researchers and you as their chief investigator. How do

31 you prevent vested interests influencing your

1 findings?---We of course see ourselves as independent and

2 we have been very careful to protect that. I'm aware of

3 this from my previous research, some of which has been

4 conducted with the pharmaceutical industry and in that

5 situation one always has to be very careful to maintain

6 scientific independence and I have in fact had a major

7 dispute with a very large multi-national corporation which

8 in my opinion sought to suppress the findings of our

9 research because it didn't suit their commercial interests,

10 and in the end we were able to publish that work. So one

11 of the things we negotiated in our contract with the then

12 health department was that although the intellectual

13 property was owned by the department we would obtain the

14 right to publish clearly and we do need to publish to show

15 the community as part of the process of community

16 engagement but ultimately it will be our decision to

17 publish the findings.

18 So would you expect interested parties to pour over your data

19 and conclusions and make suggestions on how you might

20 phrase particular sentences in your reports?---That depends

21 a bit on what you mean by interested parties. We do have a

22 scientific advisory committee, I mentioned the community

23 advisory committee earlier and that includes some quite

24 eminent people like my head of school, Professor John

25 McNeil, Professor Rod Schoffel, the deputy dean of research

26 at Monash, Associate Professor Roberts who is a national

27 expert in perinatal epidemiology so she is advising us on

28 how to interpret certain findings. Professor Brian

29 Priestly, a now semi-retired toxicologist. So we would

30 certainly accept comments from our scientific advisory

31 committee. Other comments I suppose would be considered

1 but as I said earlier, we're an independent group of

2 researchers and as a researcher I wouldn't want to be seen

3 as only printing and publishing findings that might suit

4 the sponsor of research or others.

5 So that's the guarantee you give the community, you are acting

6 independently and in their best interests?---Absolutely,

7 because ultimately the study is about a community health

8 and there is work to be done, to report back to them and

9 the hope is we will identify things that can be improved in

10 the future.

11 Thank you very much.

12 MS SHANN: Thank you, professor. I'm just going to take you

13 back now to earlier pieces of work that you along with

14 colleagues were involved with. The first one is the rapid

15 health risk assessment and for the board's assistance, this

16 appears annexed to Dr Lester's statement, which is at tab

17 6, WIT.0001.001.0005. Professor, you'll, if you're behind

18 tab 6, see at the top right-hand corner of the page there

19 is a number, a very long detailed number printed, and we're

20 looking for - 0005 is the last four digits. Have you got

21 that there?---Yes, I have located that.

22 This is a copy of a document final report rapid health risk

23 assessment prepared for the Department of Health, 12 March

24 2014 and you're listed as one of many authors?---Yes. I

25 was the lead author on this report.

26 Can you just explain to the board what you were actually asked

27 to do?---My head of school, Professor John McNeil, who is

28 listed as the last author, was approached by Dr Lester,

29 when she was the chief health officer, to provide the

30 Department of Health with some advice, based on existing

31 evidence in the scientific literature, about the health

1 effects of fires such as the one that had occurred in the

2 Hazelwood Coal Mine fire and there were a series of

3 questions that the department had asked us in the brief,

4 including what effects might be expected should the fire

5 burn for six weeks or three months or six months or

6 12 months, because at that time nobody knew how long it

7 would take to put the fire out.

8 So this assessment was completed whilst the fire was still

9 burning?---I think so. I can't recall the exact date we

10 submitted it. I think that would be somewhere on the

11 report.

12 But in any event, it is dated 12 March on the first page, is

13 that - - -?---The fire commenced, I think, on 9 February,

14 so we must have - it is an interesting situation when you

15 do these reports for government. They always take longer

16 to actually finalise than the government would like, but

17 that is the nature of the beast.

18 In terms of the methodology that you used to come to any

19 assessment, can you detail that for the board?---We

20 reviewed the existing scientific literature, particularly

21 on the health effects of fine particles, PM 2.5, and also

22 carbon monoxide, which we understood to be the two major

23 air pollutants arising from the fire. We were provided in

24 confidence with some data from the Environment Protection

25 Authority, who had started to measure ground level

26 concentrations of quite a wide range of air pollutants in

27 Morwell and elsewhere in the Latrobe Valley and we provided

28 some comment on how those levels related to national

29 environment protection measures and because there were no

30 health data available at that time, we undertook some

31 modelling and although I'm the lead author of the report, I

1 particularly need to acknowledge the contribution of my

2 colleague; Associate Professor Manoj Gambhir was the one

3 who undertook the modelling.

4 Just breaking that down a little bit, you've got some data from

5 EPA, the Environment Protection Authority, and we'll come

6 to what that was and wasn't. You're then looking at what

7 the scientific literature nationally and internationally

8 says about levels of PM 2.5?---M'mm-hmm.

9 And also carbon monoxide?---Yes.

10 And comparing that to the EPA data that you had to then form an

11 assessment as to the various questions that you're

12 asked?---Yes.

13 And one of those questions was in relation to, over a six-week

14 period, would we expect to see an increase in deaths?---We

15 were asked generally what health effects would be expected

16 if the fire burnt for a certain duration.

17 So one of the health effects that you then considered was

18 whether there would be deaths?---Indeed.

19 Or whether you might expect to see deaths?---Yes.

20 What, on page 5 of the report, is said, just in a paragraph

21 which is in the middle of the page, starting with, "Based

22 on these findings" - I'll just take you to this and then

23 we'll unpick whether there were limitations and what the

24 situation was there, but is in essence what was found as

25 part of this assessment that for combined PM 2.5 exposures,

26 around 250 micrograms in Morwell South, and for exposures

27 around the national environment protection measure in the

28 rest of Morwell, no additional deaths would be expected,

29 even if the exposure continues for six weeks. So that was

30 a part of the assessment or the findings from that rapid

31 health risk assessment?---Yes, that is a global summary of

1 the main finding of the modelling.

