
TRANSCRIPT OF PROCEEDINGS

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2015/16 HAZELWOOD MINE FIRE INQUIRY

MORWELL

WEDNESDAY, 2 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 FITZGERALD - Voices of the Valley

MR RAY TERNES - Voices of the Valley

DTI Corporation Australia Pty Ltd
4/190 Queen Street, Melbourne

Telephone: 8628 5555
Facsimile: 9642 5185

1 CHAIRMAN: Yes, Mr Rozen.

2 MR ROZEN: Morning, members of the Board. I have been informed
3 by Mr Attiwill that he wishes to make some brief comments -
4 not holding him to the briefness of those or the brevity -
5 concerning the matters raised by Professor Catford
6 yesterday about engagement.

7 CHAIRMAN: Yes, thank you. Mr Attiwill.

8 MR ATTIWILL: Thank you, Mr Rozen. Mr Chairman and members of
9 the board, I wish to make a brief statement of behalf of
10 the Victorian Government. The government acknowledges the
11 concerns that were expressed yesterday and also too by you,
12 Professor Catford, in the questioning of some of the
13 witnesses and it takes those concerns very seriously, I
14 should say on behalf of the government.

15 First, as you know, members of the board, the
16 government reopened the Inquiry. It did so, among other
17 things, to address the concerns that were raised by the
18 community about whether there'd been an increase in deaths
19 associated with the fire and the government awaits those
20 findings, which will be as a result of this process, that
21 involves eminent experts. That's the first thing I wanted
22 to say.

23 I do wish to provide the board with some
24 correspondence between Voices of the Valley and the
25 government, which includes the Minister for Health and
26 premier, both premiers, Premier Napthine and then Premier
27 Andrews. If I could hand up - I've just got one copy for
28 the board, but I have provided a copy to my learned
29 friends, including counsel for Voices of the Valley. I
30 don't intend to address on that very much, but I just wish
31 to describe that correspondence very briefly. You'll see

1 that the first document there, Mr Chairman, that you've got
2 in front of you, is a letter from the board's secretariat
3 from Hazelwood 1 Inquiry to the secretary of the Department
4 of Health. What that does is on-forward the relevant
5 information from Voices of the Valley and concludes with
6 the sentence, "The Board of Inquiry has requested that the
7 Voices of the Valley letter, attached, be sent to you to
8 consider as part of the long-term health study being
9 conducted by the Department of Health into health issues
10 arising from the Hazelwood Mine Fire."

11 Then you'll see, very briefly, without going through
12 all of it, there is a letter from then Premier Napthine,
13 which is dated 18 August 2014, and that says in the first
14 paragraph, the second sentence, "I have also received
15 feedback on the meeting your group had with Craig
16 Ondarchie, my parliamentary secretary." So there'd been a
17 meeting and then this letter was in response to that.
18 You'll see that it doesn't take the issue further, rather
19 says, I think in the fifth paragraph on the first page,
20 "The government will consider further actions as part of
21 its response to the Inquiry's report, which is due to be
22 submitted to the governor by 31 August 2014."

23 If one turns the page, the next document is a letter
24 from the Department of Health, from the acting deputy
25 secretary, and that letter, which is stamped 28 November
26 2014, refers to further requests for information and a
27 further meeting but that, in accordance with the convention
28 that the government assumes a caretaker role, it has been
29 referred for a response and obviously there was then a
30 state election and then a new government.

31 Then there is a series of correspondence, which I

1 won't go through, which includes a letter from the Minister
2 for Health, dated 15 April 2015, and then a letter from
3 Voices of the Valley and you'll see that in that letter
4 from Voices of the Valley - it looks like that, Mr Chairman
5 and members of the board - which is dated 27 April 2015 to
6 the Victorian Government, "We need your help. Our
7 community is suffering." That sets out in a succinct way
8 their concerns and current needs. If one turns the page of
9 that document and goes to what is the third page, with the
10 first bullet point at the top of the page being, "People
11 with sick children awaiting", if one sees that, and if one
12 goes to the bottom, you'll see that it says, "Once again,
13 we thank you for taking the time to listen to the people of
14 Latrobe Valley" and you'll see that that was as a result of
15 a meeting with Premier Andrews which is referred to in the
16 fourth bullet point on that page.

17 So the premier had met and this is correspondence
18 from Ms Farmer and then we have the re-opening of the
19 Inquiry and then the second-last letter in that bundle is a
20 letter from Premier Andrews to Voices of the Valley
21 referring to the reopened mine fire Inquiry.

22 Then finally there is a letter, which is the last one
23 in that bundle, from the Minister for Health, dated 12 June
24 2015, that refers to the Public Lung Function Clinic, which
25 I want to address just very briefly in a moment, and also
26 to the Mine Fire Health Assessment Clinic.

27 I only put that before the board just to show some of
28 the correspondence that had been exchanged. The main thing
29 from that is that the Inquiry was reopened and the concern
30 that had been expressed by Voices of the Valley in relation
31 to the increase in deaths as a result of the fire was set

1 out in stone in the terms of reference which is now
2 currently being well considered.

3 That said, the next thing I wish to say is this: the
4 government acknowledge that community consultation
5 engagement can be improved and should be improved. As
6 Professor Catford noted yesterday, that is the subject of
7 affirmations and recommendations of Hazelwood 1.

8 Thirdly, I just briefly wish to say the following:
9 the government has started taking steps in the Latrobe
10 Valley to improve our engagement and this includes, and I
11 just wanted to highlight a few brief matters but only in
12 brief compass, first, after listening to the community, the
13 government established the Lung Function Clinic at the
14 Latrobe Regional Hospital. It involves the community and
15 the long-term health study we heard yesterday by having
16 local representation on the advisory committee, and we see
17 that as a very good initiative, to establish the Latrobe
18 Valley Coal Mine Emergency Task Force, which is obviously
19 doing important work and we heard the work that the task
20 force had been doing in Anglesea, but it is doing a lot of
21 work here, given the magnitude of the mines. The EPA have
22 established the Latrobe Valley Citizens Science Program,
23 which enables basically local people to have the resources
24 and training to monitor their environment. We see that as
25 a very good initiative, very well directed to this Valley.
26 The Department of Health and Human Services is in the
27 process of recruiting a local community engagement officer.
28 That has been advertised and there have been responses to
29 that advertisement and it is intended that this will give a
30 new and improved focus to the government's engagement with
31 the local community, part of the improvement. We are also

1 about to commence a project to help the local community to
2 become more engaged in emergency management by basically
3 making it have a local focus. So those are the matters I
4 briefly wanted to raise at the start of the hearing and I
5 thank Mr Rozen for giving me the time.

6 CHAIRMAN: Yes. Thank you, Mr Attiwill.

7 MR ROZEN: Perhaps it might be convenient to tender the material
8 that Mr Attiwill has handed up.

9 CHAIRMAN: Yes.

10 #EXHIBIT 7 - Material tendered by Mr Attiwill.

11 MR ROZEN: Just for the benefit of the parties and perhaps
12 particularly for the representatives of Voices of the
13 Valley, with that material being part of the evidence
14 before the Inquiry, it can obviously be the subject of
15 submissions when we return next week.

16 Can I just outline the intended course of the
17 proceedings today. I'm going to briefly tender some
18 documents, which should only take a short while, and then I
19 will call Dr Lester to give evidence and once we've
20 completed Dr Lester's evidence, it may be appropriate to
21 have a break while we reconvene the room. We have to try
22 and make contact with Dr Flander, who is unable to attend
23 today, as she is unwell, but she has kindly made herself
24 available to be present via Skype, so we have to attend to
25 the logistics of that and we will then convene the panel of
26 the four experts.

27 I'm also told that, contrary to the indication I may
28 have given yesterday, we actually have to finish
29 proceedings today at 2 o'clock because the room has to be
30 cleared by 2.30 and it may be, in those circumstances,
31 appropriate, Mr Chairman, that we not have the usual lunch

1 break but that we perhaps fit in two briefer breaks through
2 the course of the proceedings.

3 CHAIRMAN: Given the need to, in effect, get as much as we can
4 in within five hours and the technological problems that
5 will be associated with the video-link and the hot tubbing,
6 if I use that expression, we'll just adapt it. If that
7 necessarily means we'll sit here rather than go outside, in
8 order to allow things to be attended to as sufficiently as
9 possible, we'll do that.

10 MR ROZEN: Yes, thank you. If I could attend to the tendering
11 of documents that was left over from yesterday and just
12 deal with a couple of other matters by way of housekeeping.
13 The first bundle of documents that I would seek to tender
14 is the email chain between Dr Csutoros and Dr Flander dated
15 27 March 2015, which is in the hearing book at
16 DHHS.1008.001.0062 to .0066, and that is the email chain
17 plus the two pages of comments that Dr Csutoros provided to
18 Dr Flander. So if that could be a single exhibit, please,
19 sir.

20 #EXHIBIT 8 - DHHS.1008.001.0062 to .0066

21 The next document that I'd seek to tender is the draft report by
22 Dr Flander dated 13 March 2015, which is at
23 DHHS.1008.001.0504.

24 #EXHIBIT 9 - DHHS.1008.001.0504

25 The next document is the draft report by Dr Flander dated
26 9 April 2015, which is DHHS.1008.001.0508.

27 #EXHIBIT 10 - DHHS.1008.001.0508.

28 By agreement with the representatives of Dr Lester, I would seek
29 to tender a report of Professor John McNeil, dated 28
30 August 2015, together with the letter that was sent to
31 Professor McNeil, asking him to express opinions on various

1 matters, dated 19 August 2015.

2 #EXHIBIT 11 - Report of Professor John McNeil, dated 28/8/15,
3 together with the letter that was sent to
4 Professor McNeil dated 19/8/15.

5 I think all of the parties should have certainly seen the report
6 of Professor McNeil. I'm not sure if everyone has seen the
7 commissioning letter, but I think copies are being made.
8 That is confirmed.

9 Mr Ternes referred yesterday, in his
10 cross-examination of Ms Cristine, to a number of documents
11 and it might be convenient to tender those, perhaps in a
12 bundle, and I'll just identify them by their coding - that
13 is those that haven't already been tendered. There is a
14 document at DHHS.1008.001.0072, there is another document
15 at DHHS.1008.001.0077, and finally the same prefix but
16 ending in 0083. If they could be perhaps tendered as a
17 single exhibit.

18 #EXHIBIT 12 - DHHS.1008.001.0072, DHHS.1008.001.0077 and
19 DHHS.1008.001.0083.

20 For completeness, because it is probably a convenient time to do
21 it, I would seek also to tender three further draft reports
22 that were provided by Dr Flander to the department. These
23 are drafts of her final report, dated 4 June 2015, and if I
24 can, for the record, identify what they are. The first is
25 a draft dated 22 May 2015 and it is located at
26 DOC.0002.001.0010. There is a further draft of the same
27 report, dated 30 May 2015, which is at DOC.0002.001.0025
28 and the third and final draft is a draft dated 1 June 2015,
29 DHHS.1008.001.0468. Perhaps if they could be one exhibit,
30 as A, B and C.

31 #EXHIBIT 13 - DOC.0002.001.0010, DOC.0002.001.0025 and
DHHS.1008.001.0468.

1 They are the housekeeping mattering and I call Dr Lester.

2 <ROSEMARY ANN LESTER, sworn and examined:

3 MR ROZEN: Dr Lester, can you please repeat your full name for

4 us?---My full name is Rosemary Ann Lester.

5 And you are presently retired?---I am, yes.

6 And you're the former chief health officer for the State of

7 Victoria?---That's right.

8 Dr Lester, for the purposes of this Inquiry, have you made two

9 statements?---Yes, I have.

10 And when I say "this Inquiry", I mean this incarnation of the

11 Inquiry?---Yes.

12 You, of course, provided some evidence to the first

13 Inquiry?---That's right.

14 You should, I hope, have open in front of you a folder behind

15 tab 6. If I could just confirm that that is what you're

16 looking at?---Yes, that's right.

17 The first page of the document behind tab 6 should have a code

18 in the top right-hand corner that is

19 WIT.0001.001.0001?---That's right, yes.

20 Is the document that you're looking at a copy of the statement

21 dated 24 August 2015, that you provided to the

22 Inquiry?---Yes, it is.

23 Have you had an opportunity to read through the contents of that

24 statement before giving your evidence this morning?---Yes,

25 I have.

26 Is there anything you wish to change in the statement?---No.

27 And are its contents true and correct?---They are.

28 I tender the statement.

29 #EXHIBIT 14 - Statement of Rosemary Ann Lester dated 24/8/15.

30 There are, of course, a number of attachments to that statement,

31 I think six in total?---M'mm-hmm.

1 If you turn to the very last page of the material behind tab 6,
2 so the last page before you get to tab 7, do you have a
3 supplementary statement of Rosemary Ann Lester
4 there?---Yes, I do.

5 Is this a supplementary statement that you made and was provided
6 to the Inquiry by your solicitors, dated 26 August
7 2015?---Yes, it is.

8 Once again, is there in anything in that statement that you wish
9 to change?---No.

10 And are its contents true and correct?---Yes, they are.

11 I tender the supplementary statement.

12 #EXHIBIT 15 - Statement of Rosemary Ann Lester dated 26/8/15

13 If I can ask, Dr Lester, please, for you to turn back again to
14 the first page of the first statement and if I can draw
15 your attention to paragraph 1 and ask you a little bit more
16 about your professional background. You held the role of
17 chief health officer of the State of Victoria between March
18 2012 and February of this year?---That's right.

19 Could you just advise the Inquiry, please, of your professional
20 qualifications?---I'm a medical graduate of the University
21 of Melbourne, I have a Master of Public Health from Monash
22 University and a Master of Science in epidemiology from the
23 University of California, Los Angeles and I'm a Fellow of
24 the Australasian Faculty of Public Health Medicine.

25 And your undergraduate degree was conferred when?---1980.

26 Prior to holding the position of chief health officer at what
27 was then the Department of Health, I think I'm right, when
28 you took that position?---M'mm.

29 You'd been employed in the department in other capacities before
30 that?---That's right. I've been employed in the department
31 and its various predecessors since 1989.

1 Can you just briefly summarise the roles that you had, perhaps
2 working back from your appointment as chief health
3 officer?---Prior to my appointment as chief health officer,
4 I fulfilled the role of deputy chief health officer, but at
5 the same time was the assistant director for the
6 communicable disease prevention and control unit. Prior to
7 that I had been working looking at managing some various
8 different units, including immunisation, perinatal health,
9 cancer screening, public health genetics and infertility.
10 Previous to that I'd been working in the immunisation
11 program, managing that, and prior to that I was a junior
12 public health medical officer, mainly working in
13 communicable diseases and immunisation, and that was after
14 I completed the two-year public health training scheme
15 which the department ran - that was in 1990 and '91.

16 Thank you. If I can draw your attention to paragraph 3 of your
17 first statement, Exhibit 14. You say there, "I provide
18 this statement in response to a request from the principal
19 legal adviser dated 11 August 2015", and you refer to the
20 attachment, "for a detailed statement setting out what I
21 did as chief health officer in relation to claims that the
22 Hazelwood Mine Fire led to an increase in deaths." Do you
23 see that at paragraph 3?---Yes.

24 Accepting that as accurate, it is not quite the complete
25 picture, in the sense that the letter from the Inquiry's
26 legal adviser seeking a statement from you was in turn a
27 response to your request to provide evidence to the
28 Inquiry, was it not?---Yes, I did request to be represented
29 at this Inquiry, yes.

30 Just so that the sequence of events is clear, you, through your
31 lawyers, sought leave to appear as a party at the

1 Inquiry?---I'm not quite sure of the legal wording, but
2 yes, my lawyers sought leave for me to appear.
3 For you to appear?---Yes, but they can obviously confirm the
4 legal wording.
5 I don't think any of this is controversial, please accept that
6 from me, I just want to clarify the sequence of events. An
7 application for leave to appear was put in by your
8 solicitors?---That's right.
9 And in that application, they said that in addition to wanting
10 to appear, in the sense of having a presence at the
11 Bar table, if I can put it that way, you also sought the
12 opportunity to give evidence as a witness by providing a
13 statement to the Inquiry?---That's right, yes.
14 And the letter from Ms Stansen to you identified the matters
15 that the Inquiry wanted you to cover in your
16 statement?---M'mm-hmm.
17 And also some areas that it didn't want you to cover which had
18 been addressed in the first Inquiry?---Yes.
19 So that was the sequence of events that then led to the
20 statement being provided?---That is my understanding, yes.
21 Just perhaps to complete that picture and out of fairness to
22 you, the supplementary statement was expressly requested by
23 the Inquiry to deal with a specific issue?---That's right.
24 If I can start my questioning of you by drawing your attention
25 to some evidence that we received yesterday from Linda
26 Cristine. You're familiar with Ms Cristine, a current
27 officer in the Department of Health and Human
28 Services?---Yes, I am.
29 Ms Cristine's statement is Exhibit 3 and it is located, for
30 everyone's benefit, behind tab 4 and attached to her
31 statement, if I can ask you to turn to that, and we'll see

1 if we can bring it up on the screen, is attachment 1 to
2 Ms Cristine's statement, so that is page 7. The code in
3 the top right-hand corner is VGSO.1012.001.0007. Just so
4 you understand the context of this, Ms Cristine's statement
5 says that this is a document which was prepared and
6 provided to the ABC as part of a 7.30 Report program that
7 it presented in September of 2014 and if you want to take a
8 moment to read it, Dr Lester, and then I'll ask you a
9 couple of questions about it?---Yes, I will. Okay.

10 Have you read that, doctor?---I have, yes.

11 Is that a brief that you were involved in preparing?---I don't
12 recall specifically. Bram would normally seek my opinion
13 on this, but I don't recall this specifically.

14 Bram Alexander, was he employed in the communications section of
15 the department?---Yes, he is in the media unit of the
16 department.

17 Can we assume from your subsequent involvement in the topic,
18 that is on the question of whether there was any
19 relationship between the mine fire and any increase in
20 deaths, that it is likely that you would have had input
21 into this brief?---Yes, it is likely but, as I said, I
22 don't recall this specifically.

23 Are you able to tell us what, as at 11 September 2014, so this
24 is prior to Melbourne University being engaged by the
25 department; is that right?---That's correct.

26 What analysis of this data had you done before this date, before
27 11 September? We seem to have a problem with the sound. I
28 think you just confirmed, doctor, if we can just get back
29 on track, that as at 11 September 2014, Melbourne
30 University had not been engaged to perform any analysis of
31 the data?---I don't recall the date on which I engaged

1 them, but what I did do with the data was look at the data
2 we received from Births, Deaths and Marriages, tabulate it,
3 put it on the website, with some succinct explanation, so
4 that the community could see it and then say we were
5 seeking further expert opinion and therefore we engaged the
6 University of Melbourne, but I don't recall the exact date.
7 All right. I understand that. If you turn the page, I think
8 you'll see the document that went on the website that
9 you're referring to, 17 September. It seems to me, and you
10 might like to comment on this, but 17 September document,
11 that is attachment 2 to Ms Cristine's statement?---Yes.
12 Is an expanded version of what was being conveyed to the 7.30
13 Report in the brief I have just asked you about, it is a
14 more detailed discussion of the topic?---Yes, it's more
15 detail on the topic.
16 Perhaps we can turn to that, it might be beneficial to ask you
17 about that?---M'mm.
18 On the left-hand column of that you will see there is a
19 reference to the duration of the fire and then in the
20 second paragraph "community concern"?---M'mm.
21 Then do you see the fourth paragraph on the left-hand side:
22 "Local communities have worked hard to recover and rebuild
23 after this fire, health issues can quickly raise anxiety so
24 it is important that any information provided is accurate
25 and well understood." Did you have a role for the drafting
26 of this document, doctor?---I did along with other people
27 in the department.
28 Were you the final person to approve its content before it went
29 on the website, is that how it worked?---No, this went to
30 the deputy secretary for approval before it went on the
31 website after I had - - -

1 After you had approval?---After I had approval, that's right.

2 Going back to the document the next paragraph says: "This fact
3 sheet provides data on the Latrobe Valley and explains how
4 those figures were gathered, analysed and reported"; do you
5 see that?---Yes.

6 What you had at this point in time was what I think has been
7 referred to in some of the reports, as the crude data, that
8 is just the numbers of deaths in four postcode areas,
9 Morwell, Traralgon, Moe and Churchill?---Yes, that's right.

10 For 2014 in particular months, especially February and March of
11 2014, then you had data for the same period going back to
12 2009?---That's right, I believe in that first we had
13 January to June in 2014, and the same for 2009 through to
14 2013.

15 And then if we return to the document itself to the right-hand
16 column under the heading, "What did the data tell us?", you
17 see a third of the way down there is a heading
18 "Morwell"?---M'mm.

19 And it states: "The highest exposure of fine particles from the
20 smoke was in Morwell especially in the southern part of
21 Morwell. Therefore if the mine fire had any impact on the
22 number of deaths it would be expected to be seen in
23 Morwell", then in bold: "However, for February and March
24 2014 there was a 19 per cent decrease of deaths compared to
25 the same period in the previous five years." That was
26 conveyed as a reference to a comparison to the numbers in
27 Morwell in February and March 2014 with the average of the
28 previous five years, is that right?---That's right.

29 You made the observation when you compared the two figures, that
30 is the 2014 figure with the average in the previous five
31 years you had a 19 per cent decrease?---That's right.

1 Then: "For the six months period the number of deaths 88, were
2 similar to 2012, 2010 and 2009", do you see that?---Yes.
3 It was the fact, was it not, that in the two other years that
4 were being examined, that is 2011 and 2013, the numbers
5 were significantly lower than the 2014 figure?---Well, they
6 were lower.

7 Well, I don't think there is any dispute about this. If you go
8 to the next attachment, LC 3, three pages further in, this
9 is a further document placed on the department website,
10 reports of deaths in the Latrobe Valley claimed to be
11 related to the Hazelwood coal mine fire, do you see
12 that?---Yes.

