
TRANSCRIPT OF PROCEEDINGS

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2015/16 HAZELWOOD MINE FIRE INQUIRY

MORWELL

WEDNESDAY, 9 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: Good morning Mr Chairman and members of the board.

3 We have prepared a document which comprehensively sets out
4 the submissions of counsel assisting and copies of that
5 document should be in front of each member of the board and
6 were provided to the parties yesterday afternoon. I won't
7 read the document but we do rely on its contents in their
8 entirety. What I will do, though, is identify the key
9 passages in it in which we set out the findings that ought
10 to be made and the recommendations that we submit ought be
11 made by the board and, where necessary, I'll refer and
12 summarise the evidence that we say supports those
13 submissions.

14 Our submissions are divided into two parts. The
15 first part deals specifically with term of reference 6,
16 which is the question of the contribution of the mine fire
17 to any increase in deaths in the Latrobe Valley. The
18 second part of our submissions deals with some incidental
19 matters which have arisen in the evidence that was
20 presented to the board in the three days of hearings last
21 week.

22 Starting with the first, that is term of reference 6,
23 paragraph 6 of the terms of reference requires the board to
24 enquire into and report on whether the Hazelwood Coal Mine
25 fire contributed to an increase in deaths in 2014 having
26 regard to any relevant evidence for the period 2009-2014.
27 Counsel assisting submit, in summary, that the answer to
28 the question that the Board of Inquiry is asked to enquire
29 into is yes, the fire did contribute to an increase in
30 deaths in the Latrobe Valley.

31 We make some brief legal submissions - I don't know

1 whether any of those are likely to be controversial - but
2 we observe that "contributed to" is an ordinary English
3 expression. "To contribute" means to play a part in the
4 achievement of a result. We submit that "to contribute" is
5 not the same as "to cause" and that an event can contribute
6 to an outcome without necessarily causing the outcome in
7 the legally understood meaning of that expression.

8 The Inquiry is, of course, conducted under Part 3 of
9 the Inquiries Act and under Part 3, the board is not bound
10 by the rules of evidence, nor is it bound by practices or
11 procedures applicable to courts of record. A finding of
12 fact must be based on some material that tends logically to
13 show the existence of facts consistent with the finding.
14 It is observed in a leading textbook on tribunal law that
15 the test may be less demanding than the balance of
16 probabilities test applicable to proof in civil litigation.

17 In paragraph 5 of our submissions, we make reference
18 to the well-known Briginshaw formula, which we submit is
19 applicable to the task of the board. We note that a
20 finding that the fire contributed to an increase in deaths
21 could have significant adverse consequences for a range of
22 parties and therefore should not be made unless the
23 evidence before the board leads to a reasonable
24 satisfaction having regard to the consequences for any
25 affected parties.

26 Turning to page 2, we summarise the four expert
27 witnesses who have given evidence in these proceedings,
28 Emeritus Professor Bruce Armstrong, a doctor and
29 epidemiologist from the University of Sydney, Professor Ian
30 Gordon, the director of the Statistical Consulting Centre
31 and professor of statistics in the school of mathematics

1 and statistics at the University of Melbourne, Associate
2 Professor Adrian Barnett, a statistician from the
3 Queensland University of Technology, and Dr Louisa Flander,
4 an epidemiologist from the University of Melbourne.

5 We then summarise the circumstances in which each of
6 those experts came to be involved in their investigations,
7 and I'll briefly summarise those, particularly in relation
8 to Associate Professor Barnett, who was the subject of some
9 cross-examination about that matter during the public
10 hearings.

11 Associate Professor Barnett was contacted initially
12 by the Australian Broadcasting Corporation to analyse data
13 that had been provided to the ABC by the community group
14 Voices of the Valley. Associate Professor Barnett provided
15 a report, initially to the ABC, in which he compared
16 mortality data in four Latrobe Valley postcodes in
17 February-March 2014 with the average of the corresponding
18 months from the previous five years. He reached the
19 following conclusion, "The probability that the death rate
20 was higher than the average during the fire is 0.89. This
21 means the probability that the death rate was not higher
22 than the average during the fire is 0.11. The mean
23 increase in deaths as a relative risk is 1.14 or 14 as a
24 percentage. The absolute number of deaths per postcode per
25 month is 1.8, which, over four postcodes and two months, is
26 14.1."

27 Those findings are significant because we submit that
28 the evidence that the board has heard from each of the
29 other three experts is that their findings in relation to
30 the same data are broadly consistent with the findings of
31 Associate Professor Barnett. A number of them observe that

1 in their individual reports.

2 Associate Professor Barnett produced a second report,
3 in which he looked at a broader range of postcodes and five
4 more years of data, and we set out, in summary, the
5 conclusion that he reached there.

6 At paragraph 10 we note that Associate Professor
7 Barnett was subjected to lengthy cross-examination by
8 senior counsel for GDF Suez, the mine operator, Mr Neal QC.
9 Mr Neal drew Associate Professor Barnett's attention to
10 some email correspondence that had passed between himself
11 and Voices of the Valley and we note there were two
12 particular emails that he was referred to, one in which he
13 had endorsed as a great idea a proposal by Voices of the
14 Valley to release his report to the media on 9 February
15 2015, the first anniversary of the fire, and an email dated
16 5 February 2015, in which he'd said, in the context of a
17 discussion about the limited data because of the small
18 number of deaths under examination, that "one way to
19 bolster the arguments is to cite the very many larger
20 studies that have consistently shown an increased risk of
21 death after exposure to pollution".

22 We note at paragraph 12 that, in response to
23 questions about the first email concerning the media,
24 Associate Professor Barnett explained that this was based
25 on his experience of engaging the media. He rejected that
26 he was starting to be part of a campaign and pointed out
27 that he was very protective of his reputation as a
28 scientist.

29 In relation to the second of those emails, it was put
30 to Associate Professor Barnett that he'd crossed the line
31 from being an independent expert to advocating for a cause.

1 He rejected this. He told the board that he'd "always felt
2 very down the line with the science", in his words.

3 The purpose of that examination appeared to be to
4 undermine Associate Professor Barnett's credibility as an
5 expert witness. However, we note, and it is important, we
6 submit, that unlike, for example, Dr Flander, Associate
7 Professor Barnett has never been held out as an independent
8 witness by Voices of the Valley or anyone else.

9 In our submission, the phrase "bolster the argument",
10 used by Associate Professor Barnett in the second of the
11 emails, was unfortunate in the circumstances. However, and
12 crucially, it was never suggested to him he'd been asked to
13 alter any aspect of his reports by anyone else and he
14 confirmed that no such request had been made of him and,
15 further, his statistical analysis was endorsed by the other
16 experts, including, we submit, Dr Flander.

17 Dr Flander is of the Melbourne School of Population
18 and Global Health at the University of Melbourne. She was
19 engaged by the Department of Health, as it then was, now
20 the Department of Health and Human Services. Together with
21 colleagues, she provided three reports to the department.
22 We summarise the content of those reports. Broadly
23 speaking, the first report examined the data, the mortality
24 data. The second report was a critical appraisal of the
25 work of Associate Professor Barnett, and her third report
26 was an updated analysis of the mortality data.

27 At paragraph 20 we note that in the critical
28 appraisal of Associate Professor Barnett's work, Dr Flander
29 was critical of him, stating that his key assertions are
30 not supported by the results reported in his paper.

31 At paragraph 21 we note in the third of the reports

1 provided by Dr Flander and her colleagues, there is a
2 conclusion and we quote, "There is statistical evidence
3 that air quality exceedances are associated with mortality
4 throughout the study period, not just during the period of
5 the 2014 Hazelwood Coal Mine fire or the 2009 bushfire."
6 They went on to conclude, "As mortality was associated with
7 air quality over 50 micrograms per cubic metre for PM 10
8 and the fire may have contributed to this measure of air
9 quality, it is possible that a proportion of deaths in 2014
10 could have been due to the fire in February-March 2014."
11 Those conclusions are important because they, as we will in
12 due course demonstrate, were adopted by the expert panel
13 when they gave their evidence as a group.

14 Later in these submissions, we will make reference to
15 the extensive comments that were provided to Dr Flander by
16 officers of the department in response to draft reports,
17 and we will address the significance of that evidence later
18 in our submissions.