2 I just wanted to then understand that a bit more. In terms of

3 the modelling that you've referred to, what was it that you

4 were actually drawing from that scientific literature

5 overseas?---The literature review was conducted separately

6 because that was something that we're able to do fairly

7 quickly, given the existence of some environmental health

8 criteria documents that the World Health Organisation had

9 assembled, and we also conducted searches of bibliographic

10 databases, such as MEDLINE, and very specifically we

11 presented some of the findings of ESCAPE, which is the

12 European Study of Cohorts for Air Pollution Health Effects,

13 and although I'm not personally an investigator in ESCAPE,

14 I know many of the investigators and we were able to obtain

15 papers that were either in press or, in some cases, had

16 only been submitted. So we had access to the latest

17 scientific data on the health effects of air pollution.

18 You mentioned in your evidence earlier an issue with the

19 long-term health study being trying to find a comparable

20 event. Was that also a limitation in terms of this

21 literature review?---Very much so. It was immediately

22 apparent that there hadn't really been a comparable fire in

23 a brown coal mine before of which a health effects study

24 had been conducted and published in the peer-reviewed

25 literature and as I described earlier, it took us another

26 year in fact to even find the unpublished reports on the

27 Centralia fire.

28 So what types of fires or sources of pollutants were you looking

29 at when you were undertaking this assessment?---In the

30 initial rapid health risk assessment it was primarily

31 studies of background urban air pollution, the sort of

1 particles that are seen in large cities due to motor

2 vehicles and industry and road dust and so on.

3 So quite different from the Hazelwood Mine Fire, or potentially

4 so?---Yes.

5 In terms of the data itself that you were provided from the EPA,

6 were there any limitations in that data?---It's not really

7 for me to comment on the quality of the measurements. I

8 believe that members of the EPA were invited before the

9 Inquiry last time to talk about that. But the main thing

10 that struck us, as epidemiologists, was that it took the

11 EPA a few days to be able to set up their equipment in

12 Morwell, so we actually didn't have any data for the first

13 few days and that is in fact still a problem. That is why

14 we have engaged CSIRO to do modelling.

15 What impact would that have had on the modelling that you used

16 for this assessment?---I think it's quite likely that the

17 exposure to smoke would have been higher in the first few

18 days after the fire broke out because it was burning over a

19 wider front. It would also be a function of the wind

20 direction at the time, which I'm not personally familiar

21 with. So I suspect it is possible that the modelling we

22 conducted may have been an underestimate of the true

23 effect.

24 In terms of the issue of measurements that you were provided,

25 was it just limited to PM 2.5 or did you have access to

26 measurements for other pollutants which have now been found

27 by the first Inquiry to have been present?---I'm struggling

28 to remember exactly what we were provided with and at what

29 point in time. We certainly had data on PM 2.5 and carbon

30 monoxide. The EPA have given us data on the other criteria

31 pollutants. I think we had access to data on sulphur

1 dioxide at that time and the sulphur dioxide levels in fact

2 were quite low, and this is one of the big differences

3 between a fire in a brown coal mine and the sort of black

4 coal that is burned in North America and Europe, which has

5 a much higher sulphur content. We have seen data on

6 nitrogen dioxide and ozone and, again, my recollection is

7 the levels were quite low. So we thought it was unlikely

8 that there would have been health effects from these

9 pollutants.

10 When you came to consider what the effects might be, were you

11 looking at the literature - was the literature that you

12 considered just dealing with PM 2.5 or was it dealing with

13 a combination of pollutants?---For this first report, we

14 also looked in some detail at the literature on carbon

15 monoxide. You're asking about the combined effects of air

16 pollution and that's really a very active area of research.

17 There certainly have been studies looking at the

18 combination of particles, more usually PM 10 - these are

19 slightly larger particles, less than 10 thousandths of a

20 millimetre in diameter - and sulphur dioxide and the

21 effects of that combination appear to be greater than the

22 effects of PM 10 alone. There have also been quite a

23 number of studies looking at photochemical smog, such as we

24 do have in Melbourne, but classically it was first really

25 described in Los Angeles and those parts of California,

26 where there are combined effects from both nitrogen dioxide

27 and ozone, as well as particles. So we know that those

28 sort of mixtures have greater effects than any of the

29 individual pollutants themselves. Specifically about the

30 combination that we faced here of carbon monoxide and fine

31 particles, I'm not sure whether that's been studied in any

1 detail.

2 I take you to, on that page, the final paragraph and just the

3 first sentence there, "The review has found that other

4 relevant air toxics, apart from PM 2.5 and carbon monoxide,

5 should be measured." So does that assist with whether or

6 not you had data about other pollutants at the time that

7 you were completing this assessment?---Look, we certainly

8 didn't have data on air toxics at that time. We have been

9 provided with some of that data since then. I know, for

10 example, the community has been very concerned about the

11 possibility of mercury exposure, but our advice was that

12 the mercury content of the brown coal was actually very

13 low, so we felt that that was unlikely to be a major issue.