13 If you look at the second page of that document there is a table
14 1, "RBDW, deaths from all causes", and if we're looking at
15 Morwell, February and March, we can see that the two years
16 I have just asked you about which were 2011 and 2013 - I
17 should be asking you to look at the January to June figures
18 and the second line down; so 2014 Morwell figure is 88, and
19 in the fact sheet readers were told it was similar to the
20 figures in 2012, 89, 2010, 91, and 2009, 86?---M'mm.

21 But as I think you just agreed if one looks at 2011 and 2013 and
22 compared those figures, 67 and 64, to the 2014 figure which
23 is 88 then the 2014 figure is significantly higher than
24 those two years, is it not?---Well, it's higher.

25 Why was there no reference to those two years in the fact
26 sheet?---Well, is it not self-evident that if someone is
27 suggesting it's a higher figure you look back and say well,
28 it's actually similar to some previous years. I don't
29 quite understand why you think we should then make
30 reference to every other figure.

31 Well, aren't the readers entitled to the complete picture?---The

1 complete picture was in the table.

2 All right. If you go back to the first document I asked you

3 about, attachment 2, there is a heading, "Traralgon" in the

4 right-hand column about three quarters of the way down the

5 page?---Yes.

6 What it says is there was an increase in deaths during February

7 and March but the number 43 was similar to 2009, 41, then

8 it goes on: "For the whole period January to June 2013

9 there was an increase in deaths with again the 2014 figure,

10 109, being similar to the 2009 figure, 117; there is a

11 different treatment of the Morwell figures from the

12 Traralgon figures, I suggest to you. With the Morwell

13 figures you compare the 2014 figure with the average of the

14 previous five years, correct?---Yes.

15 Why is there not the same treatment of the Traralgon

16 figures?---With Traralgon we're saying there was an

17 increase in deaths because there was in February and March

18 implied over the long-term average but that it was similar

19 to 2009.

20 The actual increase in deaths in Traralgon 2014 compared to the

21 average of the previous five years was 40 per cent, was it

22 not?---Yes.

23 That's a significant increase, is it not?---Well, the term

24 significance has a statistical meaning which I did not test

25 for in this.

26 It's considerably more than the 19 per cent decrease that's been

27 referred to in relation to Morwell as a figure?---Yes, yes.

28 So why not give the complete picture to the reader by referring

29 them to the percentage change in Traralgon, Churchill and

30 Moe rather than just the percentage change in

31 Morwell?---Morwell is obviously the key town of question

1 because Morwell was very much more exposed to the smoke
2 than the other towns. So if we were to see an effect of
3 the fire we should see it in Morwell. Therefore it makes
4 logical sense to treat Morwell differently to the other
5 towns and in any case, as I said, the data we presented in
6 the table so that the community could see what the actual
7 figures were.

8 I accept that but the total of course wasn't attached to this
9 first document that I'm asking you about, was it?---No, I
10 don't believe so, it was put up later.

11 But in fairness it was the same month, and you say if one looked
12 at all of the figures in the table attached to the report
13 dated September 2014 then a reader could draw their own
14 conclusions?---That's right.

15 You see I suggest to you that in relation to the 18 September
16 2014 document there is a degree of selectivity about the
17 way the data is presented to support in effect an argument
18 that there was no relationship between the fire and any
19 increase in deaths, what do you say to that?---Well, I
20 think the document accurately described the data we saw at
21 the time - as I said I think it's a straightforward
22 statement of the fact and then we said we would get further
23 expert opinion on it which is what we did.

24 Do you agree with me, Dr Lester, perhaps especially in the
25 context of this fire and concerns on the part of the local
26 community about the Department of Health's response to the
27 fire and its health impacts, that the provision of accurate
28 and complete information was of the utmost
29 importance?---Absolutely, yes.

30 And are you satisfied looking back at this document that is LC
31 2, that information that was both accurate and complete was

1 provided to the community?---Yes, I am satisfied.

2 While we're looking at these documents, can I ask you to look

3 over at attachment 4 which has the number the last four

4 digits 0012?---M'mm.

5 This was the document that was posted by the department after

6 the University of Melbourne had been engaged to look at the

7 data?---Yes, that's right.

8 Given that you had done that, and I think the evidence discloses

9 that they had been engaged around about the middle of

10 September so a bit more than a month before this, did you

11 give consideration to awaiting their report before putting

12 any information on the website?---No, I didn't because the

13 7.30 Report which quoted Associate Professor Barnett was

14 being reported in the media there was an increase in deaths

15 in Morwell at the time of the fire and I felt it was

16 important that the whole community actually saw the figures

17 that were there so they could see exactly what happened in

18 Morwell at the time of the fire. So I felt it was

19 important for those figures in the table to go on the

20 website and for us to say we're seeking further expert

21 advice on this.

22 You would accept as a matter of principle that whilst there may

23 be a particular significance concerning the figures in

24 Morwell because of the level of exposure?---Yes.

25 It was always a legitimate inquiry and continues to be a

26 legitimate inquiry looking at the other surrounding

27 postcodes for the complete picture?---Yes, absolutely.

28 In relation to this final report placed on the website dated 22

29 October 2014, that's the one for the first time that

30 conveys the information that Melbourne University had been

31 engaged to carry out analysis, and we see that on page

1 2?---M'mm.

2 In a blue box, and there is a summary of the report that you had

3 at that time received from the University of Melbourne,

4 that is their first report on this topic?---Yes.

5 And there are some quotations from it, for completeness the time

6 report you got, final first report from Melbourne

7 University was 26 September, I will ask you about that in

8 moment. But am I right in understanding that in addition

9 to the excerpts from report we see in the blue box there was

10 also a link on the website to the actual report, is that

11 correct? If we look at the bottom of the page?---I can't

12 recall but - here we are, yes.

13 You see?---For the grey box, for a copy of the university report

14 there is a link there, yes.

15 And was there any monitoring done within the department as to

16 the extent to which people looked at that - I think the

17 expression is the number of hits on that link - is that

18 something recorded within the department?---I believe our

19 communications unit do look at that sort of thing but I'm

20 not aware of what those results were.

21 Presumably they might be available to the Inquiry if that was a

22 matter we were interested in?---Presumably yes.

23 We would need to enquire of that?---Of the department, yes.

24 Of course. Can I ask a little bit about the engagement of the

25 University of Melbourne?---M'mm.

26 You personally contacted the department of epidemiology to

27 engage them to do work, is that right?---Yes, I did.

28 You had of course been the subject of some criticism in the

29 first Hazelwood mine fire Inquiry report?---M'mm.

30 About the communication of the evacuation information and

31 warning to the community of the Latrobe Valley and Morwell

1 in particular, did you think that it might have been better
2 if someone other than you within the department was
3 responsible for engaging Melbourne University, in other
4 words did you feel that you may have had a conflict of
5 interest in doing this work?---No, I don't believe that I
6 had a conflict of interest. I went to the University of
7 Melbourne as a very reputable internationally recognised
8 unit of epidemiology and biostatistics that were quite
9 independent from anything that had been to do with the fire
10 and I thought they would bring a very expert independent
11 set of eyes to the data.

12 I understand that but did it not occur to you that it might have
13 been better if you were at arm's length from that process,
14 put it that way?---No, look, I don't agree with that.

15 The initial engagement of University of Melbourne was in
16 relative terms a very small contract, just over \$3,000 for
17 the first report they provided?---Yes, that's right.

18 Would it be normal that the chief health officer would be in
19 charge of a contract for advice of that sort of size or
20 would you normally expect another perhaps more junior
21 officer within the department to have that
22 responsibility?---Well, these were quite unusual
23 circumstances.

24 In what way?---It's such an important issue that I felt I needed
25 to take carriage of it myself, I don't see anything
26 inconsistent with or in conflict with me taking personal
27 charge of this issue given its significance and important
28 to the people of the Latrobe Valley.

29 You retired towards the end of February 2015?---M'mm.

30 And as I understand it you were replaced by Dr Ackland as the
31 acting chief officer, and I think he continues to hold the

1 role in an acting capacity?---That's right.

2 He didn't perform the same role in relation to the engagement of

3 the University of Melbourne as you had done before you

4 retired, did he?---No, he didn't.

5 Is that something you discussed with him or others before you

6 left?---Look, in my discussions with him we agreed that the

7 team which had been handling the Morwell and Hazelwood

8 Inquiry information would continue and Michael having had

9 no involvement in it would not take an active part in it,

10 so that's why I passed the specifics on to Dr Csutoros,

11 senior medical advisor, to look after it after I was

12 retired.

13 Have you received direction from within anyone within Government

14 to be personally responsible for the engagement of the

15 University of Melbourne?---No, I did not.

16 In relation to Government, we know that as part of that 7.30

17 Report program that I referred you to a moment ago which I

18 think went to air on 12 September 2014, we know the deputy

19 premier was quoted in relation to the question of whether

20 there was any link between the fire and increase in

21 deaths?---M'mm.

22 Had you had any discussions with him before he gave that

23 interview?---No, I had not.

24 Do you know what briefings he had received about that topic

25 before he was interviewed?---No, I don't.

26 Would you expect in the ordinary course he would have received a

27 briefing from the Department of Health about that before

28 making a public statement like that?---Well, the material

29 that you've seen here I obviously communicated to my

30 minister, my minister may well have spoken to the deputy

31 premier, I'm not aware of that.

1 But the only material that was in existence as at the date of
2 the 7.30 Report program was that first brief I asked you
3 about from Mr Alexander, that is the case, isn't it?---Yes,
4 I think we had received - yes, we had received the actual
5 data.

6 Yes, I think that is the case?---Yes, yes, we had also received
7 official data so we had the data then.

8 But none of the fact sheets I just asked you about at least
9 hadn't been posted to the website?---No.

10 Presumably that is not a process that happens overnight, that is
11 drafts of those documents have to be prepared and
12 circulated, is that right?---Yes, that's right.

13 And as I think you have already told us you had to sign off on
14 them and they had to go to the - - -?---The acting
15 secretary.

16 Of the department?---Yes.

17 So you can't help us with what briefings, if any, the deputy
18 premier might have received before making the
19 statement?---No, I don't know.

20 Can I ask you a little bit about the selection of the department
21 of epidemiology at Melbourne University, had you had a
22 previous relationship with Dr Flander before engaging her
23 to do this work, had you previously had work done by
24 her?---No, I don't believe so, I don't recall any contract
25 that I have had with her in the past.

26 Was there a previous relationship between the department, that
27 it is the health department and that particular faculty at
28 Melbourne University?---When you say a relationship?

29 I will clarify that, had they done work for the department prior
30 to you engaging - - -?---They may well have, I couldn't
31 possibly cover the breadth of contracts that are led across

1 the department. For me personally I don't recall having
2 engaged them in a contract prior to that, but as I said the
3 department is a very big place so I can't comment on work
4 they may have done for other parts.

5 I'm just trying to understand, did you personally select
6 Dr Flander to do it or you went to the department and it
7 was allocated to her by her superiors?---Yes, I went to
8 Professor Terry Nolan who is the head of the department, I
9 have known Terry in a professional way for a number of
10 years and of course his reputation is impeccable as I said
11 in terms of expertise in epidemiology and biostatistics.
12 So I contacted Terry and asked him if he would be
13 interested in performing this work for me and he allocated
14 that to Dr Flander.

15 You do have a copy of those communications, DHHS, behind tab 34,
16 the second volume of our book, Dr Lester, and the doc ID is
17 DHHS.0008.001.0055. You should have in front of you the
18 first part of an email chain that relates to the evidence
19 you have just given about contacting Mr Nolan at the
20 University of Melbourne?---Professor Nolan, yes.

21 Professor Nolan, I apologise. If you perhaps go to the previous
22 page, that is ending 54, printed emails are never easy to
23 read, but just over half-way down that page you will see
24 the date, Tuesday, 16 September 2014, do you see
25 that?---Yes.

26 And that's an email from you to Professor Nolan copying a number
27 of people in, and then if you go to page 55 in the hearing
28 book, the next page?---M'mm.

29 About a third of the way down you see: "Dear Terry, as
30 discussed please find attached to ... (reads) ... Latrobe
31 Valley. Please let me know if you are willing and able to

1 do this and provide me with a quote"?---Yes.
2 That's the first contact at least by email concerning the
3 University of Melbourne, is that right?---Yes.
4 It refers to and implies there was a telephone conversation that
5 preceded that, is that your recollection?---Yes, that's
6 right.
7 And of course I don't expect you to know word for word what you
8 said in that telephone conversation, are you able to
9 summarise what it is that you spoke to Professor Nolan
10 about?---Well, I spoke to him about that we needed an
11 expert opinion on this - - -
12 (At this stage a person approached the Board.)
13 UNIDENTIFIED PERSON: I want to speak to you people.
14 CHAIRMAN: Please leave now, please don't get up on the stage.
15 UNIDENTIFIED PERSON: I will be all right - I haven't come to
16 disrupt the meeting, I have come here to be at the meeting,
17 I want to be heard please, I'm not going outside anywhere.
18 Sorry, excuse me please.
19 CHAIRMAN: Please leave the auditorium.
20 UNIDENTIFIED PERSON: Sorry.
21 CHAIRMAN: If you are totally quiet I will let you stay but
22 please don't interfere at all.
23 UNIDENTIFIED PERSON: No.
24 CHAIRMAN: I apologise. Please continue.
25 MR ROZEN: Thank you. I should say if at any stage you want a
26 break please let us know?---Thank you.
27 We have the email to Professor Nolan, I think I asked you about
28 the conversation prior to it that and you started to tell
29 me what you recall of the content of that
30 conversation?---Yes, it was very simple as the email
31 indicates, that I said I needed - we had these data,

1 Associate Professor Barnett had provided analysis which had
2 been broadcast in the media and I needed opinion on that
3 and would Terry think about doing that for me and give me a
4 quote, that was the extent of the conversation.

5 Why did you think it was necessary to obtain the services of the
6 University of Melbourne?---What I heard on the 7.30 Report
7 as I said, I had no access to Professor Barnett's report
8 prior to that, I had to look for it on-line. I was being -
9 the media were representing it as there were increased
10 deaths in Morwell during the fire and the data that I had
11 from Births, Deaths and Marriages showed there were
12 decreased deaths in Morwell during the fire, so I thought
13 what is this statistical technique Professor Barnett has
14 used and I need to get an expert opinion on that.

15 You have no background in biostatistics yourself?---I did a unit
16 of biostatistics in the Master of Public Health and then of
17 course there were some biostatistics in my Masters of
18 Epidemiology.

19 It's not a field you have practiced or done statistical analysis
20 yourself in?---No, that's right.

21 Do I understand from the evidence there are at least two
22 features of Melbourne University's here that are important,
23 firstly their expertise?---Yes, that's correct.

24 Secondly, their independence?---Yes.

25 It probably goes without saying but I should ask you, why was
26 having an independent view important to you?---I think it's
27 just a new pair of eyes, I think there are plenty of
28 commentators in this field and I thought it was good just
29 to have a new pair of eyes.

30 I won't take you through all of the email communication but if I
31 can summarise, there was some discussion about contracts

1 and who would do it and the like?--M'mm.

2 Then if you go over to the document ending in 51, do you see

3 that?---Yes.

4 This was at a point in time - and just familiarise yourself with

5 it, it is a few days later on 19 September, so in a pretty

6 short period of time you had received a draft report from

7 the university, do you see in the middle of the page - -

8 -?---I just lost you there, where are you reading?

9 You should have 51 in the top right-hand corner and in the

10 middle of the page you will see on 19/9/2014 at

11 2.59 p.m. Dr Louisa Flander wrote: "Dear Rosemary, thank

12 you for the opportunity to contribute to this important

13 analysis, we have attached our preliminary assessment of

14 the BDMV mortality data for Latrobe Valley,

15 2009/2014"?---M'mm.

16 So Louisa Flander had been identified by Professor Nolan to do

17 the work?---M'mm.

18 Did you make any separate inquiry of her background, her

19 capacity to fulfill her duties of the project you had for

20 her?---No, I didn't but I knew she was a longstanding

21 member of that team.

22 The Inquiry's received a report from Professor McNeil at the

23 same university and he of course is a professor in a

24 similar related field of statistical analysis?---M'mm.

25 Why would you not use someone of that status holder, a

26 professor's chair, rather than someone who is lower down

27 the hierarchy, if I can put it that way, at the same

28 university?---I went to Professor Nolan who of course does

29 hold the professor's chair of population and global health,

30 so it was obviously his choice as to which of his staff he

31 delegated it to and I didn't question that.

1 You didn't think it was your place to second guess his the
2 allocation?---No, I didn't.

3 You will see at the bottom of that page, that email I was asking
4 you about, firstly Dr Flander attached her preliminary
5 assessment and then at the bottom of the page she wrote:
6 "Thank you for providing the analysis done by QUT", that's
7 the report of Associate Professor Barnett?---Yes.

8 You managed to obtain a copy, this is his first report, August
9 2014?---That's right.

10 And Dr Flander wrote: "We have not commented on this analysis
11 in our assessment and we have not discussed the
12 environmental effects, rather we have looked only at the
13 BDMV data provided as per the project brief"?---M'mm.

14 Why did you want Dr Flander to comment on the analysis of
15 Associate Professor Barnett?---Again because I didn't
16 understand the analysis he had performed, I thought we
17 needed someone else and because the results did not seem to
18 make sense to me to say that there was an excess of deaths
19 in Morwell during the fire when the actual figures
20 suggested otherwise, I thought there should be some sort of
21 critical analysis of Associate Professor Barnett's work.

22 Is it fair to describe what you asked Dr Flander to do to be a
23 type of peer reviewer of the work done by Associate
24 Professor Barnett?---Yes, that would be right.

25 Why did you not then subsequently seek to have the work of
26 Dr Flander's peer reviewed, or did you?---No, I didn't, you
27 can go on getting opinions forever, I suppose.

28 But this is the opinion you're relying on in the published
29 information you're putting on the website and communicating
30 to the world at large?---And that was clearly stated.

31 But don't you think it was have been valuable to have that work

1 given how centrally important it was to the department to
2 have that work peer reviewed?---As I said I don't
3 necessarily think you need to go on collecting further and
4 further opinions.

5 If we go back to the email communication working backwards
6 obviously, if you look at page 0050, that's the previous
7 page in the folder?---M'mm.

8 You see at the top of the page: "Hi Rosemary"?---Yes.

9 The email actually starts on the previous page, this is

10 23 September: "I have attached the following report as a
11 PDF document so you can see the graphs. I'm not sure what
12 to say about the Barnett analysis other than that the
13 statistical solution is appropriate and more nuanced than
14 ours as he included the seasonal influence of temperature
15 in one model. It is important to note that his result is
16 not different from ours. An extra 1.8 deaths per month per
17 postcode for 2014 compared to 2009/2013, and importantly
18 his results demonstrate the extremely wide confidence
19 intervals we show as well. So we can say after applying
20 different statistical interpretation of this data we can
21 see an increase for the number of deaths for 2014 over the
22 previous five years but we cannot conclude this is due to
23 any specific cause in 2014"; do you see that?---Yes.

24 Other than that observation by Dr Flander about Associate

25 Professor Barnett's work, which would you agree with me is
26 not critical?---That's right, it says - - -

27 That's a fair observation it says his analysis is
28 appropriate?---Yes.

29 And notes the conclusions he came to are essentially the same
30 conclusions reached by Dr Flander in her work?---With the
31 qualification about the confidence intervals.

1 Well, doesn't it say that the wide confidence intervals are the
2 same as well?---Yes, they do, it does say that.

3 And you understood that to mean that confidence intervals tell
4 you how confidently one can rely on the data, if I can put
5 it that way?---That's right, yes.

6 How likely or unlikely it is that the demonstrated result is due
7 to chance?---Chance, that's right.

8 So you had that response from Dr Flander, you had left the
9 department by the time she provided the report of the
10 critical analysis of Associate Professor Barnett's work,
11 had you not?---That's right, I had left by then, yes.

12 For various reasons that we don't need to go into that didn't
13 come until April of 2015?---That's right, it was then set
14 up as Dr Flander rightly pointed out, she fulfilled the
15 terms of the project brief so that then became the subject
16 of a new project brief and Associate Professor Barnett then
17 published a second paper so the project brief became a
18 critical review of the two papers by Associate Professor
19 Barnett.

20 Why was it a requirement in the project brief to Dr Flander that
21 she provide a preliminary assessment to you before her
22 final report?---That's a reasonably standard way of
23 ensuring that the product we're about to receive actually
24 addresses the question we have asked, so it's helpful
25 before any contractor submits a final report that we have a
26 look and check that it actually fulfils requirements of the
27 contract, that it actually answers what we have asked them
28 to do.

29 Accepting that as being a normal process, would you agree that
30 the range of comments that might be provided by a client to
31 a consultant would range from minor matters sufficient as

1 identifying typographical errors on the one hand at least
2 in theory, through to asking for conclusions to be
3 changed?---Well, theoretically yes.

4 In this scenario where what you're seeking is an independent
5 expert report would it be inappropriate in your view to ask
6 for conclusions to be changed?---I think any independent
7 researcher at a university is not going to agree to
8 anything which they can't support from their work.

9 That's not really an answer to the question, Dr Lester, do you
10 think it would be inappropriate for the department to ask
11 for a conclusion to be changed in a draft report?---Well,
12 it depends what you mean by ask for a conclusion to be
13 changed, I mean a person requesting a contract might
14 suggest alternative wording which might be clearer to them.
15 It would obviously be inappropriate to completely change
16 the meaning of the conclusion, as I said no reputable
17 researcher I'm sure would agree to that.

18 There were in fact three drafts of this report provided to you
19 by Dr Flander, were there not?---This initial report?

20 Yes?---I don't recall how many drafts.

21 Could you turn to tab 31 of the hearing book, please. Just
22 while you're doing that I should tender the email
23 communication, Mr Chairman, that is the chain of emails
24 starting at DHHS.1008.001.0039 and goes through to the last
25 four digits at 0055.

26 #EXHIBIT 16 - DHHS.1008.001.0039 to DHHS.1008.001.0055.