19 Emeritus Professor Bruce Armstrong was engaged by the
20 Board of Inquiry itself to address the matters set out in
21 paragraph 23 of our submission. In his report to the
22 board, entitled Expert Assessment and Advice Regarding
23 Mortality Information as it relates to the Hazelwood Mine
24 Fire Inquiry term of reference, Professor Armstrong reached
25 14 conclusions. In response to the question, "Was there an
26 increase in mortality in Latrobe Valley during the coal
27 mine fire in 2014?", Professor Armstrong concluded, "There
28 is moderate evidence for a higher mortality from all causes
29 and from cardiovascular disease in Latrobe Valley in
30 February-June 2014 than in the same period 2009-13." And
31 we go on and note other aspects of the conclusions at the

1 top of page 6.

2 The fourth of the experts from whom the board heard
3 is Professor Ian Gordon. Professor Gordon was engaged in
4 August of this year by Voices of the Valley and he was
5 provided with the mortality data from the Registry of
6 Births, Deaths and Marriages, as well as reports from
7 Professor Barnett and Dr Flander.

8 At paragraph 27 we note that Professor Gordon, in his
9 report, noted, in relation to the work of Associate
10 Professor Barnett and Dr Flander, that they had arrived at
11 broadly similar conclusions, which is that there was an
12 excess of deaths in association with the fire of between 11
13 and 18 deaths approximately on the basis of comparison with
14 the previous five years in the area of interest. He
15 concluded that based on his own analysis of the data, "in
16 which the period of potentially different risk is assumed
17 to extend beyond the actual time of the fire, for example
18 to May 2014, the excess of deaths is statistically
19 significant at conventional levels", an expression that he
20 explained in his oral evidence to the Inquiry.

21 At paragraph 29 we note that the four experts
22 accepted an invitation to participate in a facilitated
23 meeting at the Inquiry's office on Monday, 31 August 2015.
24 At the meeting, the experts were asked to discuss the
25 conclusions in Professor Armstrong's report to the board
26 and to see if it was possible to reach agreement on any or
27 all of those conclusions.

28 At paragraph 31 we make some general observations
29 about the evidence to this Inquiry by the experts. We note
30 that apart from their obvious expertise across a range of
31 intersecting fields of scientific endeavour, there are

1 aspects of their evidence which are noteworthy. Firstly,
2 the professionalism of their collaborative approach, the
3 mutual respect with which they regarded each other and the
4 process in which they were involved, their thought and care
5 with language that they used to express their conclusions,
6 their preparedness to compromise and defer to others where
7 this was called for and their willingness to acknowledge
8 frankly where the evidence pointed away from their
9 preferred conclusions.

10 In these circumstances, we submit the board should
11 not hesitate to act on the conclusions reached by the
12 experts, especially where those conclusions are agreed to
13 by all of them and are supported by the evidence before the
14 Inquiry.

15 We submit that what emerges from the totality of the
16 evidence before the board is that the board should approach
17 answering the question posed by term of reference 6 by
18 answering the two questions posited by Professor Armstrong
19 in his report; firstly, was there an increase in mortality
20 in Latrobe Valley during the coal mine fire in 2014 and,
21 secondly, what environmental exposures might have increased
22 mortality in Latrobe Valley during the coal mine fire in
23 2014.

24 At 34 we note what appears to be certainly common
25 ground amongst all the parties, and that is that question B
26 only arises if question A is answered in the affirmative.
27 We note that the first question is answered at
28 paragraphs 1.1 to 1.3 by the experts in their joint report
29 and we submit that the board should answer the question in
30 precisely the terms employed by the four experts at
31 paragraphs 1.1 and 1.2 of their joint report, that is,

1 there is moderate evidence for a higher mortality from all
2 causes and from cardiovascular disease in Latrobe Valley in
3 Feb-June 2014 when compared to the same period in
4 2009-2013. There was some evidence that the increase in
5 mortality in February to March 2014, the period of the mine
6 fire, was greater than the increase in mortality during
7 February to June 2014.

8 We also submit the board should make a finding in
9 terms of what appears at the top of page 2 of the joint
10 expert report, that is, if the period of risk to health is
11 assumed to extend beyond the actual time of the fire, for
12 example to May 2014, the excess of deaths is statistically
13 significant at conventional levels.

14 In relation to the second question, that is what
15 environmental exposures might have increased mortality in
16 the Valley during the fire, the starting point, we submit,
17 is to acknowledge that, as Professor Armstrong noted, it is
18 to be answered having regard to the fact that the evidence
19 for the increase itself is not strong. However, even
20 having regard to that caveat, we submit that it is open on
21 the evidence for the board to identify the most likely of
22 the explanations for the numerical increase. Once again,
23 in the words of Professor Armstrong, the most likely of the
24 various explanations that can be put forward is that the
25 increase of deaths was due to the increase in particulate
26 pollution of the air during the period of the mine fire,
27 most likely due to the mine fire but possibly added to by
28 bushfires that occurred at the same time.

29 Professor Armstrong identified in his oral evidence
30 to the Inquiry two principal reasons for this opinion.

31 Firstly, the findings of Dr Flander and her colleagues in

1 their June 2015 report that there was a relationship
2 between particulate pollution and the risk of death in
3 Latrobe Valley and, secondly, the large body of evidence to
4 indicate that short-term increases in particulate pollution
5 are associated with short-term increases in deaths, as well
6 as long-term exposure being associated with longer term
7 increase in deaths.

8 In relation to the second aspect of that evidence
9 given by Professor Armstrong, there is considerable
10 evidence before the board about the adverse health effects
11 associated with the inhalation of particulate matter, and
12 we note what that evidence is at footnote 55, and we also
13 observe that the reports relied upon by Associate Professor
14 Barnett, which have now been obtained by the secretariat,
15 also provide further scientific support for that, and I
16 will shortly tender those additional reports.

17 At paragraph 41 we note that Professor Gordon was in
18 substantial agreement with the opinion of Professor
19 Armstrong, as was Associate Professor Barnett. Dr Flander
20 told the Inquiry she had no fundamental disagreement with
21 Professor Armstrong and had no objection to the further
22 analyses done by Associate Professor Barnett and
23 Professor Gordon.

24 At paragraph 42 we note that the experts were
25 extensively cross-examined by other counsel, particularly
26 senior counsel for GDF Suez.

27 At 43 we note that there appeared to be three main
28 areas in which it was suggested the evidence was
29 inconsistent with the two ultimate conclusions the experts
30 had reached. These were, (a), the 19 per cent decrease in
31 deaths in Morwell during the fire as compared to the

1 previous five years; (b), the modelling that was undertaken
2 in the Rapid Health Risk Assessment in March 2014; (c), the
3 lack of evidence demonstrating an increase in respiratory
4 morbidity during the fire.

5 At 44 we submit that, for the reasons we've set out
6 in some detail in our submissions, close analysis of each
7 of these matters does not warrant a rejection of the
8 overall conclusions reached by the expert panel.

9 Firstly, in relation to the Morwell data, we note
10 that in the evidence of Dr Lester, the former chief health
11 officer, she gave evidence that she didn't consider the
12 proposition that the fire had led to an increase in deaths
13 to be logical in light of the 19 per cent observed decrease
14 in deaths in Morwell during February-March 2014. This was
15 because, Dr Lester said, Morwell suffered greater exposure
16 to particle matter 2.5 than other locations, such as Moe
17 and Traralgon, such that she would have expected any
18 increase to be observed there.

19 Both Professors Armstrong and Gordon were asked about
20 this and Professor Armstrong conceded that the Morwell
21 figure was inconsistent with the general thrust of the
22 evidence, but he suggested that there were a number of
23 reasons why he would discount this aspect of the evidence
24 in reaching a conclusion. We've tried to summarise what
25 those reasons are. The first of them is what he referred
26 to as the imprecise nature of the Morwell data.

27 Professor Armstrong opined that the statistical evidence
28 for the Morwell figures is, to use his words "quite weak".
29 One interpretation of the Morwell figures is that they may
30 well be the result of natural variation. Similarly,

31 Professor Gordon noted the observed rate ratios must be

1 understood in the context of the very small numbers for the
2 Morwell data.