14 In terms of the particular modelling that was utilised, are

15 there any inherent limitations that you can see in that

16 particular approach to this problem?---Yes. Any model, of

17 course, is only as good as the data that goes into it. The

18 model that we used was the best available and, in fact, I

19 do need to acknowledge a collaboration. One of the authors

20 of this report is Dr Fay Johnston from the University of

21 Tasmania and she has a very active research collaboration

22 with a group at the University of British Columbia and it

23 was through that collaboration that we were able to get

24 access to this integrated model of the health effects of

25 fine particles, actually before it had been published. It

26 has subsequently been published in environmental health

27 perspectives, so it is now more widely available.

28 Can you just explain what do you mean by "integrated

29 model"?---This is a model really looking at the long-term

30 health effects. So generally speaking, we would divide the

31 health effects into those that occur in short time periods

1 and those that occur over longer time periods. So if we're

2 thinking of a pollutant like carbon monoxide, which causes

3 asphyxiation, the effects can be quite immediate, whereas

4 if the health effect of concern is cancer, that necessarily

5 takes many years to develop.

6 The approach taken here was long-term?---Yes.

7 And cumulative exposure?---That's right.

8 The fire burned for 45 days before it was declared that it was

9 under control. Does that fit within the definition of

10 long-term?---It's sort of in between. Short-term health

11 effects would be observed within days and most of the

12 research has typically looked at effects occurring two,

13 three, maybe five, days after exposure. The studies of

14 cancer and its relationship to air pollution have typically

15 extended over years. So 45 days is somewhere in between

16 short and long, I'm afraid, so again we're a little bit at

17 the mercy of what data were available.

18 Again, would you accept that as being a limitation of the

19 analysis that was undertaken?---Yes. Nobody had

20 specifically developed a model for exposures of these

21 durations.

22 Similarly, as I understand it, what you were looking at was the

23 population; is that right?---The general population, yes.

24 So what we don't know is was there a particular person who was,

25 for example, more exposed than someone else?---In essence,

26 the model averages the exposure across the entire

27 population. We did know from the data with which we were

28 provided that people in the southern part of Morwell were

29 much more heavily exposed than people in the eastern part

30 of Morwell, but we had to use the global mean

31 concentrations in this modelling.

1 Again, it was location focused?---Well, we did the analysis for

2 the entire population of Morwell.

3 It wasn't, for example, looking at a particular group, such as

4 firefighters, who might have had more proximate contact to

5 those pollutants?---No. There is typically a different

6 literature related to occupational exposures and we weren't

7 specifically asked to examine that.

8 In fact, on page 4, about a third of the way down, in the

9 paragraph starting, "The main health outcomes", you note,

10 "Health risks to mine workers, firefighters and other

11 emergency workers were not specifically asked to be

12 included in this review"?---That is correct.

13 Did the modelling take account of any particularly vulnerable

14 groups who might be expected to feel the effects more

15 readily?---No, it didn't. It is generally accepted that

16 young children and elderly people are at greater risk, but

17 the way this modelling is done, it applies it to the

18 population at large, and that will include a certain

19 proportion of young children and a certain proportion of

20 older people. It is coming up with an estimate for the

21 entire population.

22 Did the modelling take account of whether or not there were any

23 particular vulnerabilities within the Morwell population,

24 for example in terms of respiratory issues, diabetes, that

25 were perhaps disproportionate vulnerabilities compared to

26 the Victorian population at large?---No, it didn't allow

27 for those factors. I'm personally not aware of such a

28 source of data. I understand the Victorian population

29 health survey does have data down to a local government

30 area. I'm not sure whether it extends to individual towns,

31 though.

1 Is it fair to say that in terms of this assessment and the

2 statement that I read to you before, "No additional deaths

3 would be expected, even if the exposure continues for six

4 weeks", is it fair to say that is not a conclusion that we

5 can now use to say there were no deaths?---I think that is

6 a fair comment. It was the best estimate that we could

7 make at the time, based on the data that were available to

8 us and the model that we used.

9 If I can just take you now to - I think you've actually referred

10 to it - the updated literature review, and this is attached

11 to your statement, so will be behind tab 7 and it is

12 WIT.0003.001.0007. This is a document again prepared for

13 the Department of Health and Human Services, titled Updated

14 literature review on mortality and morbidity associated

15 with environmental smoke events. Again, you're one of a

16 number of co-authors?---I just need to acknowledge the

17 contributions of my colleagues, Dr Diogenes, Ferreira and

18 Dr Martina Dennekamp, to this review.

19 When it says "updated", is that that part of that rapid health

20 risk assessment that we were just talking about contained a

21 literature review?---It did.

22 So this document is, in essence, an updated and expanded

23 literature review, taken in part from that earlier

24 document?---That's right, and we'd focused particularly on

25 environmental smoke events, a biomass, fires, bushfires,

26 wildfires. Dr Ferreira even found some fires in cane

27 fields that had been studied in his country, in Brazil.

28 Just turning to page 3 of that report, which is .0010, there is

29 set out an executive summary. Was the question that you

30 were being asked by the department in this instance whether

31 increased mortality could be attributed to an environmental

1 smoke event in the absence of any observed increase in

2 morbidity?---That was the question that they wanted

3 answered that time.

4 Could you just outline what "morbidity" means?---I think

5 mortality is pretty clear. That relates to deaths.

6 Morbidity is about illness and disease, so it includes

7 things such as hospital admissions, emergency

8 presentations, consultations with a physician, ambulance

9 call-outs, and it goes further. There is a health effects

10 triangle - pyramid in the report that might assist with

11 this.

12 Perhaps if we could bring that up. It's at page 5,

13 0012?---This is the well-known pyramid of health effects.