27 Do you have the document immediately behind tab 31 in your
28 folder?---Yes, I do.

29 And it is DHHS.1008.001.0067?---Yes.

30 Do you see that is a document headed, "Preliminary assessment
31 project brief", 160914, 19 September 2014?---M'mm.

1 Do you agree that's a draft of the report provided by Dr Flander
2 to you in relation to this project?---That's what it
3 appears to be.

4 I will tender that draft report.

5 #EXHIBIT 17 - DHHS.1008.001.0067 dated 19/9/2014.

6 Can I ask you please to remove those two pages from the folder
7 and just put them to one side if you would?---So this is
8 the first draft with 0067?

9 That's right, and you should have pages running from 0067
10 through to 0069?---M'mm.

11 If you look at the next document 0095, the document that's been
12 provided to the Inquiry has you see typed on it under that,
13 "Draft received by DHHS, 11.36 hours, 23/9/2014, do you see
14 that?---Yes.

15 Is that a further draft of this report that was received by you
16 at that time?---It appears to be, as I say I really don't
17 recall the - I really don't recall the sequence of drafts
18 on this document.

19 I understand that, the Inquiry understands that departmental
20 officers have worked through this material, pieced it
21 together and provided it to us, would you accept their
22 judgment about this sequence of events, does it look right
23 to you from your recollection?---Well, I can't dispute it,
24 yes, I'm not disputing it.

25 I will tender that draft.

26 #EXHIBIT 18 - Draft received by DHHS, dated 23/9/2014.

27 Then without taking that out of the folder, doctor, if you could
28 go over to the page, that is 171 in the top right-hand
29 corner?---M'mm.

30 And you will see that it has typed on the draft "received by
31 DHHS, 13.30 hours, 23 September 2014"?---Yes.

1 And is that a further draft of this report that was received by
2 you?---It appears to be so, yes.

3 I tender that.

4 #EXHIBIT 19 - Second draft received by DHHS, dated 23/9/2014.

5 And then to complete this picture, doctor, if you turn over two
6 pages, you should have in the top right-hand corner

7 DHHS.1008.001.0462?---Yes.

8 It is entitled Draft received by DHHS, with a time and date
9 there on 26 September?---M'mm-hmm.

10 It appears to be the final report?---M'mm-hmm.

11 That is, as we understand it, the final report that was provided
12 to you. Does that accord with your memory, that you got
13 the final report on the 26th, or are you not sure?---I'm
14 not sure what the date was.

15 You can take a moment to look at it, if you like, but does that
16 look to you like the final report that you received?---Yes,
17 this looks like the final report.

18 I should tender that for completeness.

19 #EXHIBIT 20 - DHHS.1008.001.0462

20 If you have open in front of you the final report, the section
21 headed Executive Summary. In the top right-hand corner it
22 is 0463?---M'mm-hmm.

23 Do you see that?---Executive Summary, yes.

24 Just so we're looking at the same thing, can you just confirm
25 that the page in front of you, the last four digits of the
26 code at the top are 0463?---Yes, that's right.

27 If you have in front of you the first draft that was sent to
28 you, which is Exhibit 17, and that has a code in the top
29 right-hand corner 0067?---M'mm-hmm.

30 Before I ask you to compare the two, we don't see in the
31 material provided to us any written comments that you

1 provided to Dr Flander. Do you recall now whether you did
2 provide any written comments to her on those various
3 drafts?---I don't recall providing any written comments on
4 the drafts, no.

5 Do you recall providing any comments on the drafts?---No, I
6 don't recall.

7 I suggest to you that it is likely you provided comments,
8 otherwise one wouldn't see successive drafts with changes
9 from one draft to the next. Does that seem a reasonable
10 conclusion?---I really don't recall, to be honest.

11 Why, other than to receive comments, would Dr Flander have
12 provided drafts to you?---I don't know. Maybe she was
13 revising her thinking. As I said, I really don't recall
14 conversations with her about conclusions or drafts.

15 If you look at the first paragraph of that first draft that you
16 got on 19 September, it starts, "Our review of the BDMV
17 mortality data 2009-14 for Latrobe Valley shows that an
18 excess number of deaths occurred in the period January to
19 June 2014 compared to the period January to June 2009 to
20 '13 but that no conclusion can be drawn from these data as
21 to the reason for this excess mortality." Do you see that
22 is how it reads in the first draft that was sent to
23 you?---Yes.

24 And then if you compare the same paragraph in the final report
25 that you got, it reads, "Our review of the BDMV mortality
26 data 2009-14 for the Latrobe Valley shows that slightly
27 more deaths occurred." Previously it said "an excess
28 number of deaths occurred". Is that a change that you
29 asked Dr Flander to make?---I don't recall asking her to
30 make any changes on these documents.

31 Can you explain how that change would have happened without it

1 being a response to a comment from you or someone at the
2 department?---No, I can't explain.

3 Do you think, looking at it now, that it is likely that you
4 asked that change to be made or are you just simply not in
5 a position to tell us?---I have no memory of any telephone
6 conversations with her about this.

7 When these drafts were being provided to you, you had a personal
8 view about the issue of any connection between the mine
9 fire and any increase in deaths in the Latrobe Valley,
10 didn't you?---Well, I had a personal view that the deaths
11 actually decreased in Morwell, where the exposure was the
12 greatest.

13 You didn't think there was a link between the mine fire and any
14 increase in deaths in the Latrobe Valley, did you?---Well,
15 it is a basic principle of scientific causation that the
16 greater the exposure to the hazard, the greater the effect
17 should be seen and to have the effect not seen in Morwell,
18 which was much more exposed, and seen in other parts of the
19 Latrobe Valley, which were much less exposed, did not seem
20 to make logical sense.

21 But that change from the draft report to the final report was
22 consistent, was it not, with your view about the subject,
23 that is that there was no link between the mine fire and
24 any increase in deaths in the Latrobe Valley?---Well, if I
25 look at the first paragraph of the first report, that is
26 also consistent with my view.

27 I suggest to you it has been refined to make it more consistent
28 with your view. What do you say about that?---Well, as I
29 said, I have no memory of any conversations with her asking
30 her to refine this.

31 I should, in fairness to you, draw your attention to another

1 email which is behind tab 34, which I'll ask you to go to.
2 It is actually Exhibit 16, I'm told, but for your benefit,
3 Dr Lester, it is at DHHS.1008.001.0039?---Which tab is that
4 behind?

5 Sorry. It is tab 34, doctor?---The one I have there is 0011.

6 Sorry, doctor, what is your question?---I've just lost the
7 number of the document that you were asking me to look at.
8 It ends in 0039?---There is quite a lot of pages in tab 34.

9 They should be in sequence, I hope, so if you just turn through,
10 you should get to 39. If you'd just take a moment to read
11 that email, please, an email to you from Dr Flander. Just
12 for completeness, if you turn to the next page, that is the
13 page that has got 41 in the top right-hand corner, down the
14 bottom you'll see an email from yourself to Louisa Flander,
15 "Thank you again for providing the deaths data analysis. I
16 would like to clarify a couple of points with you before we
17 finalise this report." Does the reference to "we finalise
18 this report" suggest that really this was a collaboration
19 between you and Dr Flander?---I don't think it has any
20 particular connotation, it is just finalisation of the
21 report. I don't think you can read anything into that use
22 of the term "we".

23 I suggest to you it is an accurate reflection if it was intended
24 to convey that this was a collaborative effort because that
25 is the reality here, isn't it, Dr Lester, this was a
26 collaborative effort between you and Dr Flander, do you
27 agree with that?---No, I don't. It was a contractor
28 relationship.

29 Going back to the email, you said, "I have decided to do this by
30 email rather than meet, as I'm running out of time before I
31 go on leave. I have discussed with colleagues in here and

1 have the following additional requests." Does that jog
2 your memory that you did provide comments to Dr Flander and
3 that's what led to the changes being made in the
4 report?---Well, clearly I did. I said I didn't recall this
5 email. Do you mind if I take a minute to read it, please?
6 No, please do. Take as long as you need?---Thank you.
7 You'd agree with me, wouldn't you, that at least an explanation
8 for the changes in the report was that they were in
9 response to comments that had been provided by you?---Yes.
10 I should tender those two emails, please. And just for
11 clarification, they are pages DHHS.1008.001.0042 and 41.
12 I'm told they are already an exhibit, 16. In those
13 circumstances, I don't need to tender them again. My
14 apologies.

15 CHAIRMAN: All right.

16 MR ROZEN: Returning, if I could, please, Dr Lester, to the
17 comparison of the first draft that you got from Dr Flander
18 and her final report - this is behind tab 31, if you can go
19 back to that, please. Do you have those two documents in
20 front of you, that is the first draft and the final
21 draft?---Yes, thank you.

22 Just one other matter that I need to ask you about. That
23 initial sentence under the heading Executive Summary, in
24 the first draft that was sent to you, the concluding words
25 in that sentence were, "No conclusion can be drawn from
26 these data as to the reason for this excess mortality."

27 That, would you agree, is a neutral conclusion?---Yes.
28 If you look at the final report, the wording was changed to,
29 "But the evidence that this is not due to just chance alone
30 is inconclusive"?---Yes, I see that.

31 Are you able to assist us in whether that is a change that was

1 made in response to a comment made by you?---If I go back
2 to that email, I don't see anything there that I've asked
3 for any conclusions to be changed. It looks like I've
4 asked for clarifications and further simplification of
5 labels on tables.

6 Is your evidence to the Inquiry that you're able to say that
7 that email you're referring to is the sum total of the
8 comments you provided to Dr Flander?---I've said to you I
9 don't recall having any telephone conversations with her,
10 so I really don't recall.

11 All right. So it is possible that you may have?---It is
12 possible that I had a telephone conversation with her, but
13 I don't recall the content of any of it.

14 In your experience of the engagement of expert independent
15 advice for a contract of this size, some \$3,000 or so, is
16 it unusual that so many draft reports were provided and
17 comments forwarded back to the consultant about the
18 document?---Well, it was a very important issue and a very
19 important issue to get a document that could be easily
20 understood.

21 I suggest to you, Dr Lester, that what you wanted from
22 Dr Flander was not an objective analysis of the data but
23 rather an analysis of the data that supported the
24 department's stated position about there being no link
25 between the deaths and the fire. What do you say?---No, I
26 don't accept that.

27 You maintain, do you, that you were seeking an objective
28 analysis of the data?---Yes.

29 Can I just go back for a moment to that initial email chain that
30 I was asking you about, and you'll find this behind tab 34.
31 If you could go to the page with the code in the corner

1 0049. Just so that the sequence is clear, this is an email
2 from you, if you look about a third of the way down the
3 page, 23 September 2014, so it is in that period between
4 when the first draft was provided and when the final report
5 was provided?--M'mm-hmm.

6 And halfway down the page you wrote, "Thanks, Louisa" and you
7 make a comment about nomenclature in the report. Do you
8 see that, about reference to the Morwell postcodes and the
9 meaning?---Yes.

10 And then you say this, "One of the things which gives us comfort
11 that this is nothing more than random variation is" -
12 perhaps that should be "that the increase was greatest in
13 the Moe postcode, which is 13 kilometres away from the
14 fire." What did you mean by the phrase "gives us
15 comfort"?--Well, as I mentioned before, a basic principle
16 of cause and effect is that the greater the exposure to the
17 hazard, the greater the effect should be seen. So to
18 suggest that the effect from the fire was greatest in
19 Morwell does not seem to make logical sense.

20 But what comfort can you, as the chief health officer, draw from
21 an increase in the number of deaths in Moe in 2014? What
22 do you mean that gave you comfort? The data is that there
23 were 10 extra deaths in Moe compared to the average in
24 February and March and 30 extra deaths for the first half
25 of the year?---That is something that needs to be
26 investigated because it is absolutely not clear what the
27 cause is.

28 I'll repeat the question, doctor. How can that information give
29 you comfort as the chief health officer? I don't
30 understand?---All I can go back to is saying what we're
31 looking at here is are these increased deaths caused by the

1 fire, and the information that we have suggests that that
2 is not the likely explanation.

3 What you meant by the phrase "gives you comfort" is that it
4 fitted with your position, your theory about there being no
5 connection between the fire and the deaths?---Well, it fits
6 with basic principles of causation, cause and effect.

7 Did it occur to you that by so clearly stating your position,
8 that you were compromising Dr Flander's independence in her
9 analysis?---I think, as I said, Professor Nolan's unit is
10 extremely highly regarded and I don't think that any of his
11 staff would compromise themselves because of a public
12 servant.

13 Why was it necessary to state your position at all in
14 correspondence with Dr Flander if what you wanted her to do
15 was an objective analysis of the data?---Yes, I don't know
16 why I included that there.

17 It would be preferable not to have included that, wouldn't it,
18 if what you were seeking to do was maintain her
19 independence of your department?---Well, as I said, I have
20 the highest regard for Professor Nolan's unit and I don't
21 think that they could be influenced.

22 The other thing about that analysis of Moe is it assumes that
23 people in Moe, for example, don't come to Morwell to work
24 and therefore would have been exposed during the mine
25 fire?---Yes, exposure is very important, as you heard
26 Professor Abramson speaking yesterday; knowing more about
27 patterns of exposure and ill health and mortality is
28 extremely important.

29 If I could ask you some questions about another matter. Were
30 you in the hearing room yesterday afternoon when Professor
31 Catford was asking Ms Cristine about this question of

1 engagement with the community in the period
2 September/October of the second half of 2014?---Yes, I was.
3 What did you do to engage with the community about these matters
4 that were of such concern to it, that is the Latrobe Valley
5 community?---In the setting up of the long-term health
6 study, of which Professor Abramson is the chief researcher,
7 I was personally involved in the consultation sessions down
8 here in the Valley. After that, the community engagement
9 committee was set up through the regional office in
10 Traralgon from the Department of Health, which I think is
11 entirely appropriate, that the engagement be done at a
12 local level, and then Mr Attiwill has detailed this morning
13 what other things happened between the department and
14 Voices of the Valley.

15 There is nothing you want to add to that in terms of your own
16 personal involvement?---No.

17 Do you have a view on whether the Board of Inquiry should be
18 considering the question of excess deaths in the Latrobe
19 Valley following the mine fire?---Do I have a view on that?

20 Yes?---The government has decided that they wanted to give them
21 the term of reference, and that is absolutely appropriate.

22 You think that is a legitimate question for analysis?---Yes.

23 What I mean by that is from your statement, you appear to state
24 a position that it's been analysed by the University of
25 Melbourne, the issue is resolved. That would be an
26 incorrect reading of your statement?---That is incorrect
27 because in fact after that we went on to, as you know, we
28 went on to request further data from the Registry of
29 Births, Deaths and Marriages because, as the University of
30 Melbourne pointed out, one of the limitations of their
31 analysis was they take no account of age, sex and cause of

1 death and all of these things can be instructive, so quite
2 the opposite from saying no, this is the end of the matter,
3 we said we need to do further analysis on this.

4 The position is - I'll just make sure that this is right - the
5 brief to the university to do that further analysis was
6 something which occurred after your retirement?---That's
7 right, yes. It was set in train before I retired, but the
8 actual contract was signed and the work done after I
9 retired.

10 And as at the date of your retirement, was the proposed
11 re-opening of the Inquiry something which had been raised
12 with you?---Yes.

13 It had?---Yes.

14 I see?---Well, it had been raised publicly by the government.

15 Dr Lester, have you had an opportunity to look at the draft
16 reports which were provided to the department by Dr Flander
17 after your retirement and the communication between the
18 department and Dr Flander?---No. I only received the final
19 report, which is what I requested in my request to the
20 Victorian Government Solicitor's Office and the department,
21 I only saw the final report.

22 Obviously you're not in a position to comment on the
23 communications between the department and Dr Flander?---No,
24 I'm not.

25 Unless the board have any questions for Dr Lester, they are the
26 matters that I wish to raise with her.

27 PROFESSOR CATFORD: Thank you very much. I just had one
28 question, really to understand the peer review of Associate
29 Professor Barnett's report. You asked Dr Flander to do
30 that?---M'mm-hmm.

31 But she had also provided you an independent report as

1 well?---M'mm-hmm.
2 Why was it helpful for the same consultant to peer review
3 Professor Barnett's report?---Well, I don't see that it is
4 inappropriate.
5 Obviously she came to a view herself about the evidence and then
6 you asked her to review another statistician's opinion. I
7 just wondered why - did you think about asking another
8 person to peer review Professor Barnett's report?---I
9 didn't, but I saw it really as, you'll see from one of my
10 emails, an extension of my initial request, "Can you please
11 look at this data and more or less tell me why you're
12 interpreting it differently, if you are, and if so, why
13 you're interpreting it differently from Professor Barnett."
14 Thank you. I suspect we're almost at the end of the
15 questioning. Is there anything else you wanted to say to
16 the board or to the community about these affairs?---Just
17 that when this issue came to light, it was obviously very
18 concerning and it is still very concerning. As I said, I
19 think it is entirely appropriate that it is investigated
20 further and obviously at such a high level through the
21 Board of Inquiry, but through the process I continued, as I
22 mentioned, to investigate this by requesting more specific
23 data from the Registry of Births, Deaths and Marriages and
24 getting more expert analysis of that.

25 Thank you.

26 MR ROZEN: I know Voices of the Valley have some questions. I
27 have been given an estimate of 10 minutes. I'm not sure
28 about others.

29 MR NEAL: Can I reserve my position until Mr Blanden and Voices
30 of the Valley have put theirs?

31 CHAIRMAN: If others are happy with that. Voices of the Valley,

1 Ms Szydzik.

2 <CROSS-EXAMINED BY MS SZYDZIK:

3 Dr Lester, just going back to some of the questions that my
4 friend asked you in relation to your conclusion about the
5 significance of the reduction in the number of Morwell
6 deaths in the period February to March, you, at that time,
7 had the information available to you extending out to
8 June?---Yes.

9 Which showed that there was, after that period of time, an
10 increase?---M'mm-hmm.

11 Did that at all influence your opinion about, as you put it, the
12 direct logical connection between number of deaths and
13 exposure?---Well, there's the logical connection between
14 hazard and effect and then there is the literature, which,
15 you've seen in documents and heard, the literature about
16 the risk of mortality from exposure to particulate matter
17 is on that day and up to a few days afterwards. There's
18 really nothing in the literature that was presented to me
19 that Monash University did for us which suggests that the
20 results of this type of exposure could be seen in the
21 months later.

22 You are aware, are you not, that there are effects that continue
23 to be ongoing as a result of exposure to particulate matter
24 and certainly the information before you was those
25 long-term effects, and I have put it as long term because
26 that is what the literature says, that those long-term
27 effects do continue in a cumulative sense?---Looking at
28 mortality, as I said, the literature review which Monash
29 University did, and then updated for us, only identified
30 risk of mortality on the day of the high particulate
31 matter, plus a few days after, and you'll see in Professor

1 Armstrong's analysis that there was no association here.
2 And that is the reference to the rapid health risk assessment;
3 is that correct?---Yes. The literature review was one part
4 of the rapid health risk assessment and then there was the
5 calculation of risk, which Professor Abramson spoke to
6 yesterday.

7 I might just then turn to that document and ask you some
8 questions about that?---Can you just remind me where that
9 document is.

10 Absolutely. It is an attachment to Ms Cristine's statement,
11 which is behind - let me just get the reference?---Is it
12 tab 6 in the first folder?

13 Sorry, it is an attachment to your statement, RAL-2?---I've got
14 it, yes.

15 Tab 6?---Yes, I have it, thank you.

16 Thank you, Dr Lester. Now, you, in your communications with
17 Melbourne University, have relied upon this particular
18 report and, in fact, you've extracted from it, and I'll
19 come to that in a moment, but the significance of it was
20 the point that you were just making, about that there was
21 not a risk of death in the period of the exposure levels
22 that are looked at in this report, or that the modelling is
23 based upon in this report?---Yes.

24 Is that correct?---Sorry, can you repeat the question.

25 It was a little confused, I'm sorry. You have relied upon the
26 statements to the effect that are contained in this report
27 that there was not a risk of death in the period of six
28 weeks if the exposures were at the modelled levels in this
29 report?---That's right, this was the expert advice that I
30 received.

31 What I'd like to do is just take you through some of the

1 limitations that were identified within this report. If I
2 could first get you to look at - it is page 4 of the
3 report, but the Inquiry book number is 0009. The first is
4 contained within - it is the fourth paragraph down, so it
5 is halfway down, starting with, "The fire in the Hazelwood
6 brown coal mine" and then the second sentence, "To date
7 there are no published health studies done, specifically in
8 relation to exposure to smoke from fires in open-cut brown
9 coal mines similar to that of Morwell." So the first point
10 is we don't really have information - we don't have
11 information, frankly, about the situation that is currently
12 in question?---Yes, that was one of the big difficulties,
13 this was really a unique situation.

14 Moving over to the next page, which is - it is page 5 of the
15 report, so 0010, and this is the bottom paragraph,
16 starting, "The review has found". So as you can see there,
17 what this is a reference to is that there are a variety of
18 other toxins that will have been released as a result of
19 the mine fire that are in addition to the particulate
20 matter PM 2.5 and also carbon monoxide. The suggestion
21 there is that they should be measured and as no doubt you
22 appreciate, one of the particular concerns is how different
23 pollutants combine to have an effect on the
24 individual?---M'mm-hmm.

25 So this was something that was expressly acknowledged within
26 this report as a limitation; correct?---Correct, yes.

27 Moving over - - -?---Sorry, could I just make a comment on that,
28 the first report of the Inquiry. We, of course, had
29 requested the Environment Protection Authority to measure
30 all of these things and the first report of the Inquiry has
31 detailed those findings, that some of these other air

1 toxics were not present at levels which would cause
2 concern.

3 But the fact remains that at the time of this report, and so the
4 time that you were demonstrating reliance on the conclusion
5 of this report, that was unknown?---I would have to go back
6 and check the dates of exactly when we received the
7 monitoring from the EPA, but it was known in advance that
8 Hazelwood brown coal is very low in sulphur dioxide and
9 nitrogen dioxide, and that was proved to be the case
10 through the monitoring.