3 The second reason is that, as Professor Gordon
4 explained, the readings of PM 2.5 pollution that vastly
5 exceeded the advisory standard of 25 micrograms per cubic
6 metre measured over one day were taken in Morwell South and
7 we note that this is supported by the evidence in
8 figure 4.27 of the Inquiry's first report, which is on the
9 screen and it is a little bit hard to follow, but if one
10 looks at the solid blue line, that is light blue, that is
11 the data from Morwell East, and there is indicative data
12 from Traralgon, which is the dotted orange line, indicative
13 because the measurements at Traralgon were of PM 10, and it
14 can be seen that, consistent with the evidence that was
15 given by Professor Gordon, there is quite a similarity
16 between the readings in Morwell East and Traralgon and, in
17 fact, it points that the Traralgon figure is higher. It is
18 a little bit hard to follow, but as one trails into the
19 period of March, the Traralgon figures are higher.

20 In another figure, figure 4.14 in the first report,
21 the location of the Morwell South and Morwell East
22 measuring stations can be seen. The Morwell South station
23 is the green dot towards the bottom left-hand corner of the
24 photo in amongst some yellow dots - that is the bowling
25 club location where the Morwell South readings were taken
26 and, of course, that is very close to the northern edge of
27 the mine - and the Morwell East location which Professor
28 Gordon referred to is the green dot in the top right-hand
29 corner, towards the top right-hand corner of the photo, at
30 the Hourigan Road location, and as Professor Gordon noted
31 in his evidence, many of Morwell's residents live in the

1 vicinity of the Morwell East location and he noted that the
2 readings there were not that different to those in
3 Traralgon on comparable days.

4 At the top of page 10 of our submissions, we note
5 Professor Gordon's evidence that part of the explanation is
6 "actually it was bad elsewhere in the Latrobe Valley as
7 well as in Morwell and perhaps a simplistic assumption is
8 well, it was terrible in Morwell, so we should see it worst
9 here is mitigated a bit about the evidence about that the
10 particulate material was elsewhere in the Latrobe Valley
11 during the period".

12 The third reason we note at 53 is related to the
13 second. As Professor Armstrong noted, as early as
14 14 February 2015, so in the first week of the fire,
15 citizens of Morwell in at-risk groups were advised by the
16 Department of Health to consider temporarily staying with a
17 friend or relative outside the smoke-affected area. This
18 advice was confirmed on 25 February 2015 and, as is
19 well-known, on 28 February 2015 was upgraded to advice to
20 temporarily relocate. We say it is significant that this
21 latter advice was targeted specifically at people living or
22 working in the southern part of Morwell, that is south of
23 Commercial Road.

24 The potential impact of evacuations on the data is
25 reflected in the joint report at paragraph 2.4. During
26 their discussions on 31 August 2015, the evidence revealed
27 that the experts added a section to 2.4 which read as
28 follows, "However, this conclusion" - that is about
29 Morwell's data - "does not take account of evacuation of
30 some residents from Morwell during the period of the mine
31 fire, which might explain the lack of observed increase in

1 mortality".

2 We note at 55 that the first report found that
3 65 per cent of all Morwell households received financial
4 assistance for the purpose of respite or relocation. It is
5 therefore likely that a significant part of the population
6 of Morwell generally, but southern Morwell in particular,
7 acted on the advice and left Morwell.

8 As Associate Professor Barnett explained, based on
9 his analysis of the data, if around 20 per cent of the
10 population of Morwell left during the fire, this would
11 cancel out the statistical decrease. If 30 per cent left,
12 according to Associate Professor Barnett, the relative risk
13 starts to become very similar to those relative risks in
14 other postcodes.

15 Finally, we note that it is likely that some
16 residents of other Latrobe Valley locations, such as Moe
17 and Traralgon, travelled to Morwell to work in Morwell
18 during the period of the fire, for example council officers
19 and in the mine itself. If any of those people died, they
20 would be recorded as Moe or Traralgon deaths, based on
21 their postcode of residence.

22 The second matter which has been raised in
23 examination of witnesses as militating against the
24 conclusion that the mine fire contributed to an increase in
25 deaths is the Rapid Health Risk Assessment, which was
26 undertaken by Monash University during the fire and
27 concluded that no additional deaths in Morwell would be
28 expected, even if the exposure continued for six weeks. It
29 has been referred to in the evidence, in Dr Lester's
30 statement and also by her senior counsel, as a predictive
31 report as to the likely effect of the fire.

1 At paragraph 59 we seek to summarise the various
2 limitations of that modelling which have been exposed by
3 the examination of witnesses and we note at paragraph 60
4 that Professor Abramson, one of the co-authors of the
5 assessment, gave evidence to the board that the conclusion
6 reached in the assessment should not be taken to be a
7 conclusion the board can rely on to posit that there were
8 in fact no deaths attributable to the mine fire. As
9 Professor Abramson said, the assessment was the best
10 estimate that could be made at the time based on the data
11 that was available to us and the model that we used.

12 We conclude at paragraph 61 that in these
13 circumstances, it is submitted that the assessment does not
14 provide any real basis for disregarding the experts'
15 ultimate conclusions about the data itself.

16 The third suggested inconsistency is that there were
17 no data indicating an increase in respiratory morbidity
18 during the fire. This may be said to tend against a
19 finding that it was the fire which contributed to any
20 observed increase in deaths because one would expect to see
21 an increase in respiratory morbidity in such circumstances.

22 Professor Armstrong was specifically asked about this
23 matter and whilst deferring to Professor Abramson's greater
24 expertise, he explained that based on his recent
25 examination of the relevant scientific literature, he would
26 not necessarily expect to see an increase in respiratory
27 deaths but would expect to see an increase in
28 cardiovascular deaths if the fire had contributed to an
29 increase in deaths and the data, of course, does reveal an
30 increase in cardiovascular deaths and that is specifically
31 noted in the joint expert report.

1 The evidence was not contradicted by
2 Professor Abramson, nor was it ever put to him directly
3 that one could infer from the morbidity data from the
4 Latrobe Valley that there was no increase in deaths
5 associated with the mine fire.

6 We then go on and refer to the updated literature
7 review of the Rapid Health Risk Assessment which was
8 completed this year and we note that the review did not
9 disclose a study of a directly comparable event to the mine
10 fire and what emerges from a great deal of the evidence is
11 the unique nature of the mine fire and the care with which
12 one should look at other pollution events as guiding one's
13 understanding of the effect of this particular fire.

14 At paragraph 66 we set out what we submit is the
15 evidence about Professor Abramson's summary of the
16 literature.

17 Finally at paragraph 68 we note after the
18 cross-examination of the experts they were asked if the
19 answers they gave in cross-examination should be taken by
20 the board as detracting from the evidence they gave in
21 their evidence-in-chief which we have summarised in our
22 submissions and each of the expert witnesses clearly
23 answered that those answers should not be taken as
24 detracting from their evidence-in-chief

25 In those circumstances we set out at paragraph 69 the
26 proposed findings that we say the board should make based
27 on the evidence before it. We say that the board should
28 not hesitate to act on the evidence of the experts and
29 should find applying the Briginshaw formula referred to
30 earlier, the six findings we have set out at paragraph
31 A-23; firstly, there is moderate evidence for a higher

1 mortality from all causes and from cardiovascular disease
2 in the Latrobe Valley in February to June 2014 when
3 compared to the same period during 2009 to 2013.

4 Secondly, there is some evidence that the increase in
5 mortality in February to March 2014 (the period of the mine
6 fire) was greater than the increase in mortality during
7 February to June 2014. Thirdly, if the period of risk to
8 health is assumed to extend beyond the actual time of the
9 mine fire, for example, to May 2014, the excess of deaths
10 is statistically significant at conventional levels.
11 Fourthly, the most likely explanation for the increase in
12 deaths is it was due to the increase in particulate
13 pollution in the air during the mine fire. Fifthly, the
14 increase in particular pollution of the air during the mine
15 fire was most likely due to the mine fire but possibly
16 added to by bushfires that occurred at the same time and
17 therefore the board should find that the mine fire
18 contributed to an increase in deaths in the Latrobe Valley
19 in 2014

20 At paragraph 70 we note if the board makes these
21 proposed findings it may also be appropriate for the board
22 to consider making recommendations for the management of
23 future events where exposure to pollutants such as PM 2.5
24 are likely to occur.