14 So up the pointy end we have deaths, but those are,

15 fortunately, relatively rare events, and then as we go down

16 the pyramid, the effects become much more numerous and I

17 went as far, I think, as emergency visits, so medication

18 use, which can be tracked through things like the

19 Pharmaceutical Benefits Scheme. Symptoms, really the only

20 way of getting data on symptoms is to do a special survey.

21 Impaired lung function requires measurements of lung

22 function. And then right at the bottom of the pyramid we

23 have these very subtle subclinical effects, like changes in

24 certain proteins in the blood, such as C-reactive protein.

25 Is what the pyramid demonstrating, in effect, that you would

26 expect to see more subclinical subtle effects than you

27 would premature mortality and it essentially increases up

28 that scale?---Absolutely.

29 So, for example, you would expect to see a higher number of

30 emergency room visits than you would to see

31 deaths?---That's correct.

1 Were you actually asked, as part of this review, to analyse how

2 many emergency visits there were in the Latrobe Valley

3 during the fire or around that time?---No, we were not.

4 Were you asked, as part of this review, to analyse death

5 statistics, how many instances of death there were during

6 or around the time of the fire?---No. In the end, we were

7 only asked to update the literature review.

8 Just then going to the literature review, again, did you have

9 the constraint of not having studies about a directly

10 comparable event?---That's correct, and Dr Ferreira, of

11 course, brought a new set of eyes to this problem and

12 searched very widely, more widely than we'd been able to in

13 2014, and he couldn't identify any directly comparable

14 event either. So I'm very confident there are no such

15 papers in the scientific literature.

16 So in essence then, when we turn to page 14 or 0021, where

17 you've set out some conclusions, can you just explain to

18 the board what those conclusions were?---The main problem

19 we faced in this literature review was a limitation of the

20 literature. There were very few studies that had looked

21 both at mortality and morbidity. So I think the department

22 had hoped that we might be able to come up with some sort

23 of summary, mortality/morbidity ratio, but in the end, that

24 didn't prove possible and we had to base a lot of our

25 conclusions on just one study, which had been conducted by

26 Associate Professor Geoff Morgan and colleagues in Sydney,

27 and they had been looking at smoke from bushfires and they

28 had examined both mortality and hospital admissions. They

29 did not find an effect of those bushfires upon mortality.

30 There was no effect of the exposure to bushfire smoke upon

31 cardiovascular hospital admissions, admissions for heart

1 disease, but there was an effect on hospital admissions for

2 respiratory disease. So that study suggested that there

3 would be an effect on morbidity but not on mortality. So

4 we thought it was unlikely that there would be research

5 showing an effect on mortality without an effect on

6 morbidity, but we were limited by the evidence that's been

7 published in the scientific literature.

8 So really, firstly, you can't say, in relation to - the outcome

9 of this review didn't tell you whether, in relation to the

10 Hazelwood Mine Fire, you could have an increase in deaths

11 without an increase in one or more of those markers of

12 morbidity?---We formed an opinion that that would be

13 unlikely, but it is based solely on one Australian study

14 and we acknowledge that the exposure from a bushfire is not

15 exactly the same as the exposures that occurred from the

16 Hazelwood Mine Fire.

17 And I suppose secondly, you didn't crunch any data to be able to

18 see whether there was in fact any of those markers,

19 according to that pyramid, of morbidity?---We didn't have

20 any data on morbidity at that time.

21 I asked you about whether you'd done any analysis of any death

22 data in relation to the Latrobe Valley and the fire and you

23 said no. Were you actually provided at a certain point

24 with some data from Births, Deaths and Marriages by the

25 Department of Health?---Yes. We didn't actually request

26 this data, but the Department of Health and Human Services

27 provided it. We actually have not done anything with it

28 yet because we didn't think that we could contribute

29 anything new. Where I see the Hazelwood health study

30 having an important contribution is that we will be able to

31 provide better estimates of exposure. So once CSIRO have

1 completed the modelling and once we have some idea of where

2 people were during the fire, we'll have a much better idea

3 of what the exposures were. Now, true we won't still know

4 the individual exposures for the people who have died by

5 then, but I think we can make some inferences and we can

6 conduct an analysis to see if there is a relationship

7 between exposure and mortality, but unfortunately, we're

8 not yet in that position and I don't anticipate that we

9 will be by the time this board has to report.

10 Thank you.

11 <CROSS-EXAMINED BY MR NEAL:

12 Professor, could I ask you to go back to your witness statement,

13 and particularly to paragraph 10, where you're explaining

14 the adult survey. You've said in answer to my learned

15 friend Ms Shann that you were hopeful, in respect of that

16 survey, to capture a study of 7,500 people from Morwell and

17 I did say "hopeful"?---Yes.

18 And 4,000 from Sale?---Yes.

19 And, for the reasons you've indicated, you think Sale is a

20 legitimate control for Morwell, is that how you'd put

21 it?---We've chosen that as the best available comparison

22 community.

23 The numbers that you're aiming for there - I have no reference

24 point for this - but they seem of a very significant

25 magnitude. Can you say why you're aiming for

26 those?---There were sample-size calculations that were

27 conducted by my colleague, Professor Rory Wolf, who is a

28 biostatistician, and again, we utilised that integrated

29 risk model that was the basis of the modelling that we've

30 just been discussing and the rapid health risk assessment,

31 so we would hope to be able to detect a difference in

1 mortality over a 10-year period with those sort of numbers

2 of participants, given the structure of the population and

3 the anticipated death rate.

4 So as an epidemiologist, your aim is obviously for the best

5 quality outcome and that is consistent in this case with

6 numbers of that sort and a duration of 10 years?---Yes.