11 There are a number of other toxins that are identified here,
12 which I didn't take you through, but they are polycyclic
13 aromatic hydrocarbons, dioxins, furans, formaldehyde and
14 other carbonyls, chemical composition of particles,
15 volatile organic compounds and gaseous mercury. Now,
16 regardless of what you just told me about additional
17 information, that didn't actually relate to any of those
18 things, you were specifically referring to sulphur dioxide
19 and nitrous oxide, were you not?---And there are other
20 things, which are in the EPA monitoring and appeared in the
21 last Inquiry report.

22 And the fact remains at the time of this report, that is an
23 uncertainty?---I'd have to check the dates as to when we
24 got any first information from the EPA on that.

25 As stated in this report, I'll clarify that?---Sorry?

26 As stated in this report. The expression there in that last
27 paragraph is simply that we don't have those
28 measurements?---Well, those measurements weren't given to
29 these consultants at the time, yes. As you heard Professor
30 Abramson say, it was some time before we got this back,
31 yes, and as I said, I can't give you the exact date as to

1 when we received those monitoring results.

2 Thank you, Dr Lester. Just moving over to the next page, so

3 0010 - it is page 6 of the report and it is the first

4 paragraph underneath the dot point. Again, it is just

5 reiterating the same point that we identified before, that

6 this was an unprecedented event?---M'mm-hmm.

7 The next paragraph again identifying yet another unique aspect

8 of this particular instance. So we have the unusual

9 situation of intermittent and on occasion high

10 concentrations. That, again, was something that was a

11 point of difference between the other known

12 information?---Well, when it says "lasting for several

13 weeks and which may persist for some months", in fact this

14 fire had three quite high peaks in the first weeks and then

15 from the first few days of March, the air quality was

16 virtually at or below the national environment protection

17 standard, with just a few days here and there that were

18 slightly above.

19 When you say there were the three peaks within the first weeks,

20 in fact there was a significant period of time at the start

21 where there were no measurements; is that right?---That's

22 right. In Traralgon there was measurements from the start,

23 Traralgon has got a permanent monitoring station and

24 particulate matter was monitored from the start.

25 Particulate matter was monitored from Morwell East from, I

26 think, 15 February and from Morwell South on 22 February.

27 Moving over to the next page, 0012, at the top of that page we

28 have that this particular review focused only on some

29 individuals, those being the Morwell community, rather than

30 those that were mine workers, firefighters and other

31 emergency personnel. Can you see that set out

1 there?---Yes.

2 It is at the very top. Thank you, Dr Lester. If I could then

3 just get you to have a look at the project brief that was

4 provided to Dr Flander, or the University of Melbourne, and

5 that is contained as an attachment to Ms Cristine's

6 statement, which is at tab 4?---That is 0014, the project

7 brief of 16 September, is that the document?

8 That is perfect. Thank you, Dr Lester. This particular project

9 brief, which is the first brief, as I understand, to the

10 University of Melbourne?---That's right, that's correct.

11 That makes specific reference to the risk analysis that we were

12 just looking at; is that right?---That's right.

13 So if we start halfway down that page, what we see is the

14 conclusion that you stated to me about that there would not

15 be that risk of deaths and that is in fact extracted into

16 that project brief?---Well, that is the advice that I was

17 given, yes.

18 So you've set that out in terms, that conclusion, as in you've

19 included an extract setting that out from the

20 document?---M'mm-hmm.

21 But can you point anywhere in here to any of the limitations

22 that were spread throughout the report that might put some

23 question mark over the certainty around that

24 conclusion?---Well, I suppose putting that in was just by

25 way of background. What I'm asking of the University of

26 Melbourne was to provide their analysis, I wasn't asking

27 them to say, "Yes, this accords with the advice you

28 received from Monash University or not", so I don't really

29 see the relevance of putting the limitations in there.

30 That was really, as I said, just by way of background, I

31 wasn't asking the University of Melbourne to comment on the

1 appropriateness of that risk assessment, I was asking them
2 to analyse what actually happened.

3 But it is the background that sets the scene as being the
4 likelihood is zero deaths?---It is the background which was
5 the expert advice that I received, yes.

6 And that expert advice was highly qualified?---Yes, it was.

7 And that wasn't - - -?---It was qualified.

8 I'll just take you to one remaining issue, and that is a matter
9 that my learned friend asked you some questions about, and
10 that is - it is related - the issue of the logical
11 connection between the fewer deaths in Morwell and then the
12 mine fire. One matter that was put to you was that people
13 in Moe might well work in Morwell and so there is an
14 exposure, and we have seen in fact that reference in the
15 report?---M'mm-hmm.

16 But a further consideration, of course, is that people may have
17 left Morwell and so there was simply a reduced population,
18 isn't that the case?---That is the case and that would
19 obviously suggest to me that people were hearing the
20 messages of, "Smoke is bad for your health, take regular
21 breaks from the smoke" and hear that message and leave
22 Morwell and if that's the reason why there wasn't excess
23 mortality, that is very good.

24 Another reason that the logical link that you put so strongly in
25 your evidence earlier may in fact be a very questionable
26 link is the very thing that emerges from Dr Flander's
27 report, which is the uncertainty in the statistical
28 evidence. So the question is was it safe to conclude, when
29 people's lives were at risk, that just because there was
30 some reduction in some of the data, that it was appropriate
31 to disregard the data overall?---Sorry, I don't understand

1 what you're asking me. At what period of time?
2 At the time that you prepared the project brief and the public
3 statements that went on to the website and at all times
4 afterwards?---I'm sorry, I don't understand the question.
5 Can you repeat it?
6 Certainly. The question is there were uncertainties in the
7 data, as you know?---Yes.
8 And those uncertainties were highlighted by your expert?---Yes.
9 In fact, that was really the telling feature of their
10 report?---The University of Melbourne report?
11 That's right?---Yes.
12 So the uncertainties were something that were very clearly known
13 in your mind?---At the time that the University of
14 Melbourne gave me their report?
15 Well, yes, that's right. And your public statements, in
16 particular after you received that report, so let's focus
17 then on the October report - sorry, the October public
18 statement that was publicised on the website?---M'mm-hmm.
19 That still emphasised that there was a 19 per cent reduction in
20 mortality in Morwell. If you have a look at the first page
21 of that document - 0012 is the reference?---Yes, I have
22 that, thanks.
23 If we look at the column on the right-hand side and underneath
24 the heading Morwell, we have in bold still, "However, for
25 February and March 2014, there were 22 deaths. This is
26 19 per cent lower than the average for the same period over
27 the previous five years"?---Yes, that is a statement of
28 fact.
29 And that was the same statement that was referred to in the very
30 first notice that was put on the website, and we've gone
31 through that, I won't take you back to that?---Yes.

1 At the time that this particular document was prepared, you had
2 received the Melbourne University report?---M'mm-hmm.
3 And one of the emphases there was on uncertainty?---That's
4 right.

5 And you have made the point that it was so logically obvious
6 that the fact that there was this reduction means that
7 there was no connection between deaths in other areas and
8 the mine fire, that it was obvious - that that logical
9 connection was obvious?---Well, that is where you start
10 from. I don't think there's anywhere in these documents
11 where I've said, you know, everything else is completely
12 ruled out. We've started from the more exposure more
13 effect.

14 So my point is the logical connection between those two things
15 is undermined by the very uncertainty in the data?---Well,
16 we've quoted - if you're looking at the document, our
17 comments on what did Melbourne University find, we've
18 included there their comment about their uncertainty as to
19 whether it is caused by any single cause or by chance and
20 then we have put in there limitations and then put a direct
21 link to the report there.

22 No further questions.

23 <CROSS-EXAMINED BY MR NEAL:

24 Doctor, can I just ask you about one topic, which was the
25 question of allowances that were made to affected persons
26 in terms of the effect of the fire?---M'mm-hmm.

27 And I think the labelling of that system was "respite and
28 relocation"?---That's right. There were grants available
29 under both those titles.

30 To whom were they available?---They were administered by the
31 then Department of Human Services. They did have

1 particular conditions around them, in terms of residence
2 and, I believe, income. I'm not 100 per cent sure of the
3 actual criteria, but there were criteria for people living
4 in Morwell to be able to access those payments to enable
5 them to take a break from the smoky conditions.

6 Did the allowance system work this way: there was a cash
7 amount, up to a limit, available for people who otherwise
8 qualified by residence at the very least?---That's right.

9 In terms of people who accepted relocation, because I think
10 there is a distinction, is there not, between relief
11 payments and relocation?---The respite payments were made
12 earlier and then the relocation payments were made later,
13 yes.

14 Can you recall when the relocation payments were first
15 available?---They were first available on 28 February, the
16 respite payments, I think, around 20 or 21 February, but
17 again, I think that is detailed in the first Inquiry
18 report.

19 Do I assume that if people came and qualified in the sense of
20 their residence, they were able to take a cash payment, the
21 actual application of the cash payment is not known?---When
22 you say the actual application of the cash payment, in
23 terms of how many people - - -

24 No, how it was spent?---How it was spent. No, I believe that is
25 not known.

26 Thank you.

27 <CROSS-EXAMINED BY MR BLANDEN:

28 Just one matter. In terms of the project brief to Melbourne
29 University, do you still have that there in front of you,
30 Dr Lester?---Yes, I do.

31 Can you just go down to the bottom of it?---It has got some

1 attachments to it, I think you'll find. Can you find
2 those?---At the bottom of page 2 it says, "Attachments,
3 rapid health risk assessment".

4 So does that indicate that the rapid health risk assessment that
5 you're asked some questions about was in fact attached to
6 the project brief in its entirety?---That's right.

7 Thank you. I have nothing further.

8 MR ROZEN: I have nothing further, sir. If Dr Lester could be
9 excused.

10 CHAIRMAN: Yes, thank you, Dr Lester, you are excused.

11 <(THE WITNESS WITHDREW)

12 (Witness excused.)

13 CHAIRMAN: I'm conscious of the fact that it is just after 11
14 and we need to manage technical, comfort and other
15 problems.

16 MR ROZEN: Yes. They can all be addressed simultaneously,
17 perhaps.

18 CHAIRMAN: Perhaps we'll just make it a 10 minute, which means
19 that it is really a comfort stop and a technological stop,
20 to minimise the amount of time - perhaps a little more.
21 Make it a quarter past.

22 MR ROZEN: I'm being told 10 minutes won't be sufficient, that
23 is the concern.

24 CHAIRMAN: All right. We'll be on call, and everyone else needs
25 to be on call, so that we really are going to lose the
26 minimum amount of time.

27 MR ROZEN: Yes, thank you.

28 (Short adjournment.)

29 MR ROZEN: Thank you, if the Board pleases. My apologies for
30 that taking a little bit longer than we hoped but I think
31 we have made contact and we're ready to go. Before I talk

1 to Dr Flander if I could just confirm that it's my
2 intention to deal with the expert witnesses in two stages.
3 The first stage will involve what I hope will be fairly
4 brief questioning of Dr Flander, then the other three
5 experts will be invited to sit at the witness stand to my
6 right as a panel and Dr Flander will join them albeit via
7 Skype.

8 Apologies for talking across you there, Dr Flander,
9 can you hear me all right?

10 DR FLANDER: Yes, intermittently, the audio is intermittent.

11 MR ROZEN: We can certainly hear you clearly, is that better
12 now?

13 DR FLANDER: It comes and goes, the signal drops out, it's
14 clear when it's coming through.

15 MR ROZEN: Well, please let us know if you have any difficulty
16 understanding me or anyone else and we will see what we can
17 do technically at this end.

18 DR FLANDER: Sure.

19 MR ROZEN: I'm not sure if we're in a position to swear in Dr
20 Flander.

21 CHAIRMAN: I think we ought to try.

22 <LOUISA FLANDER, affirmed and examined:

23 Dr Flander, as I think you know I'm counsel assisting the
24 Inquiry and can I you please to confirm your full name and
25 your professional address for us?---Yes, Louisa Flander,
26 I'm a senior research fellow at the University of
27 Melbourne.

28 Dr Flander, you have been kind enough to provide the Inquiry
29 with a copy of your curriculum vitae?---Yes.

30 And I don't know if you have a copy of that in front of you, you
31 probably don't need it but can I just confirm your

1 professional qualifications, please, that your
2 under-graduate degree is a Bachelors of Arts with a
3 distinction in anthropology from the George Washington
4 University in Washington DC?---Yes.

5 You also have an MA in anthropology in the same
6 institution?---Yes.

7 And a Ph.D from the University of Colorado?---Yes.

8 And in addition to a Master of Arts in fine arts from the Royal
9 Melbourne Institute of Technology?---That is correct.

10 As you told us you presently are working in the Centre For
11 Epidemiology and Biostatistics, Melbourne School of
12 Population Health at the University of
13 Melbourne?---Correct.

14 And can I just ask you, and maybe I'm missing something but the
15 link between your studies in anthropology and your current
16 work in epidemiology?---Yes, I prepared a short plain
17 language file I sent last week which I'm happy to read
18 from. My graduate training was in physical anthropology
19 and human biology. My statistical work was in asthma
20 epidemiology and I did a post-doctoral at the University of
21 California, San Francisco Medical School in cancer
22 epidemiology.

23 And for how long have you worked at the centre at Melbourne
24 University?---When I came to Australia I worked for a year
25 or two, I think '88, '89 at Monash University's Department
26 of Epidemiology and Preventative Medicine and in 1990 I
27 moved over to the epidemiology unit in the department of
28 medicine at the University of Melbourne and I have been
29 there ever since.

30 We're principally concerned here with three reports that you
31 provided to the Department of Health between September 2014

1 and June of 2015, do you understand that?---That's correct.
2 And we have copies of each of those reports, I will ask you
3 about them in a moment. But if I could start by asking you
4 whether that type of work, that type of consultancy report
5 work and doing biostatistical analysis, is that an area in
6 which you had experience prior to doing this work for the
7 department?---I am not a statistician, I'm an
8 epidemiologist and my area of expertise or publications has
9 been in epidemiology, not biostatistics, and my research in
10 the last several years has been in cancer epidemiology with
11 attention to personal perceptions of risk and how that
12 guides personal behaviour, and I have also done some
13 research with environmental health scientists on the topic
14 of experts' judgments of environmental risks in areas of
15 uncertainty, that is where there are few data, and I have
16 no experience of doing these kinds of consultancies, this
17 was my first.

18 Thank you. Perhaps certainly for my benefit and hopefully for
19 others can you explain to us the difference between
20 epidemiology and biostatistics as fields of science?---In
21 epidemiology we're concerned with the determinants of
22 health as they are measured by vital statistics, what are
23 the impacts that govern the effects on those rates, and
24 also the magnitude of those effects. My understanding of
25 biostatistics is it is a branch of mathematics.

26 Which concerns the application of statistical methods to amongst
27 other things the analysis of health impacts on
28 environmental - - -?---Yes, absolutely, it can do, yes.

29 Thank you. Now, doctor, can I just clarify that overnight you
30 were provided with some documents by the staff of the
31 Inquiry?---Yes, and I have read the pages that you have

1 noted and I'm very happy to respond to what I see are the
2 points of those testimonies.

3 Thank you. And can I just clarify what it is you received for
4 the benefit of everyone here, you were provided with some
5 pages from the hearing book which were copies of email
6 correspondence that passed between Dr Csutoros of the
7 Department of Health and yourself?---Yes.

8 And for completeness that is what we're referring to here as
9 exhibit 8 which is pages 62 through to 66 behind tab 34.
10 That all probably means nothing to you, doctor, but I'm
11 communicating with others at the same time as talking to
12 you. In addition, as I think you have already alluded to,
13 you were provided with a copy of the transcript of
14 yesterday's evidence?---Yes.

15 And your attention was drawn to that part of the evidence where
16 a witness from the Department of Health and Human Services
17 was asked some questions by me of that email
18 communication?---Correct.

19 And I think you have already confirmed you have kindly had a
20 chance to read that in the short time you have had?---I
21 have read it and I have a few remarks if you would like.

22 Perhaps it would be better, doctor, if you don't mind if I ask
23 you some questions about it and then if there is anything
24 beyond those questions that you wish to say you of course
25 will have the opportunity to do that. Could I first ask
26 you to look at, amongst the bundle of email communications
27 there were two pages of what's referred to as Department of
28 Health feedback to Louisa Flander, University of
29 Melbourne?---Yes.

30 Two pages of numbered comments, I think eight in all, and for
31 the purposes of those in the hearing room these are pages

1 62 through to 36?---Yes.

2 Can I draw your attention to the second page, please, you will

3 see about a quarter of the way down the page the number 6

4 on the left-hand side?---Yes.

5 And just so this is placed in context for you, you were engaged

6 by the department to perform ultimately three pieces of

7 work that were in three separate reports?---That is

8 correct.

9 The first piece of work you were asked to do was a fairly swift

10 analysis of some data from the Registry of Births, Deaths

11 and Marriages about mortality rates in the Latrobe

12 Valley?---Correct.

13 You were then asked to conduct a critical analysis of some work

14 done by Associate Professor Barnett from the Queensland

15 University of Technology?---We were asked in the second

16 brief to do two things, one was to do a further analysis of

17 a more complete data set and also to evaluate Professor

18 Barnett's papers.

19 And because there was some delay in the provision of further

20 data to you?---That's right.

21 You ended up doing the critical analysis first in April of this

22 year, then you provided the second part of that brief as a

23 third report?---That's correct.

24 Thank you. The document I have asked you to look at we

25 understand to be comments that were provided to you by

26 Dr Csutoros from the Department of Health in relation to

27 that second bit of work?---Yes.

28 The critical analysis of Associate Professor Barnett's work.

29 The comment I want to draw your attention to is the one on

30 the second page numbered 6, and I draw your attention to

31 the second paragraph of that which starts: "Further to

1 this, and with reference to point 5 above it is noted that
2 page 4 of Barnett 2015 starts", and then there is a quote
3 and then I want to draw your attention to what appears
4 immediately after the quote which is: "Our interpretation
5 is that there was no mean increase in deaths especially as
6 there was a relative risk range", and then there are some
7 numbers there which obviously includes 1. My question to
8 you, Dr Flander, is would you agree with me that's an
9 example of a communication from the department about their
10 own view of the data, their own position if I can put it
11 that way, in relation to the data?---It certainly is an
12 interpretation of the data, yes, I agree.

13 And that's an example of it, on more than one occasion the
14 department communicated to you their view about the data,
15 is that a fair statement?---Yes.

16 If you read on in that paragraph it goes on: "It therefore
17 includes the outcome that there were no additional deaths,
18 this statement has been used by media and has been the de
19 facto conclusion akin to 10 per cent more deaths due to
20 fire and 9.6 deaths caused by fire so needs to be
21 challenged more directly"; what did you take those words,
22 "so needs to be challenged more directly" to mean?---I
23 think it's pretty clear that it's a statement of the health
24 department's interpretation and that should they be writing
25 this report they would like a direct challenge to that
26 statement.

27 It's fair to say, isn't it, that what was being expressed to you
28 is their need or what they wanted from you in the report
29 you were providing them?---I think that's been true
30 throughout in the sense that we were tasked with evaluating
31 the data in as complete a way as possible and also

1 critiquing these reports to the best of our ability. As
2 far as being guided or asked to produce a report that was
3 consistent with their perspective I don't think we took
4 that on. I notice in the testimony from yesterday there
5 was some discussion of this and I'm very happy to speak to
6 that but it's important for the broadest interpretation of
7 this problem to understand the language of causation. Our
8 approach has not been to do a causal analysis and my
9 reading of Professor Barnett's work is that he was not
10 doing a causal experiment, and the language I used in the
11 final report I think was better language than I had used in
12 the draft where I used the phrase about a probable
13 hypothesis or a predictive hypothesis or something like
14 that. I don't think that's a good plausible hypothesis, I
15 don't think that's an accurate statement for this kind of
16 analysis. This kind of analysis is not hypothesis testing,
17 it's not causal and we were very careful throughout to not
18 make statements that pointed to causing this or causing
19 that, or not causing this or not causing that.

20 I think you might have anticipated my next question to you which
21 is about the first page of the comments that were provided
22 to you and that is the phrase "plausible hypothesis", is
23 that the one you were talking to about before?---Yes,
24 that's the one I'm referring to, yes.

25 If you go to the first page, 0062, you will see in the middle of
26 the page there is a comment about a third of the way down,
27 comment number 2 and the third paragraph of that comment
28 seems to refer to what you have just been talking about:
29 "It is suggested that references be included to explain why
30 this hypothesis would be plausible. This may be because
31 prolonged smoke exposure has been linked to increased

1 mortality and 'plausible hypothesis really means
2 supposition worthy of investigation'", do you see
3 that?---Yes, I certainly do.

4 And we see, don't we, in the report that you provided, the draft
5 report you provided subsequent to receiving these comments,
6 you take on that change of wording, you changed the wording
7 from "plausible hypothesis" to "supposition worthy of
8 investigation"?---I certainly do and I stand by that.

9 Is that a weakening of the description of Associate Professor

10 Barnett's work do you think?---Absolutely not, in no way.

11 We went to great lengths in our evaluation of his work to
12 show the strengths of his analysis and as I said, he along
13 with myself and Professor Armstrong have been careful in
14 our work to avoid the language of causation. We're looking
15 at the presence or absence of effects and then we try to
16 evaluate the strength of these effects and in particular my
17 work focus is on the uncertainty around those estimates.

18 Now it is true that I don't draw the same conclusions from
19 these uncertain intervals that Professor Barnett does, but
20 nonetheless this does not weaken his report and it does not
21 weaken our critique of it. What we're doing here is
22 responding in good faith to a very accurate suggestion by
23 the health department to avoid the language of causation.
24 I don't know if that was their intention but I took it on
25 board, you all know from reading all my emails that
26 sometimes I take these suggestions on board and sometimes I
27 don't, this was a good suggestion, I stand by it.

28 Thank you, doctor. Could you read on in that same section of
29 the comments to the next paragraph which starts:

30 "Alternatively", do you see that?---I do.

31 It reads: "Alternatively is it possible the conclusion could be

1 drawn instead that the data presented do not suggest strong
2 evidence for the author's hypothesis that the fire had an
3 effect on mortality"; now, that was a conclusion which
4 appeared in the next draft of your report, did it not?---I
5 certainly said that the evidence presented in his report
6 was not strong evidence of the association of the dates of
7 the fire with mortality, I'm not sure I used the words
8 "hypothesis that the fire had an effect on mortality", did
9 I?