25 In our submissions we then go on and deal with the
26 relevance of terms of reference 7 and 12 to the board's
27 current task. We note in 71 that the board in addition to
28 enquiring into and reporting on term of reference 6 is
29 required to enquire into a report on any other matter that
30 is reasonably incidental to term of reference 6. In our
31 submission there are a number of matters which have arisen

1 as reasonably incidental to the board's inquiry into term
2 of reference 6 which warrant findings including in some
3 instances adverse findings and recommendations. We note at
4 72 that term of reference 7 is also relevant to the board's
5 present task.

6 Term of reference 7 requires the board to inquire
7 into and report on: "Short, medium and long-term measures
8 to improve the health of the Latrobe Valley communities
9 having regard to any health impacts identified by the board
10 as being associated with the Hazelwood coal mine fire.

11 Some of the recommendations we submit the board
12 should make may properly be seen as measures designed to
13 improve the health of the Latrobe Valley communities. This
14 is because implementation of them is likely to increase the
15 communication between Government and the local communities
16 thereby increasing trust in future health messages and
17 measures provided by the State. In addition the proposed
18 recommendations would we submit improve the way in which
19 the Department of Health and Human Services manages the
20 investigation of important public health issues in the
21 future thereby increasing the likelihood of positive health
22 outcomes

23 In the remaining part of our submission we deal with
24 the following topics. Firstly, the roles played by Voices
25 of the Valley and Associate Professor Barnett which we say
26 warrant commendation by the board. Secondly, we deal with
27 the response of the Department of Health and Human Services
28 to the issue of an investigation of suggestions of
29 increased mortality in the valley and we ultimately submit
30 that that investigation warrants adverse findings being
31 made and also recommendations being made

1 Thirdly, we briefly identify two matters which arise
2 for further investigation. If I can deal with the first of
3 those matters, that is the roles played by Voices of the
4 Valley and Associate Professor Barnett. We note at
5 paragraph 73 that during the mine fire itself community
6 members became concerned about the potential adverse health
7 impacts of the fire. We note meetings were held, data was
8 collected which ultimately led to the formation of a local
9 community group, Voices of the Valley which emerged from
10 that process.

11 The board heard from Mr Ron Ipsen, a Latrobe Valley
12 resident, born and bred, I think he told us, and a member
13 of the Voices of the Valley. Mr Ipsen described how around
14 May 2014 he and other members of the organisation started
15 to hear anecdotal evidence from people concerned that the
16 mine fire had led to an increase in deaths. As a result of
17 their belief that the Department of Health, as it then was,
18 would not itself investigate these concerns, Voices of the
19 Valley wrote on 27 May 2014 to the Registry of Births,
20 Deaths and Marriages to request relevant data, the purpose
21 Mr Ipsen told us was to try to establish whether or not the
22 anecdotal information was accurate, that is whether or not
23 there was an increase in deaths during and after the mine
24 fire as compared to the previous five years.

25 Unfortunately the data was not provided until 4
26 September 2014 which was after the first inquiry had
27 already completed its first report and as a result of that
28 delay and in demonstration of its commitment and initiative
29 in exploring this important matter Voices of the Valley in
30 May 2014 undertook the significant task of obtaining,
31 collating and counting death notices from the local paper

1 during the relevant period to see if it showed an increase
2 in various deaths. The results of that analysis were
3 provided in August 2014 but unfortunately it was too late
4 and the information was on-forwarded to the Department of
5 Health and the Coroner for their consideration

6 Upon receipt of the data, Voices of the Valley
7 approached the ABC which ran a story on 12 September 2014
8 with the assistance of Associate Professor Barnett.
9 According to Mr Ipsen Voices of the Valley had themselves
10 attempted to contact universities in Victoria but were
11 unable to obtain that data.

12 We note at 78 Associate Professor Barnett provided
13 his assistance on a pro bono basis to the ABC and later to
14 Voices of the Valley who provided him with additional data
15 they had obtained from the Registry of Births, Deaths and
16 Marriages in late 2014/early 2015. He undertook
17 statistical analysis of the data and published on the web
18 two papers detailing the results. He told the Inquiry this
19 was because he believed this was something of national
20 interest and worthy of investigation and: "If people ask
21 me for help from the public I'm paid by public money, I'm
22 very happy to help them with my expertise in any way I
23 can." On each occasions Voices of the Valley obtained data
24 from the Registry of Births, Deaths and Marriages and had
25 to pay a fee. Voices of the Valley have confirmed a total
26 of \$485 was paid and the evidence is this came from
27 memberships and donations and almost entirely exhausted the
28 money the organisation had. We note when the Department of
29 Health and Human Services obtained data from the Registry
30 of Births, Deaths and Marriages it paid no such fee

31 I note, and I hope I'm not stealing the thunder of

1 senior counsel for the State, but I understand the position
2 to be that the State intends to reimburse Voices of the
3 Valley the money they paid for the data and that is
4 something that we would submit the board ought to commend.

5 At paragraph 80 we note in summary that in the
6 circumstances of the evidence the board has heard it is of
7 real significance that Associate Professor Barnett provided
8 Voices of the Valley with pro bono assistance in analysing
9 the data. It is submitted that the board should commend
10 Associate Professor Barnett in his endeavour and assistance
11 to a community organisation in need of such assistance.
12 Further, we submit that the concern, enterprise and
13 persistence of Voices of the Valley in investigating and
14 responding to local community concerns is also worthy of
15 the board's commendation. Without their efforts it is
16 unlikely this important issue would be part of the board's
17 current terms of reference

18 The other significant incidental matter that arises
19 is dealt with at the top of page 16 of our submissions and
20 that is the response of the Department of Health and Human
21 Services to the issue which as we have noted warrants
22 adverse findings and recommendations.

23 We start at paragraph 82 with some observations about
24 relevant legislation, that is the Public Health and
25 Wellbeing Act 2008 under which public health matters are
26 generally the subject of regulation in Victoria. We note
27 under that Act that the secretary to the department has
28 various functions including appointing a chief health
29 officer and we note that importantly the chief health
30 officer remains subject to the direction and control of the
31 secretary.

1 We note at paragraph 83 that the Act sets out a
2 number of principles which guide the manner in which both
3 the secretary and health officer should administer their
4 functions under the Act. They include the principles of:
5 Collaboration, including with communities and individuals
6 and importantly, the principal of accountability, and I
7 quote from the Act: "Persons who are engaged in the
8 administration of this Act should as far as is practicable
9 ensure decisions are transparent, systematic and
10 appropriate and members of the public should therefore be
11 given access to reliable information in appropriate forms
12 to facilitate a good understanding of health issues." We
13 note that the department was pursuant to its statutory
14 functions the appropriate Government department to respond
15 to community concerns about whether or not the mine fire
16 contributed to an increase in deaths.

17 Dr Lester and her colleagues such as Dr Neil and
18 Dr Csutoros (who took over relevant functions from her
19 after she retired in February of this year) were employees
20 of the department and therefore of the State, and we submit
21 it's the State which is ultimately responsible for
22 Dr Lester's conduct and decision-making and for that of her
23 colleagues and the submissions we make are to be seen
24 within that framework.

25 The first issue we dealt with at paragraph 85 is what
26 we submit the evidence demonstrates that there was a
27 failure to communicate and engage by the department. The
28 department was made aware of the community concerns
29 regarding increases in death by 17 August 2014 at the
30 latest when the Registry of Births, Deaths and Marriages
31 wrote to it to inform it of the requests that Voices of the

1 Valley had made for data. We note that Dr Lester responded
2 to the Registry of Births, Deaths and Marriages by noting:
3 "Your decision on his request", that is a request for data
4 on behalf of Voices of the Valley, "is obviously yours; if
5 you refer him to us my response would be that there has
6 been an independent Inquiry into the fire and we have
7 nothing further to add. Obviously his 'research' is up to
8 him." Ms Cristine who gave evidence on behalf of the
9 department was unable to say why the department declined to
10 engage with Voices of the Valley after it was contacted by
11 the Registry of Births, Deaths and Marriages.

12 At 87 we submit there does not appear to be evidence
13 before the Inquiry of any direct engagement by the
14 department with Voices of the Valley regarding their
15 concerns. Indeed Mr Ipsen gave evidence there was none.
16 We note that senior counsel for the State handed up a
17 bundle of documents which were said to outline the
18 interaction between Government and Voices of the Valley,
19 exhibit 7. The documents did show there had been
20 contact from the Premier's office to Voices of the Valley.
21 However, that contact did not originate from the department
22 and there was reference to Voices of the Valley to access
23 the department's website and/or the long-term health study.
24 We submit there is nothing in that evidence which amounted
25 to consultation and engagement with Voices of the Valley.