7 Is it fair to ask you - you said you're optimistic - what sort

8 of cut-off you'd make if the take-up rate is not as you'd

9 hoped?---I've been able to obtain response rates in excess

10 of 70 per cent in my previous research, which has mostly

11 been conducted within Melbourne, although I have

12 collaborated with colleagues around Australia. There isn't

13 a hard and fast figure below which one says the data are of

14 no value, but clearly the poorer the response rate, the

15 less valid the data are. So to be realistic, it would be

16 nice to get 70 per cent in Morwell. I'm not sure that the

17 comparison community will be as interested in the research.

18 We will try very hard, but we might have to settle for,

19 say, 60 per cent in Sale.

20 Just to extend that idea, the smaller that population, do I

21 understand the less beneficial it will be to you, in the

22 sense that randomness starts to play more of a part in a

23 smaller population than it does in a large one?---The

24 smaller the population, the less confidence we can have

25 about the findings and any estimate of risk. In

26 statistical terms, the confidence intervals become wider.

27 It would be reassuring if it was a random process, but it

28 is probably not a random process. The people who choose

29 not to participate or cannot be engaged tend to be

30 different from those who do participate, so the results can

31 become biased.

1 Is that because some people with, say, poor health will decline

2 or what do you mean?---That is a possibility. But

3 typically what we've found in our previous research is that

4 usually women are more interested in participating than are

5 men and younger people are more difficult to involve than

6 older people. Usually they are at a different stage in

7 their careers and they're moving around and they don't

8 necessarily live at the address that is on the electoral

9 roll, and a group that is of great interest to us are the

10 people who smoke and generally smokers tend to participate

11 less in these sorts of surveys.

12 Yes, I understand. As far as the health survey being

13 geographically confined to Morwell, you say at

14 paragraph 10, "The air pollution modelling provided shows

15 that Morwell was the town most exposed to fine particulate

16 matter during the fire." Do I extend from that that you're

17 really saying this: the greater the exposure to this

18 matter, the greater the response we would expect, that is

19 greater the health effect we would expect?---That is

20 certainly what the literature would suggest.

21 In terms of the responses - how should I put this? - would the

22 perhaps key responders be, in medical terms, cardiovascular

23 and respiratory illnesses?---They are two of the major end

24 points that we're interested in, but as I was saying

25 earlier, we're also interested in effects on child health

26 and mental health and so on.

27 I should have prefaced my question by saying if you were looking

28 at mortality?---Well, most of the deaths that do occur in

29 association with air pollution appear to be due to

30 cardiovascular disease, but some will be due to cancer and

31 respiratory disease and so on.

1 This much is fair, is it: respiratory and cardiovascular would

2 be an expected concomitant of a substantial air pollution

3 event such as this one?---That is what the literature would

4 suggest.

5 I think you also said that this is a unique event and that the

6 studies that you've been able to look at basically involve

7 an urban pollution situation?---Most of them.

8 Is that true of the Morgan study to which you refer?---I'm

9 sorry, which study?

10 The Morgan study I think you referred to in particular?---I'm

11 sorry, I'm not quite sure what study you're referring to.

12 In your updated literature, you referred the board to a study

13 which I think you said was of particular - - -?---Yes, I'm

14 sorry, by Geoffrey Morgan. That was conducted in Sydney.

15 That was a study of an urban population?---Yes.

16 But over quite a long term?---Yes.

17 And it was essentially trying to study bushfire effects on a

18 population, being many events of bushfire over a period of

19 time?---Yes.

20 And then comparing a bushfire pollution day, or particulate

21 matter day, with a non-bushfire day?---That was how they

22 analysed the data, yes.

23 That is the subject of, I think, some more detailed comment in

24 your updated literature report, and I think you're

25 referring in particular to that survey at page 8, under the

26 heading Discussion?---That's correct.

27 For the reasons that you state there in terms, I think, of

28 methodology and length, et cetera, qualitatively, that is

29 the one that stood out for you in terms of if we're going

30 to base an opinion on something, that would be the one

31 you'd go for?---Yes, that was the best study. We have

1 referred in this review to three studies that were

2 conducted to examine effects of the wildfires in Borneo,

3 but the data presented were really quite sketchy and there

4 was no proper statistical analysis.

5 Just staying with that same study and that same page, do I read

6 it as saying this: although the comparison was of bushfire

7 and non-bushfire days and bushfire days being those with a

8 higher particulate matter count, notwithstanding that, the

9 dose being higher on a bushfire day did not seem to relate

10 sensibly to mortality rates?---They didn't find an

11 association with mortality.

12 And, indeed, the association that they did find - and we're

13 talking in relative terms, I understand - was more with the

14 background PM count than the bushfire count?---That's

15 correct.

16 Which, as a non-scientist - perhaps you share the view - was

17 that counterintuitive or counter-hypothetical for you?---I

18 think a relevant issue here is the duration of exposure

19 because there are only a limited number of bushfire days.

20 During the study period, there were 32 bushfire days, so

21 eight and a half years. The rest of the time, which - I

22 don't know - is over 3,000 days, people were exposed to

23 urban background air pollution, so I think that is why it

24 was that pollution that had more of an effect on deaths

25 than the bushfire events, which often are associated with

26 very high levels of particles, but not for very long.

27 That was perhaps a little surprising at first blush. You then

28 looked, however, at the same study and looked at the

29 question of the relationship between an increase in the

30 particulate matter exposure and the morbidity indicators,

31 being cardiovascular and respiratory?---Yes.

1 And between those there were inconsistent results; one was

2 higher and one wasn't?---Well, the clearest effect was on

3 hospital admissions for respiratory disease.