10 In fairness to you I will read the words that do appear in the
11 next draft of your report?---Thank you.

12 This is the draft dated 9 April 2015?---Yes.

13 Which is exhibit 10, and it commences at DHHS.1008.001.0508.

14 Doctor, I don't think you have this draft in front of you,
15 or do you?---I'm looking, pardon me.

16 I'm told you should have so I'm happy to wait while you
17 look?---Yes. I have it.

18 If you can look at the second page of the document please, under
19 the heading, "Executive summary"?---Yes.

20 If I can draw your attention to the fifth and final paragraph on
21 that page third line: "Although the fire's effect on
22 mortality may be a supposition worthy of investigation", so
23 you adopted that phraseology?---Absolutely correct.

24 And I understand the explanation you have given for that, then
25 it goes on: "The data presented in these papers do not
26 suggest strong evidence for the author's assertion of a
27 significant effect of the period of the fire on mortality
28 at that time"?---Yes.

29 That's a slightly different wording to what had been proposed in
30 the comment but I suggest that - - -?---Sorry, I'm sorry?

31 I could not hear what you said.

1 My apologies, is that a bit better, can you hear me now? You
2 can't hear me, I take it. Doctor, can you hear me now?---I
3 could not hear anything, I can hear you right now,
4 apologies.

5 The apologies are ours, doctor?---Yes, here we are, "at the
6 author's assertion of a significant effect of the period of
7 the fire on mortality at that time", is that the phrase?

8 That's the part of the - - -?---That's the phrase and I stand by
9 that, it is not the same as saying that the author had a
10 hypothesis that the fire had an effect on mortality, those
11 are two different statements and they have two different
12 meanings and I stand by the statement I made in the paper
13 that you're holding.

14 I understand that, doctor, my question is a slightly different
15 one and that is would you agree that the wording that you
16 have included in this draft, 9 April, is very close to what
17 was suggested to you in the comments that I was asking you
18 about a moment ago?---Do you mean the phrase "supposition
19 worthy of investigation "?

20 No, I mean the - - -?---I agree to that, I agree with that.

21 Sorry, I mean in addition to that the final part of that
22 sentence, can I read to you again the suggestion in the
23 comment?---Yes.

24 The suggestion is that: "The data presented do not suggest
25 strong evidence for the author's hypothesis that the fire
26 had an effect on mortality", that was what was suggested by
27 Dr Csutoros in his attachment?---Yes.

28 And what you have added is, "The data presented in these papers
29 do not suggest strong evidence for the author's assertion
30 of a significant effect of the period of the fire on
31 mortality at that time"?---I stand by that statement and I

1 do acknowledge the similarity of some of the words in that
2 sentence. To my mind, saying that something is evidence
3 for assertion of an effect is not the same as saying that
4 something is evidence for a hypothesis.

5 I understand that. The position was this, was it not, doctor,
6 the people that were providing you with feedback were
7 senior officers at the Department of Health?---I can't
8 actually speak to that, I initially corresponded with
9 Dr Lester but after that I received many different emails
10 from maybe half a dozen different staff members at the
11 DHHS, so I have to tell you I do not know, I did not know
12 personally or by any other means other than these email
13 contacts that you have.

14 I understand?---Yes.

15 But if I understand your evidence correctly what you're saying
16 is you considered the merit of the suggestions in the
17 comments and you responded accordingly?---Absolutely, as I
18 did throughout this period and you will have my evidence in
19 all of my documentation, I regard the working relationship
20 - I have maybe three other professional experiences of
21 doing contract analysis, in all cases drafts were submitted
22 to the contractor and I regard this as an important
23 exercise that is very similar to submitting a paper for
24 review in a journal, we depend on somebody evaluating the
25 work we've done. In this case it was the people that we
26 contracted to do this work for.

27 That's a pretty fundamental difference from peer review by
28 referees for a journal because here it's the client that's
29 paying the bill that's doing the very reviewing?---That's
30 right, absolutely correct. Is your question to me about
31 the appropriateness of my responding to their comments?

1 Because I really have no other way to evaluate my
2 relationship with them other than to submit work, respond
3 to comments and so on.
4 I understand?---Yes.
5 The final matter I want to ask you about in relation to this
6 topic, doctor, is the email communications with Dr Csutoros
7 which I think you were also provided with overnight?---Yes.
8 And you have had an opportunity to read through the email
9 firstly which started on 27 March, do you have in front of
10 you a page that has a code in the top right-hand corner
11 that ends in 0066?---Look, I have all of that
12 documentation, some of the - the printer has cut those off
13 but I've got all the emails in front of me I think.
14 Perhaps if I summarise it, the position as we understand it is
15 you provided a draft report to the department, that is a
16 draft report of the critique of the work of Associate
17 Professor Barnett and that then elicited the comments I
18 have been asking you about in the last few
19 minutes?---Correct.
20 You received the comments according to the email time on 27
21 March at 12.21?---Yes.
22 Do you see that?---Yes.
23 And the information that's been provided to the Inquiry shows
24 that you responded to that in an email some 38 minutes
25 later on that same day, that is 12.59, do you have that,
26 doctor?---Yes.
27 And in your response you said: "Hi Danny, many thanks for those
28 useful comments, we will incorporate all of the suggestions
29 and return the report to you by Wednesday", do you see
30 that?---Correct, I do.
31 Can I ask you firstly, what had you done between the time of

1 receiving the comments and responding in that way?---I read
2 the comments.

3 Did you have an opportunity to talk to any of your colleague and
4 particularly Professor English?---No, he was not part of
5 this analysis and he was only a co-author on the first
6 paper and he was not part of the review of Dr Barnett's
7 work.

8 That was my mistake, I meant to ask you if you had spoken to
9 Anthony Ugoni?---Yes.

10 And Cindy Hauser?---I think I had not talked to Mr Ugoni and I
11 probably - I certainly did talk to Dr Hauser on that day
12 and I notice in the testimony from yesterday one of the
13 issues was my tone of voice in email and the timing of my
14 emails and I would like to say you have all my emails from
15 the entire year, that is a characteristic tone of voice in
16 my email, to be positive and to be as prompt as possible in
17 my responses. So other than my characteristic, I guess
18 tone and choice of words in responding to the emails I
19 think that there is not much else in there. Now, with
20 regard to incorporating all the suggestions and returning
21 the report, that means to me that we take on board all of
22 the suggestions, we consider them, as I have said we
23 certainly did take on board the replacement of the language
24 plausible hypothesis with "supposition", but it doesn't
25 mean that we respond exactly with the requests of all the
26 suggestions, and I think you can tell that that is the case
27 in this and in the other comments we received.

28 I need to ask you doctor, you don't say that you will consider
29 or assess the suggestions, you say we will - - -?---I said
30 we will incorporate, I certainly did, yes, I did, yes, I
31 did.

1 I need to put it to you that 38 minutes seems a brief period of
2 time to read the comments, make an assessment of each of
3 them and respond in that way?---Is there a question?

4 Yes, I'm inviting you to comment on that?---Well, I took much
5 longer than 38 minutes, I certainly took that amount of
6 time to read and respond by email but I took much longer
7 than that to address each of the points. There were many
8 points in that list of suggestions, we needed to do a
9 little bit of extra work, I'm thinking in particular about
10 points 8A and 8B in order to respond to those comments. So
11 my email refers to my position on reading and response to
12 his email and the goodwill I hope to foster by taking on
13 board all of the comments, not to do a copy and paste, and
14 I think if you have looked at those two documents you can
15 see we did not copy and paste all of the comments and
16 suggestions into the final draft.

17 And I'm not suggesting you did, and in fairness to you doctor,
18 it is true if one looks at all of the email communication,
19 and there were many, in relation to each of the draft
20 reports it is clearly the case you did not adopt all of the
21 suggestions that were made to you and I imagine that's a
22 matter you would draw to our attention?---Correct.

23 Can I conclude this part of the questioning of you doctor, by
24 suggesting to you that what happened in relation to the
25 various pieces of work you did for the department is that
26 because of the number of drafts that you submitted, and I'm
27 referring to each of the three reports now, and because of
28 the comments that were made many of which were incorporated
29 by you in the final reports that were provided, that it's
30 open to the board to conclude that rather than the work you
31 did for the university to be seen as a truly independent

1 piece of work, it was more in the nature of a collaborative
2 piece of work between yourself and the department, do you
3 have a comment to make about that?---I do have a comment to
4 make and I and reject that interpretation. I do feel
5 absolutely clear about the fact we attempted to address the
6 important concerns of the department, I can think of
7 several instances where we were asked, for example, to do a
8 different analysis on the standardised mortality rate which
9 we rejected so this is in the sense of providing
10 information that the department needed. It is that kind of
11 a collaboration in the sense of producing documents that
12 are - and I'm choosing my words carefully here given the
13 nature of the Inquiry - in the sense that we produce
14 documents that met the department's needs for outcomes with
15 a particular perspective, I do not agree to that
16 perspective, no.

17 Thank you, doctor. One final matter, in light of the evidence
18 you gave about the differences between the field of science
19 that you work in and the field of biostatistics that
20 Associate Professor Barnett works in, do you think that you
21 were appropriately qualified to critique his
22 reports?---That's a wonderful question, I don't know that I
23 can give an unbiased answer. You will know from the
24 studying my email that I was invited to respond to his
25 first paper last year and I turned that request down
26 because at that time I said that I was not qualified to
27 evaluate his work given that it was from a different
28 perspective, different discipline and so on and on. So at
29 that time I did say that and you will have that email.

30 Yes, we do, thank you. In fact your response was, and I'm
31 paraphrasing, that you told Dr Lester there wasn't much you

1 could say about the work that Associate Professor Barnett
2 had done other than to note his conclusions were similar to
3 the conclusions you reached, is that a fair summary of what
4 you said?---That's right, there was a lot of uncertainty
5 around the estimates that we both came up with. We both
6 did a particular kind of statistical modelling of Poisson
7 regression, yes. So from early in this year of working on
8 this project I did feel that I was not the one to analyse
9 those papers; correct, that is correct.

10 Did something change between that time in September 2014 and
11 when you ultimately did provide the appraisal of his work
12 that meant you felt you were better placed to do that
13 work?---Nothing changed with respect to myself and my
14 abilities, the brief from the health department changed,
15 specifically we were asked to do a much more comprehensive
16 analysis, we were provided with many different data sets
17 and also there was a second paper that Associate Professor
18 Barnett had written. So the request that came to us in
19 early this year was will you analyse and expand a data set
20 and will you comment on both of those papers that doctor -
21 and you will see that became the terms of reference to the
22 second brief.

23 Yes?---Right?

24 Yes?---Okay, so in that time I was in the first instance doing a
25 rapid analysis with Professor English's input on the first
26 report. Now, the project came to be a much larger project,
27 much more was required in terms of analysis, a much more
28 comprehensive analysis a requirement to look at a lot of
29 different kinds of data, there was in particular the
30 requirement to look at the mortality data and the cause of
31 death data and the requirement to analyse the methods and

1 conclusions of two of Professor Barnett's papers, so that
2 meant I had to enlist a much broader pool of experts
3 including statisticians, that is the thing that changes.
4 Thank you, I understand that. I just need now to attend to some
5 formalities and then I will invite the other experts that
6 you have met to join you in a panel. Firstly, can I just
7 clarify with you that the first report that you provided
8 which is the one that resulted from the communications with
9 Dr Lester was provided on 26 September 2014?---Honestly, is
10 that the date that you have for that on the PDF?

11 It's not dated, that's why I'm asking you but I don't think it's
12 controversial?---Yes.

13 But if you're not sure does that accord with your
14 recollection?---Yes, absolutely.

15 That appears behind tab 10 in the hearing book and it's
16 EXP.0004.001.0001 and I tender the report of Dr Flander
17 dated 26 September 2014.

18 #EXHIBIT 21 - Report of Dr Flander dated 26/9/2014.

19 For the record, Dr Flander, that was actually co-authored by
20 yourself and Professor English, is that right?---That is
21 correct.

22 The second report that you provided is a report dated 28
23 April 2015 and appears behind tab 11 in the hearing book,
24 and the code is EXP.0004.002.0001, Dr Flander, is that
25 right, that the date of the final second report you
26 provided the appraisal of Associate Professor Barnett's
27 work was dated 28 April 2015?---That's correct.

28 And for the record co-authored by yourself, Anthony Ugoni and
29 Cindy Hauser?---Correct.

30 #EXHIBIT 22 - EXP.0004.002.0001.

31 Finally, doctor, the more detailed version of the first report

1 that you provided after you were provided by the department
2 with additional data was dated 4 June 2015?---Correct.
3 And for the record co-authored by yourself, Driss Ait Ouakrim,
4 if I'm pronouncing that correctly, is that right,
5 doctor?---That's right, and there were other authors on
6 that paper.

7 Mr Ugoni we have already referred to and then there is a
8 colleague of yours, Dashti, can you tell us their full
9 name, doctor?---Seyedeh Ghazaleh Dashti.

10 Thank you, and I tender that third report.

11 #EXHIBIT 23 - Third report co-authored by Driss Ait Ouakrim and
12 Seyedeh Ghazaleh Dashti dated 4/6/2015.

13 And finally I tender Dr Flander's CV, and doctor, attached to
14 that would be the brief of biographical information you
15 provided to us?---Yes, your colleague asked me to provide
16 that earlier, asked for that I think last Friday and I
17 think I emailed that to you on Monday.

18 I'm told that is at page 7 of the hearing, the CV that's been
19 distributed. I would seek to tender that.

20 #EXHIBIT 24 - Curriculum vitae of Louisa Flander.

21 Thank you doctor, what I'm now going to do is invite the three
22 other experts you have met to join you in a panel, so I
23 call Professor Armstrong, Professor Gordon and Associate
24 Professor Barnett.

25 While that's happening I presume you can't see them
26 but they are seated at a table adjacent to where I'm
27 standing and they are able to see counsel as well as the
28 board and they are also able to see you on the screen.

29 MR ROZEN: I have questions for Dr Flander briefly confined to
30 the topics I have been addressing, it may be preferable
31 they are addressed now, I don't think we need to ask the

1 panel members to move now they are seated but it may be
2 preferable for that to be done.

3 CHAIRMAN: Shall we just get the affirmations completed.

4 <BRUCE CONRAD ARMSTRONG, affirmed and examined:

5 <IAN ROBERT GORDON, affirmed and examined:

6 <ADRIAN GERARD BARNETT, affirmed and examined:

7 MR ROZEN: I ask that the three gentlemen please excuse me for
8 the moment while I indicate to you, Dr Flander, that there
9 are a few questions that one of the other barristers here
10 wants to ask so I will sit down. The next voice you here
11 will be Ms Szydzik.

12 <CROSS-EXAMINED BY MS SZYDZIK:

13 Dr Flander, thank you, I just wanted to clarify a couple of
14 points in the evidence that you gave in relation to the
15 questions earlier. You were asked by my friend Mr Rozen
16 about how appropriately qualified you felt to critique the
17 reports of Professor Barnett, you gave some evidence about
18 the fact that once the University of Melbourne had received
19 the further data, that in that circumstance because the
20 brief was so expanded that additional individuals were
21 brought on, that as I understand it relates to the third
22 report that you prepared because that was the expanded data
23 set that you were given, in relation to the second report
24 that you prepared?---Yes.

25 Which was the first critique of the reports of Associate
26 Professor Barnett, how did you feel that you were
27 qualified, did you can feel appropriately qualified in
28 those circumstances?---In that particular circumstance I
29 had to break the brief given to us - this expanded brief
30 given to us by the Department of Health into two parts and
31 one part was the expanded data analysis and the other part

1 was an expanded critique of two papers and the co-authors
2 on that report were invited by me, they are both
3 statisticians, they were invited by me to produce the
4 critique that you have before you.

5 Just to clarify, the critique in your second report, is that
6 right, or are you referring to your third report
7 there?---Yes.

8 The second report?---The second, yes.

9 Thank you for that clarification. The only other matter I
10 wanted to ask you about, very briefly, was about the
11 communications between yourself and also the Department of
12 Health. You've been taken through some written
13 communications. My question is about whether there were
14 any conversations outside of those written communications
15 that commented upon any drafts in your report along the
16 lines of the comments that we've seen so far in written
17 form?---Well, no. I had a few phone calls over the course
18 of the year to discuss these working copies of the reports
19 and I in every case asked for a written submission of
20 comments, which I received. In particular at the end of
21 May I had a phone call with Dr Neil, I think it is, Andrew
22 Neil - is that the name?

23 Yes, that is?---And a working copy of that final report, there
24 were a lot of items that he wanted to discuss and I was
25 about to get on a plane to attend a conference overseas and
26 his suggestion was that we meet in person to go over the
27 document to respond to their concerns. I did not feel that
28 that was appropriate. In all cases I asked for written
29 documentation of the requests for further information to
30 the language of our reports.

31 No further matters.

1 CHAIRMAN: Yes, thank you. Mr Rozen.

2 MR ROZEN: In no particular order, I assure you, gentlemen, if I

3 can start with Associate Professor Adrian Barnett and just

4 seek from you some formal matters before I ask you about

5 the issues of interest to the Inquiry. You have included

6 with your materials that have been provided to the Inquiry,

7 Associate Professor Barnett, your curriculum vitae.

8 ASSOC. PROF BARNETT: Yes.

9 MR ROZEN: And for the benefit of others in the room, it is

10 behind tab 9 in the hearing book and you probably don't

11 have a copy in front of you, associate professor, but

12 equally you probably know it pretty well, I'm guessing.

13 Can I just summarise your background. You have a PhD in

14 mathematics from the University of Queensland.

15 ASSOC. PROF BARNETT: Yes.

16 MR ROZEN: And that was awarded to you in December 2002.

17 ASSOC. PROF BARNETT: Yes.

18 MR ROZEN: The topic is on the use of the bispectrum to detect

19 and model non-linearity.

20 ASSOC. PROF BARNETT: That's right.

21 MR ROZEN: I won't ask you to explain what that means. In terms

22 of your present employment, you're an associate professor

23 with the Institute of Health and Biomedical Innovation and

24 the School of Public Health at Queensland University of

25 Technology.

26 ASSOC. PROF BARNETT: That's right.

27 MR ROZEN: You have held that position since August 2010.

28 ASSOC. PROF BARNETT: M'mm-hmm.

29 MR ROZEN: You set out a long list of roles you have played in

30 academia in the field of statistics and biostatistics.

31 ASSOC. PROF BARNETT: Yes.

1 MR ROZEN: Can I just confirm that that history goes back to
2 September 1994.

3 ASSOC. PROF BARNETT: Yes, that would be right.

4 MR ROZEN: And that was when you commenced as a statistician
5 with the firm SmithKline Beecham.

6 ASSOC. PROF BARNETT: Yes.

7 MR ROZEN: And then your time at the Queensland University of
8 Technology commenced in 1999, have I got that right?

9 ASSOC. PROF BARNETT: Yes, I was a PhD student there.

10 MR ROZEN: If we go to the second page of your CV, under the
11 heading Research Publications, you have produced 163
12 peer-reviewed publications.

13 ASSOC. PROF BARNETT: Yes.

14 MR ROZEN: As well as two books and one chapter in a book and we
15 can see the titles of the books in the CV. The question I
16 think I need to ask you is there are two reports that you
17 have produced, which I'll take you to in a moment. Have
18 either of those been submitted for peer review by you?

19 ASSOC. PROF BARNETT: No.

20 MR ROZEN: Is there a reason for that?

21 ASSOC. PROF BARNETT: There is. It would be quite hard to
22 publish them, in my opinion, because there is a strong bias
23 in the literature towards new evidence and there's already
24 a mass of evidence on the health effects of air pollution
25 and I didn't think that it would be interesting enough or
26 it would - I would probably have to go for a very low
27 journal and it might take quite a while to get it published
28 and so I chose not to.

29 MR ROZEN: I understand. I'll tender Associate Professor
30 Barnett's CV, sir.

31 #EXHIBIT 25 - CV of Associate Professor Barnett

1 Associate Professor Barnett, you were initially engaged by the
2 ABC, the Australian Broadcasting Corporation, I think it
3 is, or Commission.

4 ASSOC PROF. BARNETT: Yes.

5 MR ROZEN: And that led to the report that you produced in
6 September of 2014 and for our purposes, that appears in the
7 hearing book behind tab 8, at EXP.0005.001.0001. In what
8 way were you engaged by the ABC? In other words, did you
9 receive a written brief or was it a telephone call?

10 ASSOC. PROF BARNETT: No, it was a phone call. Madeline Morris,
11 I think, was the journalist. She'd been contacted by
12 Voices of the Valley, who'd gotten this data from Births,
13 Deaths and Marriages. I think the journalist was
14 struggling to interpret what was going on and I have run
15 quite a lot of these models before, so I offered to run the
16 data through the pretty standard model that we use and
17 report back my findings.

18 MR ROZEN: Did you provide those findings in writing to the ABC
19 initially?

20 ASSOC. PROF BARNETT: I can't remember. It would have been -
21 possibly in an email I would have provided the headline
22 findings, but then what I did subsequently was write up
23 that report.

24 MR ROZEN: And you were interviewed as part of the 7.30 Report
25 program that went to air?

26 ASSOC. PROF BARNETT: I was.

27 MR ROZEN: You can confirm for us then that the first report you
28 produced is dated September 2014.

29 ASSOC. PROF BARNETT: Yes.

30 MR ROZEN: Have you had an opportunity to read through that
31 report before coming along and giving evidence today?

1 ASSOC. PROF BARNETT: Yes, I re-read it yesterday.

2 MR ROZEN: I take it there is nothing that you would wish to
3 change in that report.

4 ASSOC. PROF BARNETT: No.

5 MR ROZEN: I tender that.

6 #EXHIBIT 26 - Report of Associate Professor Barnett dated
7 September 2014.

8 We know that you produced a further report. Can you explain to
9 us the circumstances in which you came to produce the
10 report of December 2014, which is also referred to as your
11 2015 report.