26 Senior counsel for the State referred not to meetings
27 and phone calls but to meetings and consultations about the
28 long-term health study, re-opening of the Inquiry and
29 future recruitment of a community engagement officer for
30 the Department of Health and Human Services. We submit
31 these measures are not demonstrative of any meaningful

1 engagement between the department and community about
2 whether the mine fire contributed to an increase in deaths

3 We submit from 17 August 2014 up until now there
4 appears to have been no real application by the department
5 of the function and guiding principles required by the
6 Public Health and Wellbeing Act as they relate to community
7 collaboration and engagement on this issue. We submit the
8 deficiency is both surprising and unfortunate starting as
9 it did only weeks before the first Inquiry released a
10 report identifying significant deficiencies in the
11 department's communication and engagement with the Latrobe
12 Valley communities during the fire. We note that the State
13 at that time undertook to improve local engagement on
14 health issues and that was a commitment that was affirmed
15 by the board in the first Inquiry report.

16 The response to the concerns raised by Voices of the
17 Valley, rather than being consultative and demonstrating
18 engagement with the Latrobe Valley community, was we submit
19 handled in an inappropriate manner which has ultimately
20 exacerbated mistrust felt by the community towards the
21 department. We note the process was at least initially
22 driven by the then chief health officer, Dr Lester, but was
23 continued after Dr Lester retired in February 2015,

24 Our submissions then refer to evidence that was given
25 by Ms Cristine, and there is a quoted passage that,
26 "community consultation engagement can be improved and
27 should be improved." We should correct the document there
28 and note that is in fact a quote from Mr Ipsen's
29 submissions to the board on this issue and not from the
30 evidence of Ms Cristine. Also we do note Ms Cristine's
31 evidence was very similar but not identical to the words

1 there used

2 The second aspect of the department's response that
3 we refer to in paragraph 90 is under the heading,
4 "Dr Lester should not have been permitted to investigate
5 the issue." We submit on becoming aware that the Voices of
6 the Valley were concerned the mine fire had contributed to
7 an increase in deaths, Dr Lester personally assumed
8 control of the department's investigation and response to
9 the issue. She maintained that control up until her
10 retirement in February 2015.

11 Her evidence before the Inquiry is that her role
12 included analysing the data and drafting fact sheets,
13 briefing the secretary and reviewing at least one media
14 release, personal sources and briefing a consultant to
15 provide opinions on the data and on Associate Professor
16 Barnett's work and providing comments on drafts of that
17 work. Dr Lester assumed this role despite the controversy
18 surrounding her conduct during the fire itself. We note in
19 the first Inquiry report Dr Lester was the subject of
20 criticism and adverse findings particularly regarding the
21 timing of the evacuation warning.

22 In those circumstances we submit that Dr Lester
23 showed poor judgment in deciding to take charge of the
24 investigation of this issue of whether or not the fire
25 contributed to an increase in deaths. It ought to have
26 been clear that the community would have difficulty
27 accepting the results of an investigation she was managing.
28 It is further submitted that Dr Lester's investigation gave
29 rise to a conflict of interest. Had the result of the
30 investigation been an acceptance there was in fact an
31 increase in deaths, that finding would have reflected

1 poorly on Dr Lester personally in light of her role during
2 the fire. This ought to have been plain both to Dr Lester
3 and to those more senior within the department. She should
4 not have been permitted to assume carriage of the matter in
5 such circumstances.

6 We note there were other options open. Indeed after
7 Dr Lester retired in 2015, her replacement, Dr Ackland, did
8 not take over management of the investigation. In other
9 words the chief health officer wasn't considered
10 appropriate to continue the investigation. It rested back
11 in the health protection branch with Dr Andrew Neil and
12 with a senior medical advisor in the office of the chief
13 health officer, that is Dr Csutoros, in her evidence before
14 the board Dr Lester was unable to identify why she
15 personally headed the investigation other than to say she
16 didn't see any conflict in taking personal charge and she
17 felt she needed to because it was an issue of such
18 significance and importance to the people of Latrobe
19 Valley. We submit that is the very reason the department's
20 response to the issue should have been overseen by someone
21 who had no vested interest in the outcome

22 At the top of page 19 of our submission we make
23 reference to the fact sheets which were produced by the
24 department which we submit were unbalanced and misleading.
25 Soon after assuming personal control of the department's
26 response to the Voices of the Valley concerns Dr Lester
27 formed the opinion that the fire had not contributed to an
28 increase in deaths.

29 We note this position was adopted prior to any
30 independent expert analysis of the data and it became the
31 public position of the department by 12 September 2014 when

1 the ABC program was aired. It will be recalled the
2 department provided a briefing to the program which is part
3 of the evidence of Linda Cristine. We also note that it
4 was apparently the position of the then Government and we
5 make reference to the quote from Deputy Premier Ryan also
6 aired in that program

7 Shortly after the issue arose within the department
8 three fact sheets were placed on the department's website,
9 two in September and one in October of 2014. Each of those
10 fact sheets emphasised the 19 per cent decrease in deaths
11 in Morwell in the relevant period compared to the same
12 period in previous years. In relation to the significant
13 increases in deaths in Traralgon and Moe in the same
14 periods, the fact sheets did not compare them to the
15 average in previous years but merely drew the reader's
16 attention to selected years with death rates that were
17 similar to 2014.

18 As Professor Gordon, who had been asked to review the
19 fact sheets observed, the document lacks an appropriate
20 level of objectivity as they focus on particular elements
21 of the data and appear to be arguing persuasively toward a
22 particular conclusion, namely that the mine fire did not
23 cause any excess deaths. Professor Gordon fairly accused
24 the department in his report of selective reporting.

25 We submit that the fact sheets did not live up either
26 to their own claim of providing accurate and clear
27 information that would be well understood or the
28 requirements of s.8(2) paragraph (b) of the Public Health
29 and Wellbeing Act which states: "Members of the public
30 should be given access to reliable information in
31 appropriate forms to facilitate a good understanding of

1 public health issues."

2 At the top of page 20 of our submissions we note that
3 Dr Lester in her evidence did make a number of concessions
4 concerning the limitations of the Morwell figures and we
5 note in evidence there also that in the very first report
6 she received from the University of Melbourne there was
7 some highlighting of the uncertainties surrounding the
8 Morwell and other figures.

9 At paragraph 102 we conclude in these circumstances
10 the continued emphasis on the Morwell figure in the fact
11 sheet without reference to the limitations was misleading.
12 This was particularly so when combined with the failure of
13 the fact sheets to give equal prominence or statistical
14 evidence to other data which tends to confirm an increase
15 in deaths. Put simply the statement contained in the fact
16 sheet dated 17 September 2014 that, "it is important that
17 any information provided is accurate and well understood",
18 was not adhered to in that or the later document and the
19 guiding principle of accountability in the relevant Act was
20 not followed

21 The next topic that we address in our submissions is
22 the department's engagement in the management of Dr Flander
23 and her colleagues we submit lacked rigour and
24 independence. We noted earlier in these submissions that
25 the Melbourne School of Population and Global Health from
26 the University of Melbourne was engaged by the department
27 in September 2014 to provide independent expert advice on
28 the contentious issue of mortality rates in the Latrobe
29 Valley. We noted the university provided three reports to
30 the department and as the final fact sheet in October 2014
31 clearly demonstrates the department wanted to demonstrate

1 to the public that it had obtained such independent advice
2 and that the advice supported its position that there was
3 no link between any increase in deaths and the mine fire.

4 However, we submit the evidence before the Inquiry
5 raised questions about the true degree of independence of
6 the university in carrying out this work. We note that
7 each of the three reports provided to the department went
8 through several drafts and we set out the evidence about
9 those drafts. We note at paragraph 105 of our submissions
10 that the extensive comments on the drafts provided by
11 departmental officers to Dr Flander address matters of
12 substance and led to substantial changes to the drafts. We
13 set out two examples of this in our submissions.