4 So that went one way but the cardiovascular didn't seem to be

5 affected much at all?---There wasn't a significant

6 association.

7 Can I just ask for an explanation. This is a very small-scale

8 document that I'm looking at, but so that I'm sure we

9 understand it correctly, at the bottom of page 9, where you

10 set out a couple of graphs, which are the basis on which

11 you've answered me the way you just did, do I read it

12 correctly that looking perhaps at the cardiovascular

13 mortality all ages, figure 1 - that is the left-hand bottom

14 graph - that in the vertical line above the zero figure one

15 sees, and relevantly sees, a tiny circle in the middle of

16 the line?---Yes.

17 And that's the relative point that we're trying to measure as it

18 goes up and down?---That is the risk estimate, whether

19 there is or is not an excess of, in this case, a death

20 associated with the exposure to bushfire smoke.

21 And because that figure or that circle appears very slightly

22 above the zero line and between the zero and 1, that is why

23 you're answering me the way you are?---It is particularly

24 because of the lines that you can see above and below that

25 point estimate. That is the confidence interval and the

26 confidence interval overlaps zero, so it is quite possible

27 that in fact there was no increase in cardiovascular

28 mortality.

29 And that is true as a general proposition, is it not, where a

30 confidence interval laps between below 1 and above, then it

31 is a very equivocal outcome?---It is technically a question

1 of the scale of measurement. So here we're looking at

2 per cent change. So a per cent change of zero means there

3 is no effect. If it is a relative risk, then a relative

4 risk of 1 means that there's no effect.

5 And that same principle applies to the respiratory graphs on the

6 top of page 10, do they not?---Yes, and the reason that I'm

7 saying they did find an increase in respiratory admissions

8 is if you look at the line for the day of the bushfire

9 smoke - that is zero - you can see that the bottom limit of

10 that confidence interval is above zero, so there is a

11 significant effect. That effect was not just due to

12 chance.

13 I appreciate you have said already that the Morgan study is the

14 one quality study that you're - and it is substantially the

15 basis for the outcome of this document, is it not, in terms

16 of - - -?---Yes, it was.

17 As far as accepting the limitations of that document, is it fair

18 to understand that what these graphs and your text indicate

19 to us is there doesn't appear to be a coherent relationship

20 between elevated PM 2.5 counts and morbidity and

21 mortality?---Well, this particular study was looking at

22 PM 10, which is slightly larger particles, but they didn't

23 find an effect on mortality. They did find an effect on

24 respiratory admissions. They did not find an effect on

25 cardiovascular admissions. It is clinically quite

26 plausible because people are breathing in the smoke, so it

27 is not surprising it would have a bigger effect on the

28 respiratory system than the cardiovascular system.

29 Should we understand that when one measures PM 10, one includes

30 PM 2.5?---Yes. PM 2.5 is a subfraction of PM 10. In

31 bushfire smoke, my understanding is that in fact most of

1 those particles are in the fine fraction there, PM 2.5.

2 One point on the notion of harvesting, which you touch on at

3 page 4 of your updated literature review, and that is about

4 two-thirds of the way down the page, can I have a go at

5 saying what I think it means and you can agree with me or

6 not? It is essentially the phenomenon which says that

7 where deaths are imminent, another factor may intervene to

8 slightly accelerate the imminent event and, amongst other

9 things, the effect is that a death rate might go down

10 because you've actually brought forward imminent deaths

11 into another period?---I think that is a fair statement of

12 what is meant by harvesting, but the point Dr Dennekamp

13 made there is the literature would suggest it is probably

14 not a major explanation for the observed effects.

15 So in terms of the harvesting effect, the sorts of pollutant

16 fallout from a fire such as this does not seem to exhibit

17 the harvesting effect?---Well, precisely what would be

18 observed from the Hazelwood Mine Fire smoke I don't think

19 anybody currently knows, but if the exposure is comparable

20 to the others that have been examined in the literature,

21 you wouldn't expect a lot of harvesting.

22 Going to the conclusion of this document, can I put it to you

23 this way, and again the caveat has to be the limitation of

24 what you have been able to study, but based on that is this

25 fair to say, in cases where you know definitively there has

26 been an increase in mortality due to environmental smoke

27 effects you would expect to see an antecedent increase in

28 morbidity?---Yes, that would be expected.

29 And as a corollary of that can I put this to you, where you have

30 increased morbidity from the same event you do not

31 necessarily expect to see increased mortality?---No, not

1 necessarily, it would be a function of how extreme the

2 exposure is and the health of the underlying population

3 that have been exposed to it. I could give you another

4 example beyond the scope of this review but one of the most

5 infamous events of pollution was the fog in London in 1952

6 and that was very clearly associated with both a dramatic

7 increase in mortality and at least 3,000, I think it may

8 have been up to 12,000 people died and there was also a

9 dramatic increase in the use of hospital services.

10 Qualitatively is it also fair to say sulphur dioxide was a very

11 prominent factor in the London smog?---Yes, it was.

12 Which is not here?---No.

13 Thank you, professor, I have no further questions.

14 <CROSS-EXAMINED BY MR BLANDEN:

15 Thank you, sir. I have a few questions. Professor, when you

16 undertook the rapid health risk assessment the first

17 document it would appear, and please tell me if I have this

18 wrong, but it appears that it wasn't difficult to come to

19 the conclusion that the principal risk to the community

20 affected by the fire was going to be fine particulate

21 exposure?---Yes, on the basis of data we have been provided

22 that appeared to be the major pollutant certainly.