12 ASSOC. PROF BARNETT: I think there was the thought that if the
13 sample size could be increased, that maybe the statistical
14 certainty would increase too. This time the Voices of the
15 Valley provided the data to me directly, they were able to
16 get that extra data, and I did the extra analysis.

17 MR ROZEN: So do we understand then that the second report was
18 commissioned by, if that is the right word, or requested by
19 Voices of the Valley?

20 ASSOC. PROF BARNETT: Yeah, I'd say that.

21 MR ROZEN: In terms of the additional data, just for the record,
22 your first report examined the four postcodes that there's
23 been evidence about - that is Traralgon, Moe, Churchill and
24 Morwell.

25 ASSOC. PROF BARNETT: M'mm-hmm.

26 MR ROZEN: And it was confined to data from the years 2009 to
27 2014.

28 ASSOC. PROF BARNETT: Yes, and I believe only six months as
29 well, it didn't have the full year.

30 MR ROZEN: To June, I think that is right. The second report
31 examined six postcodes, the additional two being Yinnar and

1 Boolara South, does that sound right?

2 ASSOC. PROF BARNETT: I think so.

3 MR ROZEN: If enough people around me are saying it, that
4 probably means it is right. And the years that you were
5 looking at went from 2004 to 2014?

6 ASSOC. PROF BARNETT: Yes, and included every month of the year.

7 MR ROZEN: Every month, thank you. And that second report
8 appears behind tab 9 of the hearing book and the code is
9 EXP.0005.002.0001. I think a copy of that is being put in
10 front of you. If you could just take a moment, please, to
11 look at the nine-page report behind that tab.

12 ASSOC. PROF BARNETT: That looks right.

13 MR ROZEN: And can you confirm for us that that is the second
14 report, dated December 2014.

15 ASSOC. PROF BARNETT: Yes.

16 MR ROZEN: I tender that.

17 #EXHIBIT 27 - Second report of Associate Professor Barnett dated
18 December 2014.

19 One final preliminary question for you, Associate Professor
20 Barnett. At the request of the Board of Inquiry's staff,
21 did you participate in a meeting, together with Professor
22 Gordon, Professor Armstrong and Dr Flander, on Monday,
23 31 August this week?

24 ASSOC. PROF BARNETT: I did.

25 MR ROZEN: Was that meeting facilitated by a member of the
26 Inquiry's staff, Ms Monica Kelly?

27 ASSOC. PROF BARNETT: It was.

28 MR ROZEN: Were you present throughout the time that the
29 discussions took place?

30 ASSOC. PROF BARNETT: I was.

31 MR ROZEN: And can you describe to the board the role that was

1 played by Ms Kelly during the meeting.

2 ASSOC. PROF BARNETT: I think she sort of kept us to time a

3 little bit and I would say it was fairly hands-off. Just

4 set up what we were going to discuss for the day and how it

5 was going to work and then we got to our discussions.

6 MR ROZEN: Ultimately was a joint report produced by Ms Kelly

7 and provided to you to read and sign if you were happy with

8 its contents?

9 ASSOC. PROF BARNETT: It was, yes.

10 MR ROZEN: And did you sign the joint report?

11 ASSOC. PROF BARNETT: I did, yes.

12 MR ROZEN: If you'll just excuse me, Associate Professor

13 Barnett, I'll ask some similar questions of your colleagues

14 to your right. If I could ask you, Professor Armstrong.

15 You are in fact an Emeritus Professor Armstrong at the

16 University of Sydney?

17 PROF. ARMSTRONG: Yes.

18 MR ROZEN: And you have also provided to the Inquiry a document

19 you've described as a resume, which is attached to your

20 report.

21 PROF. ARMSTRONG: Yes.

22 MR ROZEN: Do you have that document in front of you, the

23 resume?

24 PROF. ARMSTRONG: I do.

25 MR ROZEN: It appears behind the hearing book at tab 13.

26 PROF. ARMSTRONG: I don't have it in front of me.

27 MR ROZEN: It is being handed up to you. What is being placed

28 in front of you, Professor Armstrong, is a copy of the

29 hearing materials and behind tab 13 you'll find your report

30 and if you go to the 28th page, so it should have a code in

31 the top right-hand corner EXP.0002.001.0028, do you see

1 that?

2 PROF. ARMSTRONG: I have that page.

3 MR ROZEN: That is the resume that you provided to the Inquiry.

4 PROF. ARMSTRONG: Yes.

5 MR ROZEN: And that accurately sets out your professional

6 achievements and background.

7 PROF. ARMSTRONG: Yes.

8 MR ROZEN: To summarise that, under the heading Academic and

9 Professional Qualifications, your undergraduate degree was

10 Bachelor of Medical Science, with first class Honours in

11 biochemistry, from the University of Western Australia.

12 PROF. ARMSTRONG: The first one, yes.

13 MR ROZEN: 1967, the first undergraduate degree. The second was

14 the Bachelor of Medicine, Bachelor of Surgery, with

15 Honours, from the same institution in 1969.

16 PROF. ARMSTRONG: Yes.

17 MR ROZEN: You've been a Fellow of the Royal Australian College

18 of Physicians since 1975.

19 PROF. ARMSTRONG: Yes.

20 MR ROZEN: And you have a PhD in epidemiology, conferred by the

21 University of Oxford in 1975.

22 PROF. ARMSTRONG: Yes.

23 MR ROZEN: Can you tell us what your thesis was.

24 PROF. ARMSTRONG: It was on dietary factors in human cancer,

25 with a special reference to renal cancer.

26 MR ROZEN: You're also a foundation Fellow of the Faculty of

27 Public Health Medicine of the Royal Australasian College of

28 Physicians, and have been since 1990.

29 PROF. ARMSTRONG: Yes.

30 MR ROZEN: You have held a range of appointments which you set

31 out on the first page of your resume and they speak for

1 themselves. Perhaps relevantly, most recently you've held
2 the position Professor of Public Health at the University
3 of Sydney from 2002 until 2013.

4 PROF. ARMSTRONG: Yes.

5 MR ROZEN: And on the second page of your resume, you have set
6 out what apparently are just some of the scientific and
7 advisory roles that you have held, is that right?

8 PROF. ARMSTRONG: That's correct.

9 MR ROZEN: As well as a reference to your publication history
10 and you record there that you have co-edited several books
11 and published over 600 articles in books and peer-reviewed
12 journals.

13 PROF. ARMSTRONG: Yes.

14 MR ROZEN: And, as you say, the articles published cover mainly
15 the epidemiology and control of cancer and heart disease,
16 aspects of clinical nutrition and some wider issues in
17 public health.

18 PROF. ARMSTRONG: Yes.

19 MR ROZEN: Professor Armstrong, you were engaged directly by the
20 Board of Inquiry to answer a number of questions which were
21 specified in correspondence to you.

22 PROF. ARMSTRONG: Yes, that is correct.

23 MR ROZEN: Perhaps the best summary of what you're asked to do
24 appears on page 3 of the document that I've been asking you
25 about, and that is at EXP.0002.001.0003. That happens to
26 be page 3 of your report. Do you have that open, with the
27 heading Introduction?

28 PROF. ARMSTRONG: Yes, I do.

29 MR ROZEN: At the second paragraph on that page, after setting
30 out the formalities of the Inquiry, you say, "In providing
31 an expert assessment and advice to inform this term of

reference, the consultant" - that is you - "was required to, (a), consider the mortality information provided by the Registrar of Births, Deaths and Marriages, (b), review the mortality assessments undertaken by the Department of Health and other organisations commissioned by the department, (c) review the mortality assessments undertaken by any third parties, for example Associate Professor Adrian Barnett, and (d) to consider any relevant public submissions or case reports." That accurately sets out what it is that you're asked by the Inquiry to do?

PROF. ARMSTRONG: That's correct.

MR ROZEN: Your report is obviously there for us all to read and I won't take you through it in detail, but I do want briefly to refer to the conclusions section, which starts on page 24, if I could ask you to turn to that.

PROF. ARMSTRONG: Yes, I have it.

MR ROZEN: It is the case, isn't it, that you reproduce in this part of your report the conclusions that you have reached in specific sections earlier in the document?

PROF. ARMSTRONG: That's correct.

MR ROZEN: You helpfully do that under two headings, the first of which we see at the bottom of page 24, "Was there an increase in mortality in Latrobe Valley during the coal mine fire in 2014", and I take it that is a reference to a straight statistical analysis of the data.

PROF. ARMSTRONG: Yes, that is correct.

MR ROZEN: And you conclude, as we see, "There is moderate evidence for a higher mortality from all causes and from cardiovascular disease in Latrobe Valley in 2014 than in 2009-'13."

PROF. ARMSTRONG: Yes.

1 MR ROZEN: The second broad topic that you set out on the
2 following page, on page 25, is, "What environmental
3 exposures might have increased mortality in Latrobe Valley
4 during the coal mine fire in 2014, and it is at that point
5 that you address some possible explanations for that
6 statistical increase, is that right?

7 PROF. ARMSTRONG: Yes.

8 MR ROZEN: And in particular you look at the effect of
9 bushfires, you look at the impact of fine particle air
10 pollution, either from the mine fire or from bushfires, you
11 consider carbon monoxide and finally you consider
12 temperature.

13 PROF. ARMSTRONG: Yes.

14 MR ROZEN: Then finally we see on page 26 the third broad
15 question that you identify is, "Was there an increase in
16 emergency admissions to hospital in Latrobe Valley during
17 the coal mine fire in 2014", and having established that
18 the answer to that question is "yes", you then consider in
19 the next heading why that might be the case.

20 PROF. ARMSTRONG: Yes.

21 MR ROZEN: Thank you. Is there anything in your report that you
22 would seek to change?

23 PROF. ARMSTRONG: There are some very minor things which I will
24 take you through, if that is acceptable.

25 MR ROZEN: Please.

26 PROF. ARMSTRONG: Firstly on page 23, at the third-last line, so
27 the one beginning "from Flander and others 2015", there is
28 a table reference there and it should be table 2, not
29 table 1.

30 MR ROZEN: Delete the number 1 and insert 2.

31 PROF. ARMSTRONG: Correct. And then on page 24 and in the first

1 recommendation that appears at the bottom of the page,
2 there should be added in the last line of that, after the
3 words "disease in Latrobe Valley in" and before "2014",
4 "February to June".

5 MR ROZEN: So insert "February to June" between "in" and "2014".

6 PROF. ARMSTRONG: Yes, and then before "2009-'13", at the very
7 end of the sentence, insert "the same period". I've
8 actually got the words here "the same period" referring
9 back to the February to June. Then at recommendation 5,
10 near the bottom of page 25, strike out "Latrobe Valley" and
11 insert "Morwell."

12 MR ROZEN: The sentence now reads, "Barnett 2015 also observed a
13 lack of an increase in mortality in Morwell during February
14 and March 2014", and so on.

15 PROF. ARMSTRONG: Correct. Then in the last recommendation,
16 recommendation 11, the middle of page 26, then take the
17 words "in 2014 than in 2009-13" from where they are in the
18 sentence and place them after the right-hand bracket in the
19 first line, that is after the bracket containing the words
20 "zero to four years of age".

21 MR ROZEN: I might clarify. You would wish that to read as
22 follows, "Emergency hospital admissions were greater in
23 infants and children (zero to four years of age) in 2014
24 than in 2009-'13, albeit with statistically weak evidence
25 and greater in older people", and so on, is that right?

26 PROF. ARMSTRONG: Yes, correct. That is all.

27 MR ROZEN: With those changes, the contents of your report are
28 true and correct?

29 PROF. ARMSTRONG: Yes, they are.

30 MR ROZEN: I tender the report of Professor Armstrong, together
31 with the resume, as one exhibit.

1 #EXHIBIT 28 - Report and resume of Professor Armstrong.

2 Just before leaving you for the moment, Professor Armstrong, you
3 too attended the meeting with your colleagues, Professor
4 Gordon, Associate Professor Barnett and Dr Flander on
5 Monday, 31 August this week?

6 PROF. ARMSTRONG: I did.

7 MR ROZEN: Do you concur with the description of what took place
8 there that Associate Professor Barnett gave?

9 PROF. ARMSTRONG: I concur with that description.

10 MR ROZEN: Did you, perhaps by default, end up being the
11 de facto chair of the meeting?

12 PROF. ARMSTRONG: By default in the sense that I proposed that I
13 would be willing to do that, unless anyone disagreed or
14 preferred to do it, and no-one did, so I did it.

15 MR ROZEN: Was the task that the meeting was asked to engage in
16 to use the conclusions in your report as a reference point
17 to see if it was possible to reach agreement on any or all
18 of those conclusions?

19 PROF. ARMSTRONG: That is precisely the task that was posed.

20 MR ROZEN: And were you also a signatory to the joint report
21 that emerged?

22 PROF. ARMSTRONG: Yes, I was.

23 MR ROZEN: Professor Gordon, if I could turn to you, please.

24 You have also provided the Inquiry, helpfully, with a
25 report as well as a CV and the correspondence that passed
26 between you and the legal firm that asked you to provide a
27 report. That all appears, for our purposes, behind tab 14,
28 which I hope is being placed in front of you. A little
29 about your background, Professor Gordon, and perhaps if we
30 do this by reference to page 13 and by that, you'll see
31 there is a coding in the top right-hand corner of the

1 pages, EXP.0003.001.0013. That is the curriculum vitae
2 that you attached to your report, Professor Gordon?

3 PROF. GORDON: Yes, it is.

4 MR ROZEN: As you state there, you're the director of the
5 Statistical Consulting Centre and a professor of statistics
6 in the School of Mathematics and Statistics at the
7 University of Melbourne.

8 PROF. GORDON: Correct.

9 MR ROZEN: What does the Statistical Consulting Centre do?

10 PROF. GORDON: It provides statistical assistance to all and
11 sundry, to staff and post-graduate students within the
12 university and it engages with the wider community by
13 providing statistical help. Expressed most generally, it
14 could be design analysis, anything that could be construed
15 as the kind of specialist expertise statistical assistance
16 that might be required, to people on a consulting basis.

17 MR ROZEN: You say in the document you have over 30 years of
18 experience in applied statistical work and that is, as I
19 think you've indicated, work that you have done for a range
20 of clients.

21 PROF. GORDON: Yes.

22 MR ROZEN: In the second paragraph of your - - -

23 PROF. GORDON: And researchers within the university, too.

24 MR ROZEN: At the second paragraph of that page, you state that
25 you have written over 200 consulting reports for projects
26 of all sizes and for clients from business, industry and
27 government.

28 PROF. GORDON: Yes.

29 MR ROZEN: You refer to your role as an expert witness and you
30 go on to advise us that you were the president of the
31 Victorian branch of the Statistical Society of Australia

1 from 2009-2010 and either side of that you were the
2 vice-president, is that right, both before and after?

3 PROF. GORDON: Correct, yes.

4 MR ROZEN: In terms of your formal qualifications, your
5 undergraduate degree is a Bachelor of Science, with
6 Honours, from the University of Melbourne, you have got a
7 Master of Science from La Trobe University and a PhD
8 conferred by the University of Melbourne.

9 PROF. GORDON: Yes.

10 MR ROZEN: Can you tell us what your thesis was, please.

11 PROF. GORDON: It was on sample size determination for discrete
12 data. All those qualifications were in mathematical
13 statistics, by the way.

14 MR ROZEN: You then set out your brief employment history and
15 you have spent all of your working life at the University
16 of Melbourne, do I understand that correctly?

17 PROF. GORDON: Apart from the odd vacation job in a factory,
18 yes.

19 MR ROZEN: We probably don't need to find out too much about
20 those from you. Your current role as director of the
21 centre, you have occupied that position since 1992?

22 PROF. GORDON: Yes.

23 MR ROZEN: But worked in the centre since 1988.

24 PROF. GORDON: Yes.

25 MR ROZEN: Before that time you were a research fellow,
26 lecturer, tutor, the usual career path to academia?

27 PROF. GORDON: That's correct. It may be worth noting in the
28 context that there was a four-year period there when I was
29 in the Department of Community Medicine, which is where I
30 got somewhat to focus on medical research and epidemiology
31 that has been a sort of a emphasis of my career, I suppose.

1 MR ROZEN: That is helpful. What was the nature of the work you
2 did during that four-year period?

3 PROF. GORDON: I was mainly employed to work on a large
4 epidemiological study of the health of workers in the
5 petroleum industry, known as Health Watch, which is still
6 going to this day, actually.

7 MR ROZEN: That study - I have got some familiarity with it, I
8 think - has been looking at cancer rates, amongst other
9 things, in that cohort of workers.

10 PROF. GORDON: Yes.

11 MR ROZEN: You were engaged to consider the matters that are of
12 interest to the Inquiry by a law firm that was representing
13 the community organisation Voices of the Valley.

14 PROF. GORDON: Yes.

15 MR ROZEN: If we look briefly at page 10 of the documents behind
16 tab 14, that is a copy of the letter that was sent to you
17 on 5 August 2015 by that firm, Environment Justice
18 Australia.

19 PROF. GORDON: Yes.

20 MR ROZEN: And it sets out, on page 2, the tasks that they were
21 requesting you to perform.

22 PROF. GORDON: Yes.

23 MR ROZEN: We can perhaps summarise those. There were three
24 aspects to the work that you were asked to do. The first
25 was to review the materials supplied to you in relation to
26 the coal mine fire and, within the scope of your expertise,
27 answer the questions there set out about whether or not the
28 fire contributed to an increase in deaths and to identify
29 any limitations you see in the data in relation to that
30 matter.

31 PROF. GORDON: Yes.

1 MR ROZEN: You were secondly asked to prepare a report setting
2 out the conclusions you've reached and then thirdly, in
3 anticipation that the Board of Inquiry may be interested to
4 hear from you, you were asked to make yourself available to
5 join us here and subsequent to that, your report was
6 provided to the Inquiry and in turn you've been invited by
7 the Inquiry to participate in its proceedings.

8 PROF. GORDON: Yes, that is all correct.

9 MR ROZEN: In response to the request from Environment Justice
10 Australia, you did produce a report, dated 11 August 2015,
11 and that is the report that appears immediately behind
12 tab 14 in the folder in front of you, I take it?

13 PROF. GORDON: Yes.

14 MR ROZEN: Have you had a chance to read through your report
15 before coming along this morning?

16 PROF. GORDON: Yes.

17 MR ROZEN: Is there anything in it that you wish to change?

18 PROF. GORDON: No. I confess that I believe I noticed on Monday
19 a very minor grammatical error, which I can't currently
20 identify, but if anybody notices it, I'll agree it is
21 there.

22 MR ROZEN: Does that mean it wasn't that significant?

23 PROF. GORDON: It is certainly not significant with respect to
24 meaning. If we find it - - -

25 MR ROZEN: We'll attend to it.

26 PROF. GORDON: I didn't notice it. That is what I'm apologising
27 for.

28 MR ROZEN: With that caveat, are the contents of your report
29 true and correct?

30 PROF. GORDON: Yes.

31 MR ROZEN: I tender the report, together with the letter of

1 instruction and CV.

2 #EXHIBIT 29 - Report of Professor Gordon, letter of instruction
3 and CV.

4 I'm about to move on to - it seems we may have lost Dr Flander.

5 DR FLANDER: Can you hear me?

6 CHAIRMAN: We've got your voice.

7 MR ROZEN: We can hear you, we can't see you.

8 DR FLANDER: Okay. I can try the picture again. It is quite
9 difficult for me to hear and see you.

10 MR ROZEN: I apologise for that. Is that better if I'm closer
11 to the microphone?

12 DR FLANDER: Yes, thank you. I have no picture, though.

13 MR ROZEN: We'll see what we can do about that, but if it is all
14 right with you, Dr Flander, we'll proceed.

15 DR FLANDER: Absolutely, okay.

16 MR ROZEN: I'm firstly conscious of the time. I'm about to go
17 on to the broader topics that I wish to question the
18 experts about. I think it is abundantly clear that we're
19 not going to finish today. So what I'm going to raise is
20 whether or not we want to have a brief break now or should
21 we just press on until 2. I'm really in the board's hands.

22 CHAIRMAN: We're happy to keep going, but it depends upon other
23 communications to be made, if they are to be made, to you
24 or to anyone else from the secretariat, please do so and
25 we'll accommodate you, but for the moment, we'll go on.

26 MR ROZEN: I'm content to do that. If I could start by asking
27 Professor Armstrong a broad general question, if I may.
28 The task of the board is to answer the question, based on
29 the data from 2009-2013 and having regard to 2014 data, did
30 the Hazelwood Coal Mine fire contribute to an increase in
31 deaths. The first question I want to ask is really a

1 medical question, and that is taking a step back, there are
2 clearly a number of ways in which a fire can contribute to
3 an increase in deaths, just looking at it as a general
4 proposition, and that is what I want to explore with you.
5 The obvious way is the fire directly burns people and
6 causes their deaths and in this area there is a very clear
7 and recent and tragic example of that in 2009, where a
8 bushfire led to 11 deaths in the Churchill area. There's
9 no evidence of anything like that happening in relation to
10 the Hazelwood Coal Mine fire and so we can put that to one
11 side for our purposes. I would assume you'd agree with
12 that?

13 PROF. ARMSTRONG: Yes.

14 MR ROZEN: The next obvious way in which a fire such as the
15 Hazelwood Coal Mine fire might contribute to an increase in
16 deaths is through the inhalation of the smoke by people in
17 the vicinity of the fire.

18 PROF. ARMSTRONG: That is correct. Any emission, in fact, not
19 necessarily just smoke, but any emission from the fire is
20 potentially inhalable and can cause illness and death.

21 MR ROZEN: Carbon monoxide, for example, is an example of
22 something which could occur as a result of a coal mine fire
23 and could potentially lead to illness and/or death.

24 PROF. ARMSTRONG: Correct.

25 MR ROZEN: We know from the various reports that you've provided
26 that there is a very graphic example of, in the London smog
27 event of 1952, of a large number of deaths being
28 attributable to coal smoke. I think that is - - -

29 PROF. ARMSTRONG: That is so.

30 MR ROZEN: The consensus amongst those of you that have referred
31 in your reports to that event is that one particular

1 constituent of the smoke, that is sulphur dioxide, played a
2 very significant role in relation to those deaths. Can I
3 ask you briefly to explain that to us, your understanding
4 of what occurred.