14 The first relates to the first report that was
15 provided by Dr Flander and colleagues to the department.
16 We note in mid September 2014 Dr Lester herself asked
17 Professor Terry Nolan of the university if he could provide
18 a quick review of the data and of Associate Professor
19 Barnett's work. Professor Nolan gave the task to
20 colleagues Dr Flander and Professor English and the
21 evidence is Dr Flander assumed primary carriage of the
22 task. Despite realising the significance of this issue to
23 the local community Dr Lester conceded in evidence she
24 didn't make any enquiry of Dr Flander's background or her
25 capacity to fulfill her duties of the project and that is a
26 matter of some significance because it is submitted
27 Dr Flander was in fact lacking in experience. She told the
28 Inquiry she had never previously done this type of
29 consultancy, further and equally significantly she is not a
30 statistician and the work she was being asked to do was
31 essentially a statistical study. In these circumstances we

1 submit Dr Flander was an inappropriate choice to review the
2 work of Associate Professor Barnett as she herself conceded
3 in her evidence to the Inquiry.

4 Furthermore having undertaken her own analysis of the
5 data and provided an opinion on it in September 2014
6 Dr Flander became an inappropriate choice of expert to
7 review Associate Professor Barnett's work for a different
8 reason. Had the department desired a review of Associate
9 Professor Barnett's work it ought to have sent it, and for
10 that matter Dr Flander's work, to a third party who it who
11 had not already formed an opinion about what the data
12 showed.

13 In addition although in her evidence to the board
14 Dr Lester accepted it was important that the University of
15 Melbourne be engaged as completely independent of the
16 department, we submit this was not borne out by the
17 approach undertaken by Dr Lester and those who took over
18 management after her retirement.

19 Dr Lester's position that the data did not show an
20 increase in deaths was in fact communicated to the
21 independent expert, Dr Flander, at various stages including
22 in the brief itself and in email responses to the draft
23 reports she received. The board may recall that evidence
24 of an email sent by Dr Lester to Dr Flander which we set
25 out at footnote 144, after receiving a draft report on 23
26 September Dr Lester wrote to Dr Flander and I quote: "One
27 of the things which gives us comfort is that this is
28 nothing more than random variation that the increase was
29 greatest in the Moe postcode which is 13 kilometres away
30 from the fire." As noted, after Dr Lester retired, the
31 conduct of the department of the investigation was taken

1 over by Dr Neil and Dr Csutoros.

2 The second example we refer to at paragraph 112 of
3 the inappropriate nature of the department's comments and
4 engagement of the University of Melbourne concerns
5 Dr Flander's critical appraisal of the work of Associate
6 Professor Barnett. The board will recall the evidence of a
7 draft report dated 13 March 2015 which had been provided to
8 the department and then two pages of comments about the
9 draft under an email from Dr Danny Csutoros. We make
10 specific reference to comments in number 2 and 6 in
11 paragraph 112 of our submissions. Comment 2 included the
12 following: "Alternatively, is it possible that the
13 conclusion could be drawn instead that the data presented
14 do not suggest strong evidence for the author's hypothesis
15 that the fire had an effect on mortality?". We submit the
16 comment the so-called independent expert was being asked
17 was in terms to change her conclusion.

18 We also note that comment 6 made reference to "our
19 interpretation of the data", that it is the department's
20 interpretation, and pointed out the Associate Professor
21 Barnett's conclusion about the fire having caused an
22 increase in deaths needs to be challenged more directly.
23 We note a further draft dated 9 April 2015 was provided to
24 the department, and in Dr Flander's email of 27 March 2015
25 she incorporated all of the comments that had been sent to
26 her and we note at paragraph 113 she changed the wording
27 which reflected word for word the comments that had been
28 provided.

29 We note that Dr Flander in her evidence agreed that
30 the department had on more than one occasion communicated
31 its view to her about how the mortality data should be

1 interpreted. However, she denied that she had adopted the
2 suggestions without sufficient reflection. Dr Flander told
3 the Inquiry that what she meant in the email that she would
4 incorporate all suggestions was that she would take on
5 board the suggestions and consider them. Dr Flander
6 maintained in her evidence that her work was independent of
7 the department and was not a collaborative piece of work.
8 We note at 115 that Linda Cristine, a departmental officer,
9 gave evidence to the Inquiry she was asked about the
10 appropriateness of Dr Csutoros' suggestions to Dr Flander,
11 she stated that, "there is no rule book for us as public
12 servants in providing feedback to consultants."

13 At 117 we submit that what flows from the evidence
14 the board has heard about the draft reports and comments
15 and changes to draft reports is because of the nature and
16 number of the emails between Dr Flander and Dr Lester (and
17 also her colleagues after her retirement), that the board
18 has seen, demonstrate that at best the final reports from
19 the University of Melbourne were more akin to collaborative
20 rather than independent documents.

21 We have addressed the evidence concerning the manner
22 in which the department responded to the concerns of the
23 community generally and Voices of the Valley in particular
24 at some length. This is because we submit the evidence
25 raised some serious questions about the conduct of the
26 department and its officers and whether that conduct was
27 consistent with the statutory principles that guide their
28 work and was otherwise appropriate in all of the
29 circumstances.

30 The evidence in these public hearings needs to be
31 understood in the context of the findings of the first

1 Inquiry's report that the conduct of departmental officials
2 during the fire itself had left some Latrobe Valley
3 residents more distrustful of Government agencies and
4 service than they previously were.

5 In the next part of our submissions we set out the
6 findings about the conduct of the department that we submit
7 should be made by the board and the recommendations we
8 submit should flow from those findings. These we submit
9 are required to improve the relationship between the
10 department and Latrobe Valley communities and thus
11 contribute to a collaborative approach to the future health
12 needs of the Latrobe Valley and it's in that spirit the
13 recommendations are proposed.

14 Firstly, in relation to the proposed findings we set
15 those out at paragraph 120 of our submissions. We submit
16 the board ought to make the following findings: The
17 Department of Health and Human Services did not communicate
18 or engage with Voices of the Valley regarding concerns the
19 mine fire had contributed to an increase in deaths.

20 Secondly, it was a conflict of interest for Dr Lester
21 personally to investigate claims by Voices of the Valley
22 and then manage subsequent expert investigations into its
23 concerns. Thirdly, the process by which the Melbourne
24 School of Population and Global Health at the University of
25 Melbourne was selected to undertake the data analysis was
26 unclear and lacking in rigour.

27 Fourthly, the three reports prepared by the Melbourne
28 School of Population and Global Health at the University of
29 Melbourne were not independent from the department.

30 Fifthly, the fact sheets published by the department in
31 September and October 2014 were incomplete, misleading and

1 unchallenged and failed to acknowledge any uncertainties
2 concerning the mortality data, and finally, it was
3 inappropriate to choose the same consultant to undertake
4 the mortality analysis and then subsequently peer review an
5 analysis by another expert.

6 In the circumstances of this Inquiry we submit that
7 the board ought to make the following five recommendations
8 arising from those findings, these are set out at paragraph
9 121 of our submissions.

10 Firstly, that the State should review as a matter of
11 urgency how its 2014 commitment to improving community
12 engagement in health would be implemented, regularly
13 monitored and evaluated. Secondly, the State should ensure
14 the Hazelwood Mine Fire Inquiry monitor, Neil Comrie, gives
15 this special attention with quarterly progress reports
16 provided to the Premier. Thirdly, the State should
17 establish a more rigorous process for the investigation and
18 consideration of matters of public health concern including
19 the selection and management of independent experts.
20 Fourthly, consultants engaged by the State should make a
21 declaration in their reports about any comments and
22 suggestions made by departmental officials and what their
23 responses to those comments have been, and finally, the
24 State should establish an internal rapid review process for
25 reviewing and updating public statements concerning the
26 health status of the population to ensure balanced,
27 unbiased and understandable information is provided which
28 allows the community to come to an informed view.

29 Finally, members of the board, there are two matters
30 that require in our submission further investigation that
31 have arisen in the evidence. We note that the board is

1 required to report in relation to these terms of reference
2 by 2 December 201. The two matters we set out at the top
3 of page 30 of our submission concern the completeness of
4 the Registry of Births, Deaths and Marriages data relied on
5 by the experts, and secondly, the appropriateness of the
6 present scope of the long-term health study excluding
7 emergency responders.