23 You were able I think you said to relevantly quickly rule out

24 sulphur dioxide and other pollutants that may have possibly

25 been involved, again you didn't think were likely to have

26 much of an impact on the health of the community?---Yes,

27 with the possible exception of carbon monoxide all of the

28 levels of the other criterion were within the national

29 environmental protection limits.

30 You in the modelling that followed used a measure of exposure,

31 and we're now on page 5 of your report in that middle

1 paragraph again, this is the rapid health risk assessment,

2 page 5, middle paragraph?---Yes.

3 And in terms it reads as follows, that based on these findings

4 about the types of health outcomes related to pollutants,

5 epidemiological modelling undertaken as part of what you

6 found had combined PM 2.5 exposures, and on it goes. The

7 point of my question is simply this, you used a minimum

8 exposure to posit the danger caused in a particular manner

9 in that circumstance?---We used an average level of

10 exposure and in fact given the way that's expressed, and

11 please understand I wasn't personally the one who undertook

12 the modelling, I think what must have been done is that

13 that level of 250 micrograms per cubic metre applied to the

14 southern part of Morwell, then for the rest of Morwell it

15 was around the national environment protection measure

16 which is 25 micrograms per cubic metre.

17 Whichever part of Morwell you're talking about, you still need

18 the exposure to the particular matter obviously enough to

19 provide a risk?---Yes, the whole town was exposed.

20 So insofar as the level of particulate matter is concerned the

21 risk arises because of the exposure to the particulate

22 matter on the days where that exposure took place?---Yes,

23 and the literature would suggest there really isn't a safe

24 level of fine particles, the higher the exposure the

25 greater the effects.

26 In terms of the modelling that you had done by the CSIRO you

27 indicated clearly enough that that modelling showed that

28 Morwell was effectively at greatest exposure of persons to

29 particulate matter?---Morwell was the town that was most

30 exposed but the map that I have provided is only a

31 preliminary analysis, it's the first run of the mill models

1 and what they're currently doing is attempting to calibrate

2 that with what ground level measurements were available at

3 the time.

4 Certainly based on the modelling if you see an adverse effect as

5 a result of particulate matter exposure you would expect to

6 see it in Morwell?---Yes.

7 As opposed to but not to necessarily exclude the other areas

8 around it but the greater effect, if you like, of a

9 particulate matter exposure would be likely to be

10 Morwell?---The most exposure to the community was Morwell

11 but you can see from the map there was some exposure in

12 Trafalagar and Traralgon and that's as far (indistinct)

13 lower level.

14 And as a matter of probability is it fair to say that the area

15 where you found the greater exposure is the area where you

16 are most likely to find as an effect of that exposure, in

17 other words in our context if there were to be a death or

18 deaths as a result of that exposure they would more

19 probably be found in Morwell than elsewhere?---More

20 probably, yes.

21 Thank you.

22 <CROSS-EXAMINED BY MS FITZGERALD:

23 If I can just take you back first of all to some of the comments

24 you made about the updated literature review, I just wanted

25 to clarify, my learned friend Mr Neal, took you to the

26 Morgan study of the Sydney population, and you have spoken

27 to some extent about the limitations in the data underlying

28 the various studies that you have been able to locate, and

29 those limitations you would agree include that those

30 studies deal with either urban area pollution or with

31 bushfire smoke which is qualitatively different from the

1 mine fire smoke, that's right, isn't it?---Yes, the initial

2 rapid health risk assessment, the literature there was

3 predominantly on urban area pollution, in this updated

4 literature review point we focused very much on fire smoke.

5 When you consider the Sydney based study which in the updated

6 review which you said was the better quality of the studies

7 you considered in that review, there are a number of other

8 factors that limit the comparison with the mine fire event

9 and I just want to go through a few of them with

10 you?---M'mm.

11 So one would be that you were dealing with a combination in

12 Sydney in terms of the pollution loading that the

13 population there experiences, you were dealing with a

14 combination of urban air pollution and bushfire smoke

15 pollution which is going to be qualitatively different from

16 the pollution exposure that the residents of Latrobe Valley

17 experienced during the mine fire, that is right, isn't

18 it?---Yes, that's correct.

19 And another limitation is that the residents of the Latrobe

20 Valley and in particular Morwell may be engaged in

21 occupations that differ in terms of exposure levels to

22 residents of Sydney, for example, Sydney would likely have

23 a higher population of indoor workers than a rural area

24 would?---Yes, I think that's a fair summary, we are aware

25 that many people in Morwell were employed by the former

26 State Electricity Commission and that's an area we do wish

27 to obtain information on in our adult survey.

28 So it's difficult to compare the statistics or the outcomes of a

29 study based on a Sydney population with Morwell or

30 surrounding towns when it's difficult to know how similar

31 the levels of exposure would be due to their activities

1 during the day?---Look, I accept there are qualitative

2 differences between the populations.

3 Another difference would be the proximity to the source of the

4 smoke, so the town of Morwell is located adjacent to the

5 immediate source of the smoke whereas Sydney is not

6 immediately adjacent to the source of the bushfire smoke in

7 the study you considered?---Well, it's a little outside my

8 area of expertise. I believe one of the things about

9 Sydney is it has these green wedges that come down through

10 the suburbs, so at least on some of those occasions there

11 were bushfires - I think in Ku-ring-gai Chase National Park

12 and elsewhere that were directly threatening homes and

13 populations, I accept overall the proximity to the fire

14 wouldn't have been as great.