5 PROF. ARMSTRONG: Let me say firstly this is not an area of
6 special expertise of mine, but I have read the paper in
7 question and because of the high sulphur content of the
8 coal that was used, sulphur dioxide was an important
9 emission from the many coal-burning devices in the city and
10 its accumulation at that time is believed to have been an
11 important contributor to the deaths that occurred and
12 essentially this is because when it is inhaled, it
13 essentially becomes sulphuric acid and obviously this has a
14 very nasty effect on respiratory function and so that is
15 believed to be the reason why there was such a dramatic
16 increase in mortality during this period, but it was almost
17 certainly not the only reason.

18 MR ROZEN: I understand that. That nasty effect of the
19 sulphuric acid is not just nasty but will often be, if not
20 immediate, will occur soon after ingestion.

21 PROF. ARMSTRONG: It is a rapid effect and that was what was
22 observed in terms of the time trajectory of the deaths in
23 that event.

24 MR ROZEN: The evidence that the Inquiry has heard, both in its
25 first incarnation and in its present setting, is that one
26 of the key pollutants that is the focus of concern is
27 particle matter, both particle matter 10 and particle
28 matter 2.5. Can you, if you feel it is within your area of
29 expertise, explain briefly to us the difference between
30 those two forms of particle matter. It is just really a
31 question of the size, is it not?

1 PROF. ARMSTRONG: It is really just the size, but inevitably it
2 also relates to composition because the particles of size
3 2.5 will tend to remain suspended in air generally longer
4 than particles of greater than that size and so they may be
5 a different composition, and are a different composition
6 generally, to the bigger particles.

7 MR ROZEN: That distinction between the particle size is
8 important because the evidence that's been presented to the
9 Inquiry, and I think has been considered by all of you, is
10 that at different times and in different locations we had
11 measuring of PM 10 and at other times PM 2.5; the two don't
12 entirely match up.

13 PROF. ARMSTRONG: They don't entirely match up, that is correct.

14 MR ROZEN: In terms of ingestion of PM 2.5, the Inquiry has
15 heard that a particular concern is because of the minute
16 size of the particles, it is able to settle deep inside the
17 lungs. Can you explain to us what, from a health effect
18 point of view, what the concern is there. Why is that such
19 a problem for human health?

20 PROF. ARMSTRONG: Well, essentially, the larger particles are
21 usually caught up in the larger airways and they can be
22 essentially coughed up in the normal mechanisms that the
23 lungs have for clearing foreign particles that come into
24 the lungs, whereas the PM 2.5s get beyond that level in the
25 lung and so they will persist in the lung longer and will
26 have effects right down at the functional level of the
27 lung, which is the level at which oxygen is being
28 transferred across the membranes and carbon dioxide coming
29 back the other direction.

30 MR ROZEN: That is how we see those minute particles potentially
31 making their way into the bloodstream, is that correct?

1 PROF. ARMSTRONG: They don't necessarily make their way into the
2 bloodstream, but that is a possibility, but they certainly
3 have a potent effect in the lungs themselves, but obviously
4 they do get into the bloodstream because some of the most
5 important effects of the PM 2.5 are on the heart, not on
6 the lungs as such.

7 MR ROZEN: That is what I'm about to turn to. I want to see if
8 I can explore with you the expected mechanism by which the
9 ingestion of PM 2.5 might impact, for example, on the
10 respiratory system and on the cardiovascular system. If
11 you're able briefly to explain that to us.

12 PROF. ARMSTRONG: I will not attempt to do that. I think that
13 goes beyond my level of expert knowledge in the space.

14 MR ROZEN: I don't know if any other member of the panel wants
15 to address that, if they feel they're able to.

16 ASSOC PROF. BARNETT: I can certainly talk a bit about the
17 evidence that we have.

18 MR ROZEN: Yes, please, Associate Professor Barnett.

19 ASSOC PROF. BARNETT: There is strong evidence from meta
20 analysis, and these are analysis where somebody takes all
21 the available analysis and summarises them, so there is
22 very strong evidence of the short-term effects of air
23 pollution on stroke and on the long-term effects of air
24 pollution on stroke too, there is very strong evidence of
25 an increased risk of death and there is very strong
26 evidence of an increased risk of emergency hospital
27 admissions for cardiovascular and respiratory disease. I
28 think it is worth saying that you've got people like the
29 American Heart Association saying there is a causal link
30 between particulate matter pollution and death and
31 morbidity, and also the World Health Organisation and also

1 the US Environmental Protection Agency as well.

2 MR ROZEN: Professor Gordon, I want to address a matter that you
3 raise, and perhaps you're an appropriate person to start
4 with, and that is the observation you make at paragraph 14
5 of your report about the timeframe of the likely impact and
6 so what time period we ought to be looking at to try and
7 understand these issues. Just for completeness, you note
8 at paragraph 14, in reference to the work both of
9 Dr Flander and also Associate Professor Barnett, that the
10 focus of their work is on the months of February and March,
11 due to the dates of the fire. We know the fire burned from
12 9 February 2014, so a period of 45 days towards the end of
13 March. You say, "I consider it reasonable to believe that
14 any effect of the fire on mortality may have continued for
15 some time after the fire was declared safe on 25 March
16 2014." You go on, "It is not hard to envisage scenarios
17 for which this is a logical possibility. A frail elderly
18 person with chronic obstructive pulmonary disease, for
19 example, could have their respiratory system stressed by
20 the air pollution from the fire in such a way that their
21 death is accelerated, without it necessarily occurring
22 during the period of the fire." And you go on and explain
23 it is for that reason that you think it is appropriate, in
24 fact necessary, to look beyond March to at least the middle
25 of 2014. Could you expand on the thinking there and what
26 it is that you're seeking to convey in that part of your
27 report.

28 PROF. GORDON: Some of it is just as was stated there, the
29 logical possibility that acute effects could have - it is
30 rather acute exposures could have a lingering effect in a
31 sort of indirect way, if you like, by the stress placed on

1 the body at the time the acute exposure occurred, but also
2 on some of the analyses of some of those previous events,
3 including the London smog event of 1952, in which some more
4 recent analysis has suggested that the early estimates of
5 the numbers of deaths caused, which were considerable, were
6 still too low, precisely because of effects that lingered
7 in their impact beyond the actual five days of the smog and
8 for some months afterwards, potentially perhaps even longer
9 than that, but I'm not going to speculate about how long it
10 might be.

11 MR ROZEN: Just while we're on that page of your report, if I
12 can ask you about table 1.

13 PROF. GORDON: Yes.

14 MR ROZEN: You note there that you're referring to table 1 of
15 the first report by Dr Flander, I think I'm right, the
16 Flander and English report of September 2014.

17 PROF. GORDON: Yes.

18 MR ROZEN: Can you explain to us what you've done, what that
19 table summarises and what you're able to conclude from that
20 data and why.

21 PROF. GORDON: In their report, they used the 2009-2013 data to
22 predict what would be expected in a sort of on average
23 sense to have occurred in 2014. So it just amounts really
24 to an average of what happened over the previous years of
25 2009-2013 in the various time periods identified there. So
26 that is a statistical average, if you like, that gives the
27 par, so to speak, that might be expected if 2014 behaved in
28 the manner of the previous years from 2009-2013. But, of
29 course, we actually - so those are not whole numbers even
30 though, of course, the number of deaths do have to be a
31 whole numbers, but it is just an average constructed from

1 the previous years. Then we have the actual observed
2 numbers that we recorded.

3 MR ROZEN: That is the third column.

4 PROF. GORDON: That is the third column, yes. So now we have a
5 comparison, we have a comparison of observed with
6 predicted, and a common way to think about that would be to
7 construct the ratio of the observed to predicted to
8 indicate the excess or the reduction relative to predicted
9 that you see in the observed. In this case, the observed
10 was always higher than the predicted. Of course, the
11 periods are overlapping, so it is not independent
12 information, the months are accumulated in that way, so
13 there is a lot of the same data being reproduced. So that
14 is the ratio. So 1.15 is simply 50 divided by 43.38 and so
15 on. The in the last column there is a P-value calculated.
16 Do you want me to attempt to explain that?

17 MR ROZEN: I think we all want you to attempt to explain that
18 because the reports are replete with references to P-values
19 and I'm probably not alone in confessing not to fully
20 understand them.

21 PROF. GORDON: Okay. Funnily enough, you might get disagreement
22 between the members of the panel about exactly how to think
23 about a P-value if we get deeply philosophical about it,
24 but I'll attempt an explanation and other members of the
25 panel can have a go too if they want. So, as you say -
26 well, research generally, I would say, is replete with
27 these quantities. The P-value, first of all the most
28 important thing to understand about it, I think, is it is a
29 probability, so it is expressed on a scale of zero to one
30 generally - it might be mentioned as a percentage, but that
31 amounts to the same thing - but think of it as a

1 probability between zero and one. It attempts to ask the
2 question how likely are the data that we actually see if
3 the data are conforming to some particular expectation or
4 model or theory of the way the world is. So in this case
5 we can ask, for example, how likely is it we would see an
6 observed number of 50 if what was really happening was that
7 2014 was conforming to 2009-2013, in which the predicted
8 number was 43.38.

9 Now, because of natural variation, whatever else is
10 going on, we don't expect the observed number in 2014, just
11 taking the first row of the table, to be 43 exactly, or 44,
12 we understand that there will be some variation, even if
13 2014 is generally conforming to 2009-2013. So what the
14 P-value does is attempts to say how strange is it that we
15 got the result we actually did if we're operating with the
16 working hypothesis that it should conform to 2009-2013.
17 The smaller that P-value, the more remarkable the result
18 is. So the closer the P-value gets to zero, the more
19 strange, if you like, the outcome is. If it is true that
20 the, in this case, 2014 results are conforming to the
21 2009-2013 results - - -

22 MR ROZEN: If I can just stop you there. So even a small
23 P-value doesn't mean that the hypothesis that you're
24 examining is definitely true, it is just more likely,
25 relatively likely.

26 PROF. GORDON: A small P-value will indicate that the hypothesis
27 that you're entertaining - it is evidence against that
28 hypothesis, the smaller the P-value, because the stranger
29 this result is, so to speak.

30 MR ROZEN: So in this context the hypothesis that's being
31 examined is that the variation is due just to random

1 chance?

2 PROF. GORDON: Yes, that's right, that 2014 is conforming, in an
3 on-average sense, to 2009-2013, but with some random
4 variation around that, that we know we always have and
5 can't avoid.

6 MR ROZEN: I think I cut you off. You've just been saying that
7 the smaller the P-value - and you explained the
8 significance of that.

9 PROF. GORDON: Sure.

10 MR ROZEN: Is there some point in the discipline of statistics
11 at which a P-value means that the result is statistically
12 significant?

13 PROF. GORDON: That is a highly controversial matter, but the
14 short answer is yes, there is a conventional level of
15 statistical significance that's been used a lot in
16 research, and that would be .05, or 5 per cent on a
17 percentage scale.

18 MR ROZEN: Can you just explain to us in simple arithmetic
19 terms, if you could, what that actually means. If you have
20 got a P-value of .05 and you're testing a hypothesis, what
21 is that telling you?

22 PROF. GORDON: It is saying that there is - you're testing a
23 particular hypothesis and you observe whatever and you say
24 what we observed here is something that would only occur
25 one in 20 times if we did this over and over again, it is
26 an unusual occurrence, and therefore it gives evidence
27 against the hypothesis. It is like a probabilistic version
28 of a logical argument, which if you assume something and
29 show a falsehood, it means the assumption is wrong. Here
30 we have a probabilistic version of that, where we assume
31 something, then we ask how likely is it that we see what we

1 actually saw, we find that the likelihood is very small and
2 therefore there is evidence against the theory or against
3 the assumption. So the smaller the P-values in that table
4 are, the stronger the evidence is that the 2014
5 observations do not conform to the 2009-2013 experience.

6 MR ROZEN: What is the explanation for - because if we look at
7 the ratio column, they're broadly similar.

8 PROF. GORDON: Yes.

9 MR ROZEN: And yet the P-values are quite significantly lower as
10 we work our way down the table.

11 PROF. GORDON: Yes.

12 MR ROZEN: Why is that?

13 PROF. GORDON: It is essentially, in this case, just a sample
14 size matter. As the sample sizes get larger, even a
15 slightly smaller ratio will become more statistically
16 significant, become unusual, so to speak.

17 MR ROZEN: As you observe, the last two, that is when one looks
18 at February-May and February-June, the last two P-values
19 are well under .05.

20 PROF. GORDON: Yes.

21 MR ROZEN: In fact, the last considerably under. If I have got
22 the maths right, it is a 1 in 65 chance with a P-value, or
23 thereabouts, if the P-value is .015.

24 PROF. GORDON: Yes, that is correct.

25 MR ROZEN: I think, Associate Professor Barnett, you were
26 invited to make any observations you wanted about that.

27 ASSOC PROF. BARNETT: I thought that was an excellent
28 explanation. All I would say is that the P-values that I
29 give come from a Bayesian paradigm. So what that means is
30 the P-values that I show are the probability that the mine
31 fire increased the deaths, which is, I think you'll agree,

1 a much simpler explanation.

2 MR ROZEN: Well, it is, but Bayesian paradigm was another term

3 that I was going to ask for some guidance on, so you've put

4 your hand up for that one, I think. What does that mean,

5 what is a Bayesian paradigm?

6 ASSOC PROF. BARNETT: The way I explain it to my students is

7 that in a Bayesian paradigm we see data as fixed, so the

8 number of people who died were fixed, and these parameters

9 that we're interested in, like the increase in deaths,

10 they're random, they move around, and that seems to us to

11 be a more natural way of working. In the frequentis world,

12 that Professor Gordon described beautifully, the parameters

13 are fixed and the data around them, you kind of have to

14 re-imagine what the data might have looked like in another

15 scenario, which is what Professor Gordon was talking

16 about - you know, how unusual is this data if we sort of

17 re-imagine other worlds. So I just find, especially when

18 dealing with the public, because I knew this report was

19 going to be for public consumption, that Bayesian P-values

20 are far, far easier and intuitive to understand.

21 MR ROZEN: So it really just comes down to how the material is

22 presented, is that essentially the difference?

23 ASSOC PROF. BARNETT: Yeah. One of them is the probability that

24 the mine fire increased the risk of death, the other one is

25 how unusual are these data, which I'd say is a more

26 abstract. It is not directly answering the question. You

27 kind of have to say okay and then it is not unusual and

28 then what is it.

29 MR ROZEN: It is a two-step process, in a sense. It is saying

30 this is unusual and then one goes to what might the

31 explanation be.

1 ASSOC PROF. BARNETT: Yes.

2 MR ROZEN: Professor Gordon, you're nodding. The transcript
3 won't pick that up, but is that a correct - - -

4 PROF. GORDON: Yeah. I haven't heard it quite described like
5 that, but, yeah, I think that's - - -

6 MR ROZEN: That is why I'm not teaching statistics and you are.

7 PROF. GORDON: That's roughly right.

8 MR ROZEN: Dr Flander, you've been sitting very patiently there.

9 Is there anything that you would like to add to the
10 discussions that we've been having, particularly in
11 relation to the statistical analysis techniques?

12 DR FLANDER: I think the explanations are spot-on and I have no
13 argument with that and, as I said, I'm not a statistician.
14 As an epidemiologist, we have - perhaps Professor Armstrong
15 can comment on this if I'm wrong - we have, over the last
16 couple of decades, really moved towards publishing
17 standards that involve not P-values but could include
18 P-values but focus instead on the confidence interval and
19 the credible interval around any point estimate or any
20 ratio. So our work, we show a preference, although we
21 include P-values in our work, although they were omitted in
22 part of the first report we did, in general we include the
23 P-values but we focused on the effect side. As I said in
24 my original statement, we're looking at is there an effect
25 and what is the magnitude of the effect and the P-value, as
26 Professor Gordon explained, can be influenced by the number
27 of observations we're making and in our current situation,
28 we're struck by the low number of observations and as a
29 result the difficulty of choosing between different
30 explanations, simply because the variation around those
31 point estimates is so broad, that is the large confidence

1 interval.

2 MR ROZEN: You have mentioned, Dr Flander, the next term that I
3 was going to ask for some explanation of, and that is
4 confidence intervals. Do you wish to try and explain what
5 that means or should I ask one of the statisticians to do
6 that?

7 DR FLANDER: I'd appreciate very much if you'd ask Professor
8 Gordon, who I know to be very good at explaining these
9 things.

10 MR ROZEN: That looks like a hand pass, Professor Gordon. Can
11 you have a go at confidence intervals for us, please.

12 PROF. GORDON: Okay. There's confidence intervals in table 2 of
13 my report, since you were asking me about table 1, and it
14 follows very shortly thereafter.

15 MR ROZEN: Yes, the top of page 5.

16 PROF. GORDON: The top of page 5, yes. Firstly - it is just a
17 very minor technical point - in fairness, I should say, as
18 you will know from having read the report, at paragraph 16
19 I point out an inadequacy of the analysis in table 1, that
20 it treats the predicted numbers as fixed, whereas of course
21 they were actually estimated from the 2009-2013 data. I
22 describe that as minor because from my point of view I'm
23 essentially correcting that in table 2 and while it makes a
24 small amount of different, it is only a small amount of
25 difference. So if you were going to rely on a P-value
26 argument that we were discussing previously, I would prefer
27 that you use table 2 than table 1, for the reason indicated
28 at paragraph 16. Sorry, that is not the question you asked
29 me, but I just wanted to make that clarification.

30 MR ROZEN: That's fine.

31 PROF. GORDON: So coming to the confidence intervals, it is very

1 common in statistical analysis generally that we think of
2 estimating some unknown population quantity, and I guess
3 the simplest version that we would all be familiar with
4 there would be political polls, where a poll is conducted
5 of maybe 1,000 voters for the purpose of estimating the
6 voting populations preference for Mr Abbott or how they are
7 going to vote, or whatever. Those estimates of the true
8 population are just - they are estimates and they'll have
9 some uncertainty associated with them, but nevertheless we
10 can see, from just a logical perspective, that if you could
11 at that time ask the whole voting population for their
12 views, you would get an answer and there is a sense in
13 which that answer would be the true answer.

14 MR ROZEN: Because you've got the whole population.

15 PROF. GORDON: The whole population of many millions and it is
16 not ambiguous, there is no uncertainty, you go and
17 interrogate everybody and find out what they say and you
18 end up with, you know, 42.76142 per cent of the population
19 think Mr Abbott is doing a bad job, or whatever. But we
20 don't get that from the sample. From the sample we just
21 get - let's say it is a sample of a 1,000 - we get that 443
22 out of 1,000 agreed to that proposition. So that means
23 that we are in a position where we have an estimate from
24 the sample but there is clearly some uncertainty about it,
25 we don't really believe that that is the exact value that
26 you would get from the whole population. So there is a
27 whole theory and set of theories applicable to different
28 situations for determining these intervals known as
29 confidence intervals and a 95 per cent confidence interval
30 is constructed in a way to be 95 per cent confident, in a
31 way that I can spell out more fully if you wish, that it

1 includes the true value, the true unknown value. So we
2 might say that the sample estimate said 44.3 per cent but
3 the 95 per cent confidence level, in the case I mentioned,
4 might go from - I don't know - 41.2 per cent to
5 47.5 per cent, or something like that. So we say that is
6 an interval within which we are confident the true value
7 lies. Now, in surveys and political polling, that idea, I
8 think, is sort of relatively easily understood and
9 internalised. In some other contexts it is less
10 straightforward to think about what you actually mean by
11 the true population value, and in this context you're sort
12 of imagining the Latrobe Valley situation and what happened
13 over that period as being a kind of sample from some
14 hypothetical set of universes in which similar things could
15 have happened but there would have been natural variation,
16 so we're seeing natural variation here again, and hence the
17 confidence interval is intended to reflect that imprecision
18 that arises through natural variation and so we have an
19 estimate, for example, in table 2 at the top there, an
20 estimate of 1.2, or a ratio of 1.2, as what was observed
21 but the point estimate - that is the parallel to my
22 44.3 per cent in the survey example I gave - and a
23 confidence interval that goes from .97, just below one, up
24 to 1.47 and that is intended to reflect the uncertainty in
25 the estimated quantity.

26 MR ROZEN: I'll just stop you there. Because one appears in
27 that range, that is an indicator of the degree of
28 uncertainty, is that right? Perhaps I haven't expressed
29 that very well.

30 PROF. GORDON: Well, it is a fact that one occurs in that range.

31 MR ROZEN: But what is the significance of that in the context

1 of the confidence interval?

2 PROF. GORDON: Well, that depends on your perspective a little
3 bit. Of course, one is the value at which the observed is
4 equal to the predicted, so to speak, so it is sort of
5 conforming therefore to the model in which 2014 is not
6 different from 2009-2013, but so are a whole lot of other
7 values, anywhere between .97 and 1.47, but there is a
8 consistency between the 95 per cent confidence interval in
9 the P-value, and that may be where you're going, I'm not
10 sure, in the sense that for these ratio measures, the
11 95 per cent confidence interval will exclude the value one
12 in exactly the same circumstances in which the P-value will
13 be less than .05.

14 MR ROZEN: That was really my next question, that is what is the
15 interrelationship between the confidence interval and the
16 P-value, and I think you have just explained that. Are
17 they really two ways of measuring the reliability of the
18 data or of the conclusion from the data?

19 PROF. GORDON: Yes. At a basic statistical level, they are two
20 very common ways of expressing the statistical inferences
21 that we carry out. I mean, I would agree that a confidence
22 interval, from my point of view, is good to emphasise and
23 it is what I have practised in my career and my teaching in
24 fact, because it focuses on the size of the effect and what
25 we think is an interval that might contain the true effect.

26 MR ROZEN: Thank you. Associate Professor Barnett, I'm right,
27 aren't I, that in your reports you refer to the credible
28 interval?