8 I can deal with the first matter quite briefly, that
9 is the evidence that is before the board from the Registry
10 of Births, Deaths and Marriages is that the data which has
11 been provided to the Inquiry and examined by the experts
12 only included deaths which were registered in the Registry
13 system as "complete" on the date the data set was
14 extracted. We note that a registration is not complete if
15 there is some outstanding piece of information required
16 such as when the Coroner has yet to determine cause of
17 death. Further, the evidence is that completion can take
18 some time. What that means for the Inquiry is as we set
19 out at 124, it is possible the data set used by the experts
20 who gave evidence to the board did not reflect all deaths
21 from the relevant postcodes. There could be some
22 additional deaths to add to the 2014 figures and although
23 less likely, to add to the previous years as well.

24 We note the evidence is that the Registry has been
25 requested to provide information to the board regarding any
26 additional deaths by 14 October 2015 at the latest so it
27 can be considered in time to be included if relevant in the
28 final report. We record that it's the intention of counsel
29 assisting that upon receipt of the data an assessment will
30 be made about whether or not the information should be
31 provided to the experts and in the event that any change of

1 views occurs all parties involved in this matter will be
2 notified and given the opportunity to make any submissions
3 about that that they consider should be made.

4 The second matter for further investigation is the
5 scope of the long-term health study. Professor Abramson
6 gave evidence regarding the current scope of the study and
7 referred to a component of it known as an adult survey and
8 that it will only consider residents of Morwell and health
9 impacts observed from late 2015 onwards. The adult survey
10 will be used to consider the impact of the mine fire on
11 respiratory and cardiovascular function and be linked to
12 the national death data index in the future. It is this
13 part of the long-term health study at some stage beyond the
14 conclusion of the current Inquiry that further answers to
15 the question about whether the mine fire contributed to an
16 increase in deaths may emerge.

17 The evidence that this Inquiry and also the first
18 Inquiry heard is that the range of people who where exposed
19 to the mine fire extended beyond those who resided in
20 Morwell at the time, in particular people who worked in
21 Morwell during the fire including emergency responders to
22 the fire were potentially heavily exposed.

23 Professor Abramson gave evidence it would be possible
24 to include these persons in the study and that he and his
25 colleagues are "seriously interested" in such an inclusion
26 as the information obtained would be "extremely valuable".
27 At least some emergency responders have also indicated an
28 interest in participating in the long-term held study.

29 We note Ms Cristine gave evidence in the Inquiry that
30 firefighters and other responders have their own programs
31 and studies which are monitoring the health impacts of the

1 fire. However, there are no details of this presently
2 before the board. Ms Cristine said the department
3 considered there to be significant methodological issues in
4 including non-resident emergency responders in the study
5 but she was unable to tell the Inquiry whether there had
6 been discussions with Monash University about whether any
7 such difficulties would be overcome.

8 We note at 130 that investigations will be made by
9 the board regarding the scope of any such studies and
10 whether their existence lessens any need for emergency
11 responders and others to be included in the long-term
12 health study.

13 At 131 we summarise other questions regarding the
14 study which we say have emerged from the evidence. For
15 example, whether it would be possible to expand the study
16 to considers death data during the fire, whether other
17 parts of Latrobe Valley ought to be included in the adult
18 survey particularly in light, for example, of the
19 comparable PM 2.5 levels in Traralgon compared to Morwell
20 east. Thirdly, the adequacy of the current duration of the
21 study and contractual arrangements for options and
22 extensions, the level of independence the study has from
23 the department and the level of community engagement and
24 ownership of the study.

25 We note that further investigations will be
26 undertaken on these issues by the board and we also note
27 that the public forums set to run at the end of September
28 are likely to explore at least some of these issues. It
29 may be that additional findings and recommendations are
30 proposed at the conclusion of those investigations. One
31 potential recommendation, and we emphasise, potential, may

1 be that the State should undertake with the support of
2 independent experts a review of the terms of reference of
3 the long-term study addressing the scope issues. Parties
4 will be notified if that course is contemplated by the
5 board.

6 They are the submissions that we make about the
7 evidence that the board has heard. Unless the board has
8 any questions from me I should at this point tender various
9 documents which were left over from the evidence we heard
10 last week and perhaps now is an opportune time to do that
11 so all the parties are aware of the totality of the
12 evidence. Perhaps if I deal with each of them in turn.

13 Firstly there are three reports that were referred to
14 Associate Professor Barnett in his evidence and you will
15 recall that Mr Ipsen I think it was made some observations
16 about their absence, and the three reports have been
17 obtained and I will perhaps tender them as a bundle. I
18 will read out their titles, American Heart Association
19 scientific statement, 2010, and the correct title of that
20 is, "Particulate matter air pollution and cardiovascular
21 disease", and the extract to the document says it draws on
22 the work of a wide range of experts, and in the fourth line
23 of the abstract I read: "The main objective of this
24 updated American Heart Association scientific statement is
25 to provide a comprehensive review of the new evidence
26 linking particulate matter exposure with cardiovascular
27 disease ... (reads) ... health care providers", that's the
28 first of Associate Professor Barnett's reports that he
29 referred to.

30 The second is entitled, "The World Health
31 Organisation fact sheet on outdoor air pollution", and the

1 third document is a product of the United States
2 Environmental Protection Agency, and I'm instructed it runs
3 to 1071 pages so we haven't printed it out but we do have a
4 copy of it available. So I tender those.

5 #EXHIBIT 37 - Bundle of reports.

6 The second of the left-over matters concerns the
7 email chain that passed between the Registry for Births,
8 Deaths and Marriages and the Department of Health in August
9 2014, that was referred to in the evidence of Dawn Sims
10 from the Registry, this was served yesterday and I'm
11 instructed that one page of it was accidentally not served
12 and we are in a position to do that today but I tender the
13 complete email chain.

14 #EXHIBIT 38 - Email chain between RBDM and Dawn Sims.

15 Thirdly, it will be recalled Mr Ipsen gave some
16 evidence - - -

17 MR BLANDEN: Sir, can I rise to raise an objection to the last
18 tender, the documents just referred to in fact were not put
19 to any of the witnesses in the case, they have not been
20 asked for comments from any of the persons who gave
21 evidence and as we stand here now we still don't have all
22 the documents that are purported to be relied upon and in
23 those circumstances we say it's inappropriate to tender
24 that material.

25 CHAIRMAN: What do you say, Mr Rozen?

26 MR ROZEN: There is evidence before the board in the evidence
27 that Dawn Sims gave about the email communication between
28 the Registry of Births, Deaths and Marriages and the
29 Department of Health. It is specifically in paragraph 10
30 of her statement which I will read to you: "On 17 August
31 2014 the Registrar contacted the Department of Health and

1 Human Services to confirm whether it was appropriate ...
2 (reads) ... declined this approach", all we're doing is
3 completing the picture by producing the actual emails that
4 the witness is referring to.

5 CHAIRMAN: I'm prepared to take it with the qualification you
6 have raised an objection, Mr Blanden, and that objection
7 will be noted.

8 MR BLANDEN: And my concern, so the board is particularly aware
9 of it, is that one of the email in that chain purports to
10 be an email written by my client and that was never put to
11 her in her evidence at all. She has not had the
12 opportunity of any comment on the email, why it was
13 written, the circumstances in which it was written et
14 cetera et cetera, and it's of grave concern to us that
15 that's an omission from the process and if the board's
16 prepared to accept it with that qualification - - -

17 CHAIRMAN: I think it's appropriate what you have said should be
18 taken into account in dealing with that matter.

19 MR BLANDEN: If the board pleases.

20 MR ROZEN: We accept those concerns. One way of addressing it
21 may be to provide Dr Lester with an opportunity to put in a
22 further brief statement concerning the email if she wishes
23 to.

24 CHAIRMAN: It will be taken for granted that would be a course
25 we would be happy to see followed.

26 MR BLANDEN: My other concern, sir, is the statement referred
27 to as talking about those emails in fact doesn't refer to
28 the same dates as the emails that we have. It refers to an
29 email of the 17th, the documents albeit the incomplete
30 documents we have seem to be dated 18 August, so I'm not
31 quite certain how the matter arises at all in the evidence

1 at this stage.

2 CHAIRMAN: Yes.

3 MR ROZEN: Without taking up too much time I'm instructed the
4 missing pages, the email of the first date, 17 August, that
5 commences the chain of emails, perhaps that will be clearer
6 when that additional page is provided and it is in fact on
7 the screen as we speak.