15 That's because in the Morwell situation it's entirely unique in

16 terms of studies that you have been able to access to find

17 a town located immediately adjacent to an open-cut coal

18 mine that is unfortunately lit on fire, there is nothing

19 comparable to that that you have come across, is

20 there?---We could not find a directly comparable

21 (indistinct)

22 Another differentiating factor and limiting factor which you

23 touched upon in terms of comparing the Sydney study with

24 the experience of the Morwell residents is that the Sydney

25 study looks at the impact of 32 independent days of

26 bushfire/pollution over an eight day period whereas the

27 residents of the Latrobe Valley were exposed to 45

28 consecutive days of exposure which would likely have a

29 different impact, wouldn't it?---Yes, I agree and the

30 duration of the exposure was definitely greater than in

31 Morwell and that's one of the reasons we used a model based

1 on accumulative exposure.

2 Taking you to page 4 of the updated literature review, if you

3 look at the final sentence of the third paragraph down it

4 reads: "As brown coal originates from organic material

5 including plants, it is expected that pollutants from

6 vegetation fire smoke would be relatively similar to those

7 from brown coal mine fire smoke." You don't have a

8 qualification as a chemist, do you?---No.

9 And you wouldn't be able to comment on the constituent

10 properties of brown coal as opposed to the constituent

11 properties of various burning properties in any of the wild

12 fires or bushfires considered in that study, would

13 you?---I'm not a chemist or an expert in coal combustion.

14 As part of drawing up the proposal for the Hazelwood fire

15 study we did seek some advice from Professor Alan Chaffee

16 from Monash University but he didn't play any part in this

17 particular review.

18 He certainly didn't contribute that sentence I just read out to

19 you, did he?---No.

20 And it's fair to say comparing brown coal to plants or organic

21 vegetation burnt in a bushfire, there is no scientific

22 weight to the comparison that's made in that sentence, is

23 there?---Well, we were asked to update the literature

24 review, we tried our best with the literature that was

25 available, there was no literature on fire in an open-cut

26 brown coal mine.

27 If I can take you back to the health and risk assessment, you

28 were asked by my learned friend, Mr Blanden, about the

29 chemicals or pollutants that you considered in that risk

30 assessment and an emphasis was placed on the consideration

31 of the effect of particulate matter and carbon monoxide in

1 that study, and at the time of undertaking that study you

2 didn't have any data on the measurements of air toxics

3 including polycyclic aromatic hydrocarbons, dioxins, boron,

4 formaldehyde or other volatile organic compounds, did

5 you?---No, we didn't.

6 Are you able to say whether those various substances if they

7 were also released by mine fire, whether they would

8 compound the effects of the pollutant levels of particulate

9 matter or carbon monoxide that was released into the

10 air?---I'm not a toxicologist, Professor Brian Priestly one

11 of the authors of this report contributed to that part of

12 it. What I can say is things like polycyclic aromatic

13 hydrocarbons which are large molecules, multiple rings of

14 carbon atoms are considered carcinogenic so one wouldn't

15 expect to see a short-term health effect but if there were

16 elevated levels of polycyclic aromatic hydrocarbons it

17 could increase the risk of cancer over time.

18 And with respect to the other various chemical matters that

19 weren't included in the data you had, you can't provide a

20 comment on how they would have act in combination with the

21 other pollutants?---I think you would be better informed

22 asking a toxicologist those questions.

23 Thank you. You gave some evidence about the long-term health

24 study and you said that the study doesn't consider the

25 deaths that have occurred since the commencement of the

26 mine fire on 9 February and up until the time that the

27 adult health survey commences; you made a brief comment on

28 a limitation in reviewing those deaths being that it would

29 be difficult to obtain data about confounding factors, for

30 example, whether the person who died was a cigarette smoker

31 and the like. If you or another organisation were provided

1 with adequate funding if would be possible, wouldn't it, to

2 go back and review the information about cause of death to

3 potentially contact next of kin, to enquire into

4 confounding factors like smoking status or other

5 pre-existing health conditions, for example, diabetes and

6 the like, that would be a study that could be undertaken

7 with appropriate funding, wouldn't it?---I would hesitate

8 to say that any study is completely impossible but I think

9 that would be extremely difficult. We have previously

10 conducted research in occupational health where we have the

11 advantage of routinely collecting records from the company

12 and even then trying to determine something as simple as

13 whether somebody was a smoker or not isn't easy and

14 inevitably with the passage of time people's recollection

15 of events tends to fade so I think what you're suggesting

16 would be very difficult.

17 No further questions, thank you.

18 CHAIRMAN: Thank you, professor, you're excused.

19 <(THE WITNESS WITHDREW)

20 MR ROZEN: There is one further witness that we had hoped to

21 called to and that is Dr Lester but I'm conscious of the

22 time now, I don't think she will be a quick witness. I

23 will be some time with Dr Lester and unless the board wants

24 to start with her evidence now, the better course may be

25 given we have an early start tomorrow to call her tomorrow

26 morning.

27 CHAIRMAN: Yes, we will leave it until tomorrow, start at 9.30,

28 thank you.

29 MR ROSEN: Or perhaps 9.

30 CHAIRMAN: I'm happy to start even earlier if you want to.

31 MR ROZEN: We have a way to go, so perhaps 9.

1 CHAIRMAN: If the consensus is 9 then 9.

2 MR ROZEN: Can I remind everyone we have a 2.30 finish tomorrow

3 because of the availability of the hall, I think there is

4 some prospect we will finish the evidence of Dr Lester and

5 the experts tomorrow but I will have to concede there is a

6 risk we may not. We will have a better sense of that as we

7 go tomorrow.

8 CHAIRMAN: Yes, thank you.

9 ADJOURNED TO 2 SEPTEMBER 2015 AT 9 A.M.

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