29 ASSOC PROF. BARNETT: Yes.

30 MR ROZEN: Is that something different to the confidence
31 interval?

1 ASSOC PROF. BARNETT: It is quite similar. Again, it just has a
2 simpler interpretation that you can do in a sentence, it
3 just has a 95 per cent probability that the true value is
4 within that range.

5 MR ROZEN: So we can, for our purposes, see those as essentially
6 the same concept or am I stretching - - -

7 ASSOC PROF. BARNETT: The same concept, yes. I would stress
8 again that the Bayesian concept is easier to understand, I
9 would say, to the layperson.

10 MR ROZEN: There is a wry grin on Professor Gordon's face. Do
11 you want to make any observations about that proposition,
12 that the Bayesian analysis is easier to understand for the
13 layperson? Does it suffer from any deficiencies, for
14 example?

15 PROF. GORDON: I would say only that it hides a sort of
16 framework that is more challenging to understand, I think,
17 to do with the way that prior beliefs are incorporated into
18 the analysis. I do agree with Adrian that at the final
19 stage the credible interval is easier to explain to a
20 layperson in the manner that he described.

21 MR ROZEN: Professor Armstrong, you have been quiet for a while.
22 Is there anything you would like to add to this discussion
23 about statistical analysis relevant to what we are doing?

24 PROF. ARMSTRONG: I think just a useful little additional
25 comment, and that is to say essentially what we're doing
26 through a statistical analysis like this is trying to get
27 some of the evidence that we need to make a decision about
28 whether this is the way the world is or this is what's
29 happened versus something else. So we get our relative
30 risk, if that's what we've calculated, that is one bit of
31 information, the 1.5, then we've got the 95 per cent

1 confidence interval, that is another bit of information,
2 and then we have the P-value, that is another bit of
3 information. That doesn't allow us to say well, yes, the
4 P-value is very low, the obs ratio is higher, the
5 confidence interval is narrow, therefore definitely this
6 caused that. There is a number of other factors that have
7 to be taken into consideration. That is, in a sense, the
8 statistical evidence, but there is a whole bunch of other
9 things and so I think the notion that developed certainly
10 in medical science, and perhaps in many other sciences, if
11 you have got a P-value of less than 0.05, you have proved
12 it. That is not true. You have got to think of a whole
13 lot. And in epidemiology, which is essentially what this
14 is, because we are not doing experiments, where we are
15 controlling all the factors, then we know that even if we
16 do get a very strong association with a low P-value and so
17 on, we still have to consider all of those things that
18 might bias that and give us still a misleading result. So
19 my message is that's just some of the evidence that we use
20 ultimately to decide, in this particular situation, how
21 strongly we believe in the proposition that the death rate
22 in Morwell in the first part of 2014 was more than you'd
23 expect to see under normal circumstances and therefore
24 something must have caused it, perhaps, and then all the
25 possibilities that we might put on the table.

26 MR ROZEN: When you refer there to Morwell, do you mean the
27 death rate in the Latrobe Valley generally?

28 PROF. ARMSTRONG: The Latrobe Valley or Morwell specifically,
29 either one, but we've been considering Latrobe Valley
30 essentially because we see this larger category of exposed
31 people, people who were exposed to emissions from the mine

1 fire and also because the numbers give us more certainty in
2 the statistics that we've been talking about, narrower
3 confidence levels and so on.

4 MR ROZEN: Dr Flander, was there something you wanted to add to
5 that or did you wish to make an observation about it?

6 DR FLANDER: I think it is just, for the record, really
7 important that my colleagues have been given a chance to
8 explain how we use these analytic tools. I have no
9 objection to the explanations and, of course, with my
10 experience as an epidemiologist, albeit not as extensive as
11 Professor Armstrong's, I concur that a narrow confidence
12 interval or credible interval, a low P-value, is not a
13 sufficient explanation of these observations.

14 MR ROZEN: Dr Flander, can I ask you about one specific matter,
15 and that is the observations made by Professor Armstrong in
16 his report about your comparison of the 2014 mortality data
17 with the individual years 2009, 2010 through to 2013. I
18 take it you understand what I'm referring to?

19 DR FLANDER: I do.

20 MR ROZEN: I'm specifically for our benefit here looking at the
21 observation that Professor Armstrong makes on page 7 of his
22 report. What he is conveying, as I understand it, is that,
23 somewhat contrary to the approach that you took, it would
24 have been preferable a priori if you had compared 2014 with
25 an average of 2009 to 2013.

26 DR FLANDER: Yes.

27 MR ROZEN: Having seen that, do you agree with that critique, if
28 I can put it that way?

29 DR FLANDER: With respect, I don't, and I note that later in his
30 report he did a year by year comparison which of course we
31 also did, and I think it's tables 5 and 6, and our reasons

1 for looking at the 2014 observations and comparing them
2 with each of the previous five years was to extract as much
3 information as possible. We noted in our very first
4 analysis that the observed events were high in 2009, we
5 didn't have a reference set for that. We did not have
6 denominator data. This suggests to us that knowing about
7 the events of 2009, that would have been an important
8 source of mortality that would have been useful to compare,
9 if we had treated those years as a single unit and just
10 averaged them we would have lost information we may find
11 out to be useful and I think that that was the spirit of
12 our analysis, to try to use absolutely as much information
13 as we could, not to average things or try to increase
14 statistical power, so with respect I have to say that I
15 stand on our comparison of 2014 with each of the previous
16 five years.

17 MR ROZEN: I understand that, do you accept though that if one
18 does it the way Professor Armstrong says it ought to be
19 done, that is by comparing 2014 with the average, you do
20 end up with a different outcome, a different statistical
21 conclusion?

22 DR FLANDER: Absolutely, I think we have abundant evidence that
23 every time we make a pass through these data and alter the
24 - how should I put it, the architecture of it, which
25 variables go in and how we perform the analysis we will get
26 slightly different results, I absolutely concur with that,
27 yes.

28 MR ROZEN: Thank you. Professor Armstrong, why is it in your
29 view more appropriate to compare the 2014 data with the
30 average of the 2009/2013 data rather than on a year by year
31 basis.

1 PROF. ARMSTRONG: I guess I'm really approaching this from a
2 question that was posed, and the question as I understood
3 it was, was there a higher death rate in Latrobe Valley in
4 Morwell, either or both, in 2014, than would usually be
5 expected and that might be attributable to the mine fire.
6 With that question I would say that what I said was the
7 preferred approach would be what most people would do, that
8 is to say they wouldn't say well, we will just compare with
9 2013 or with 2009, we'll take a number of years to try and
10 get a reasonable estimate of what it's usually like and
11 then make the comparison, so 2014 with 2009 to 2013. If
12 the question is a more complex one well, how is mortality
13 varied and how does it compare between 2014 and different
14 years, well then surely do it year by year. You can unpack
15 it if you want but there is a phenomenon in this that I
16 worry about, I don't know that every analyst worries about
17 it, and that's what we refer to as multiple testing.

18 DR FLANDER: Yes.

19 PROF. ARMSTRONG: The more times we test an association then the
20 less weight we can put on it and I would say that going in
21 and doing this one examination, that is one test, not four,
22 and if you really want to answer the question you pose
23 that's the one you do first.

24 MR ROZEN: By a priority you mean almost instinctively that
25 would be the way you approach it.

26 PROF. ARMSTRONG: Yes, exactly. Thinking of exactly what it is
27 I should do to answer this question, and our priority
28 thinking is very important because the more you're
29 influenced by what you have seen in the data about the
30 questions you pose to the data, the more likely it is you
31 start to select things that look as if they might be

1 positive and you will sure find lots of positive things if
2 you do it that way when in fact most of them probably are
3 just chance occurrences. So thinking about it in advance,
4 making that up or a decision about the analysis, saying
5 that's what you're going to do and doing it is the honest
6 way.

7 MR ROZEN: Professor Gordon?

8 PROF. GORDON: I agree strongly with what Professor Armstrong
9 said, well, it's what I did do.

10 MR ROZEN: And it's not just a matter of some potential
11 academic disagreement here because it actually produces
12 different results, does it not, depending on what one
13 compares with what, what I mean by that is if you look,
14 Professor Armstrong, at your report at page 8, doing the
15 comparison the way that you say it ought to be done and
16 that Professor Gordon agrees ought to be the way it's done,
17 you say in the middle of page 8 of your report: "Contrary
18 to the Flander and others 2015 conclusion that there is a
19 lack of statistical evidence for an overall higher
20 mortality in 2014 than in 2009/2013, I consider on the
21 basis of table 2", that is doing the comparison the way you
22 say it ought to be done, "that there is moderate evidence
23 for a higher mortality from all causes and from
24 cardiovascular disease in 2014 than in 2009/2013", that is
25 a central conclusion in your report, is it not?

26 PROF. ARMSTRONG: It is.

27 MR ROZEN: And the expression "moderate evidence", is that a
28 reference to the P-values we see in the table at the top of
29 the page, is that the basis for the conclusion that the
30 evidence is moderate?

31 PROF. ARMSTRONG: I would say yes to that, my colleagues may

1 well disagree but I see the P-value as a useful indicator
2 of the strength of the statistical evidence for a
3 particular proposition and while, you know, there is this
4 convention around 0.5 which I don't adhere to, once you
5 start to get down with P-values below 0.5 you say well, I'm
6 starting to believe in this proposition. You may think
7 well, I still think the evidence is quite weak but you
8 would be looking for other evidence to see whether or not
9 it supports it in that case whereas if the P-value is 0.1
10 or 0.2 so interesting, there does look to be an association
11 here but it is really weak evidence and I wouldn't
12 necessarily pursue it any further, and I would see this in
13 the moderate evidence category. But am I certain that the
14 increase in mortality we see in Latrobe Valley in that
15 first part of 2014 is indicative of something different to
16 what happened in the preceding five years? No, I'm not -
17 but it could be.

18 MR ROZEN: We know from the joint report you have all signed
19 that there was unanimous agreement with that conclusion,
20 that there is moderate evidence for a higher mortality from
21 all causes and from cardiovascular in Latrobe Valley in
22 February/June 2014 than in the same period during
23 2009/2013. Professor Gordon, would you like to comment on
24 the relevance of the P-values in Professor Armstrong's
25 report to that conclusion, do they play a role in reaching
26 that conclusion?

27 PROF. GORDON: Yes, I think they do, if we look at table 2
28 which we have been looking at, top of page 8, I suspect we
29 were influenced by the fact that the P-value from February
30 to June there is 0.04 which is clearly smaller than the
31 other one albeit with a smaller rate ratio, I mean, in a

1 sense the rate ratio from my point of view would be more
2 sensibly thought about by being inverted in those cases and
3 I would like to explain that if you don't mind.

4 MR ROZEN: Yes, please.

5 PROF. GORDON: So what Bruce has done is looked at 2009 to 2013
6 compared to 2014. The reason his results came in that way
7 is because it was derived from Dr Flander's report where
8 each year separately from 2009 to 2013 is compared to 2014,
9 but having arrived at that comparison between just the two
10 categories or levels, whatever you want to call them,
11 namely 2013 and 2014 and 2009 to 2013, it is perfectly
12 straightforward and reasonable to invert the rate ratio so
13 it's expressed somewhat perhaps more naturally and in line
14 with a lot of the other results such as the ones presented
15 in my report as 2014 relative to 2009 to 2013.

16 MR ROZEN: So the base comparisor would be, you would call 2009
17 to 2013 one.

18 PROF. GORDON: Yes, that's right, and it would simply be the
19 reciprocal of 0.90 which is 1.11 which is in line with a
20 lot of the other rate ratios shown in Professor Barnett's
21 report and my report and so on, that kind order of
22 magnitude, and similarly with the 0.83 if you invert that
23 you get 1.20 which is in fact identical to one of the ones
24 in my report for the same outcome.

25 MR ROZEN: To clarify, you're looking at the February/March
26 rate ratio.

27 PROF. GORDON: Yes, you can do it 1 over 0.83 is 1.20 and you
28 could express that as 2014 relative to 2009 to 2013. So
29 sorry, I was answering your question about P-values, we're
30 influenced by two things, I think, the effect of the rate
31 ratio itself and the P-value in coming to that conclusion.

1 MR ROZEN: The next matter I want to explore with you is in
2 your report, Professor Armstrong, you make a case in fact
3 on that same page with doing a separate comparison with one
4 particular year, that is looking at 2014 relative to 2009;
5 could I ask you please to explain why you think there is
6 value in doing that.

7 PROF. ARMSTRONG: Okay, and let me say I did that simply because
8 it had been an issue, it was an issue that had been raised
9 in the analysis that Dr Flander did and I could see the
10 logic of that, again, a priority if you think and say well,
11 here we have got these two periods, 2014 and 2009 to 2013,
12 one is the year we're interested in and the others are sort
13 of for comparison, but there is one year here that is a bit
14 different to the others in the comparison group and that's
15 2009 because there were bushfires then just as there were
16 in 2014. So one could do several things about that, you
17 might say well, we won't include 2009, we will just look at
18 2010, 2011, 2013 and compare them, or we will have a look
19 at 2009 and see whether or not there is anything on there,
20 what we find is well, yes, it's a little bit different but
21 there isn't much different between the death rate in 2014
22 and 2009 much less than there was in comparing it with 2013
23 and 2010.

24 MR ROZEN: To put it another way, they are the two stand out
25 years, if you do a bar graph it's immediately obvious,
26 isn't it, that they stand out 2014 and 2009.

27 PROF. ARMSTRONG: Yes. So you think well, perhaps then what has
28 caused the apparently higher mortality in 2014 was the
29 bushfire just like 2009 and maybe it's just incidental that
30 there was a mine fire at the same time. Now, this is
31 purely in terms of thinking about possible explanations,

1 and that - one adds a technical term to that in
2 epidemiology which is there is confounding between a
3 bushfire and the mine fire in 2014. So if you're going to
4 interpret the difference between 2014 and this ensemble of
5 2009 to 2013 you might say well, one possible explanation
6 is that the fact that there was a bushfire there, another
7 is there was the mine fire but perhaps more likely say
8 well, it was possibly both. But it comes down then to your
9 reasoning based on the statistics about what might be the
10 explanatory factors. This is where you start to move from
11 just, you know, numbers and confidence intervals into
12 causal thinking, what caused what to happen. Louisa
13 mentioned that in her discussion but ultimately that's what
14 this is all about, it is not just description of numbers,
15 it's about making a decision at least as I understand this
16 Inquiry's purpose, that firstly whether or not there was a
17 higher death rate in 2014 than would be normally expected
18 to be, and secondly, what caused it. Once you ask the
19 second question you then have to think what is the universe
20 of possible causes and one of them was a bushfire and
21 that's where the 2009/2014 comparison comes into play.

22 MR ROZEN: I understand. Professor Gordon, you have something
23 to say about the 2009 comparison in your report at
24 paragraph 33. That's what I want to ask you about, you
25 make the observation that there were 11 deaths in this area
26 which were the direct result of the Black Saturday bushfire
27 on 7 February 2009, there seems to be some debate amongst
28 the report whether it was ten or 11.

29 PROF. GORDON: I didn't investigate that, I was only basing it
30 on the document I was given.

31 MR ROZEN: The Royal Commission report says 11 and there will

1 be at least one person in the room that will be upset if we
2 don't use that figure. So assuming it is 11 correctly as
3 you say in paragraph 33, what the significance for the
4 exercise we're undertaking of that fact?

5 PROF. GORDON: Well, it's just what I argued there, that if you
6 - I mean, the tragedy of 11 people dying are included in
7 the 2009 deaths that we're making comparison between, and
8 as you previously discussed there is no suggestion that in
9 2014 the coal mine fire directly burned people to death,
10 and there seems to be at least a question about whether it
11 makes sense to include those directly caused deaths in the
12 Black Saturday fire in this area in the comparison in 2009.
13 Now, I didn't go down that track but I'm at least raising
14 it as a possibility. The obvious consequence would be that
15 the 2014 and 2009 would look less similar than they
16 currently do on all the analyses done if you excluded those
17 deaths.

18 MR ROZEN: And 2014 would look less like any other year in the
19 area we're looking at?

20 PROF. GORDON: That's right.

21 MR ROZEN: Well, it would increase the difference if I can put
22 that way.

23 PROF. GORDON: Yes.

24 MR ROZEN: I take it from a statistical analysis point of view
25 it would be a relatively easy task to take those 11 deaths
26 out of the 2009 figure and re-crunch the numbers, if I can
27 put it that way?

28 PROF. GORDON: It would on the data I had which was very crude,
29 I only had monthly data by postcode, I still haven't seen
30 some of the data that's been analysed by Dr Flander's
31 group.

1 MR ROZEN: In relation to that, I understood that had been
2 provided to you late last week, is that true?

3 PROF. GORDON: No, not the daily death data from 2009 to 2014.

4 MR ROZEN: Just going back to what I was asking you about
5 though, that is removing the 11 from the 2009 figures and
6 bearing in mind the limitation you have just identified, is
7 that something that could be relatively easily done, for
8 example, between today and tomorrow?

9 PROF. GORDON: For the analyses - well, my analysis was done on
10 Latrobe Valley - I'm just being cautious because I'm trying
11 to think of all the implications but I believe so.

12 MR ROZEN: Do you have any observation about that, Professor
13 Armstrong, is that a worthwhile - - -

14 PROF. ARMSTRONG: Again, just coming back to my theme here that
15 this is all a bit complicated and you have to look at all
16 the issues. As soon as someone says hey, but what about
17 the direct bushfire deaths, oh, yes, of course, well, they
18 would be best excluded from the 2009 figures in making this
19 comparison.

20 MR ROZEN: Dr Flander, can I check whether you can hear us.

21 DR FLANDER: I can hear you. I haven't been able to see you
22 for I guess maybe an hour, hour and a half but I'm - may I
23 make a comment?

24 MR ROZEN: Please do, that's why I have turned to you.

25 DR FLANDER: I'm taking notes and I actually have no
26 fundamental disagreements with any of this. I will point
27 out though that our report, our third report which covers
28 these issues contained cause of death data, we did look at
29 death - which statement of cause of death for each
30 individual death over the six year period in the four
31 postcodes consists of a statement from the certificate of

1 death which we coded, and we have six deaths occurring in
2 February to June 2009 from direct relationship with fire.
3 So I guess I'm saying if you remove 11 because someone has
4 said there were 11 deaths from that fire you will get a
5 different answer than we got but you won't be starting on
6 the same reference set we had.

7 MR ROZEN: I understand.

8 DR FLANDER: Okay, good. So our analysis of the cause of death
9 - I'm reading from the second paragraph on page 9 of our
10 third report: "Ten deaths from direct relationship with
11 fire between 2009 and 2014 in Latrobe Valley" keeping in
12 mind that is the four postcodes, "of these, six deaths
13 occurred in February to June 2009 and one in February/June
14 2013. No deaths from direct relationship with fire
15 occurred in February to June 2010 to 2012 or 2014." So I
16 guess we run into this issue that I'm very aware of, of
17 multiple analyses that Professor Armstrong brought up,
18 every time we run another analysis and we change some of
19 the parameters we run the risk of reducing our overall
20 confidence in the results. But I would argue that if we
21 remove deaths from 2009 and to compare that with our
22 results that we used the number 6 rather than 11. This may
23 be a tiny pedantic technical point but I do think it points
24 to the problem of comparisons like with like and using the
25 same reference sets.

26 MR ROZEN: Thank you, doctor. Just to clarify, it's not just
27 someone that said there are 11 deaths in February 2009,
28 it's the Royal Commission report into Black Saturday just
29 so you know.

30 DR FLANDER: I do absolutely understand that, I don't in any
31 way mean to diminish that statement but I can only go with

1 the data from Births, Deaths and Marriages of Victoria
2 which coded all the deaths from all of these years for the
3 postcodes. So it may be that there were deaths directly
4 related in that 11 figure that were not part of the
5 category that we used. They may have been direct deaths as
6 a consequence of the fire and I'm sure they were at the
7 time, I'm only talking about making a comparison based on
8 death certificate data we were given.

9 MR ROZEN: I understand what you're saying, it's possible that
10 the other five, if I can put it that way, were coded
11 differently for some reason.

12 DR FLANDER: That's absolutely the case, thank you very much,
13 that's absolutely the case.

14 MR ROZEN: Thank you. I'm conscious of the time and perhaps
15 given we have to conclude by 2 and it's a minute to 2 I
16 should perhaps conclude for the moment by tendering the
17 joint report which I don't think I did, that is behind tab
18 15, and Professor Armstrong, in light of the changes you
19 made to your report in the area of the conclusions, that is
20 the minor changes you raised for me earlier, you would want
21 to make those changes to the conclusion as they are set
22 out?

23 PROF. ARMSTRONG: I raised those before we reached those
24 conclusions so they should be already in those.

25 MR ROZEN: In the way it's worded.

26 PROF. ARMSTRONG: Yes.

27 MR ROZEN: I think that's clear, so I tender that for the
28 record.

29 #EXHIBIT 30 - EXP.0008.001.0001.

30 MR ROZEN: For others' benefit I would anticipate and hope I
31 will conclude within another half an hour of my examination

1 of the panel, it might be desirable to get some estimates
2 from other counsel just to inform what we do from now.

3 MR NEAL: I would express my view with a very low confidence,
4 but at least an hour.

5 MR BLANDEN: Perhaps 15 minutes or so I would think, sir.

6 MS SZYDZIK: Ten to 15 minutes, sir.

7 CHAIRMAN: That sounds like it's about two hours; shall we aim
8 for a 9 o'clock start?

9 MR ROZEN: I'm happy with that, sir.

10 CHAIRMAN: That means the imposition on others is kept to a
11 minimum, I'm thinking particularly of - - -

12 MR ROZEN: I'm informed that our technical assistant cannot get
13 here till 8.30 so perhaps to give him sufficient time to
14 make arrangements if we say 9.30 rather than 9.

15 CHAIRMAN: I hear no objection to 9.30, 9.30 it will be, thank
16 you.

17 <(THE WITNESSES WITHDREW)

18 ADJOURNED TO 3 SEPTEMBER 2015 AT 9.30 A.M.