8 CHAIRMAN: I don't think it's necessary to go into the detail
9 at this stage, Mr Blanden has made clear he wants the
10 matter to be not treated as something that is unexceptional
11 and the exceptions he's specifically mentioned will be
12 taken into account.

13 MR ROZEN: If the board pleases. I think I had started to
14 refer to the evidence of Mr Ipsen about paying for the data
15 from the Registry of Births, Deaths and Marriages. We have
16 obtained from solicitors for Voices of the Valley a receipt
17 for the data dated 12 December 2014 and I tender that.

18 #EXHIBIT 39 - Receipt from RBDM for Voices of the Valley.

19 Finally, in relation to the evidence of Dr Burdon it
20 will be recalled that a report of Dr Burdon was tendered
21 and is exhibit 32 and one of the parties' representatives,
22 it may have been Mr Blanden, made the submission that the
23 exhibit should also include any correspondence to Dr Burdon
24 seeking his report and what instructions were given to him,
25 and we have been provided with two emails from the
26 solicitors for Voices of the Valley that we understand were
27 provided to Dr Burdon that set out his instructions, and I
28 would seek to tender those emails as part of Exhibit 32.

29 #EXHIBIT 32 - (Addition) Emails from Environmental Justice
30 Australia to Dr Burden dated 12/8/2015 & 21/8/2015.

31 MR ROZEN: Unless there are any other matters that I can assist

1 the board with, they are the submissions of counsel
2 assisting.

3 CHAIRMAN: Yes, thank you, Mr Rozen. Mr Attiwill.

4 MR ATTIWILL: Thank you. Mr Chairman and members of the board,
5 as you know, I appear on behalf of the State of Victoria.
6 I do so today with Renee Sion of counsel.

7 The State makes the following submissions: first,
8 the State notes the proposed findings on term of reference
9 6 set out in paragraph 69 of the submissions of counsel
10 assisting the board. The Inquiry heard evidence on whether
11 the Hazelwood fire contributed to an increase in deaths
12 from a number of persons, including from a resident, a
13 representative of Voices of the Valley, a representative of
14 - a range of experts, I should say, and also too the former
15 chief health officer. The issues were thoroughly explored
16 at the hearing. The State looks forward to the findings of
17 the board on term of reference 6. The State notes that the
18 long-term health study will provide further data and
19 information over time on this important issue for the
20 community.

21 Secondly, the State also notes the other proposed
22 findings and recommendations set out in paragraphs 120 and
23 121 of the submissions of counsel assisting. First to
24 Voices of the Valley. The proposed finding set out in
25 paragraph 120(a) of the submissions concerned Voices of the
26 Valley. The State acknowledges that it did not adequately
27 communicate and engage with Voices of the Valley with
28 respect to its concerns in 2014. As counsel assisting this
29 Inquiry said, the State is taking steps to reimburse Voices
30 of the Valley for the \$485 it expended on obtaining data
31 from RBDM and those discussions are progressing between

1 counsel for Voices of the Valley.

2 The State took action to establish this Board of
3 Inquiry to, among other things, examine whether the
4 Hazelwood fire contributed to an increase in deaths. This
5 was the very matter that was raised by Voices of the Valley
6 and other members of the community. The State refers to
7 the correspondence exchanged with Voices of the Valley in
8 2015. That is in Exhibit 7.

9 Secondly, in relation to the former chief health
10 officer, the Department of Health and then the Department
11 of Health and Human Services, we make the following
12 submissions: the proposed findings set out in paragraph
13 120(b) to 120(f) of the submissions concern the chief
14 health officer at the time, the Department of Health until
15 31 December 2014 and the Department of Health and Human
16 Services from 1 January 2015. The State takes the proposed
17 findings and the recommendations, and the matters upon
18 which they are based, very seriously. The State considers
19 that it is open to this board to find that some mistakes
20 were made and that some of its processes may be improved.
21 The State submits that the nature of the proposed findings,
22 and the matters upon which they are based, together with
23 the State's commitment to improving its engagement with the
24 Latrobe Valley community, mean that further judgment on
25 these matters should be left to the board. Those are the
26 State's submissions, if the board pleases.

27 CHAIRMAN: Thank you, Mr Attiwill. Mr Neal.

28 MR NEAL: If the board pleases, we too have produced written
29 submissions and we trust those find themselves before the
30 members. Mrs Roper is shaking her head. Apologies. We
31 thought that had already happened.

1 The course I propose to take, and we're conscious
2 that we are limited in time, is to go through the written
3 submissions at a certain level, similarly to what my
4 learned friend Mr Rozen aspired to do, trying to avoid
5 reading them to you in great slabs as much as I can. I'm
6 sure I'll fail in part in that endeavour, but I'll try as
7 much as I can not so.

8 We'd also seek, substantially at the end of our oral
9 address, to reserve a few moments for some necessarily
10 ad hoc responses to the written submissions of counsel
11 assisting. We obviously received those yesterday
12 afternoon, in the midst of trying to produce our own.
13 There are some comments we'd seek to make about those.
14 Necessarily they can't be comprehensive and, unfortunately,
15 not perhaps as coherent as we'd like them to be in other
16 circumstances.

17 Going to our written submissions, we set out for the
18 benefit of the board the terms of reference at paragraph 1
19 and then acknowledge that there are two questions which are
20 of assistance to the board - not the same as the term of
21 reference but of assistance to the board - which include
22 the two propositions was there an increase and, secondly,
23 did the fire contribute.

24 Can I break from my sequence just for a moment to say
25 this: insofar as counsel assisting's submissions suggest
26 to you, in paragraph 2, that "contribute" is an ordinary
27 English expression, that it means to play a part in the
28 achievement of a result, it is not the same thing as
29 "cause", we respectfully disagree. We would submit that it
30 has been plain through the course of this Inquiry that the
31 word "contribute" has been understood to mean "cause" and

1 that the very lengthy examination of expert witnesses in
2 this case has in part included the premise of a causal
3 correlation. We would say in its context in this term of
4 reference, the word "contribute" clearly has a causal
5 connotation.

6 Whilst I'm dealing, albeit out of my own sequence,
7 with counsel assisting's submissions, can I draw attention
8 to the question of what is the standard that the board
9 should make its decisions by reference to. That is touched
10 upon in paragraphs 4 and 5 particularly of counsel
11 assisting's submissions. We say this: ultimately it seems
12 to be plain from their submissions that they accept that
13 what is known as the Briginshaw test - apologies to the
14 non-lawyers - the Briginshaw test is the appropriate test.
15 We agree with that.

16 To the extent that paragraph 4 of counsel assisting's
17 submissions draw attention to a proposition out of Forbes
18 work of justice and tribunals and quotes the idea that this
19 test may be less demanding than the balance of
20 probabilities, we robustly disagree with that idea. We
21 have ourselves looked at the relevant text that is relied
22 upon out of Forbes and we respectfully suggest to the board
23 that the proposition in 4 involves a misreading of what the
24 author is saying. What in fact is being said by the author
25 is in circumstances where the Briginshaw test does not
26 apply, it may be that some lesser standard than probability
27 could be applicable.

28 It may assist to make - this is, I suppose, members
29 of the board who've perhaps been more comfortable with
30 statistics than we have, this is the lawyers revenge part,
31 where we can talk about things that are unique to the

1 lawyers - in Briginshaw, where the court was discussing the
2 question of what do we do in circumstances which are,
3 formally speaking, civil but have very serious content. Do
4 we satisfy ourselves with the balance of probabilities test
5 or do we go to the higher test, beyond reasonable doubt,
6 used in criminal matters. The answer in Briginshaw, as we
7 take it, is that depends on the gravity of the matter.

8 In Briginshaw, Dixon J actually said reasonable
9 satisfaction is a benchmark for the tribunal, but I quote,
10 "Reasonable satisfaction is not a state of mind that is
11 attained or established independently of the nature and
12 consequences of the fact or facts to be proved. The
13 seriousness of an allegation, the inherent unlikelihood of
14 the occurrence of a given description or the gravity of the
15 consequences flowing from a particular finding are
16 considerations which must affect the answer to the question
17 whether the issue has been proved to the reasonable
18 satisfaction of the tribunal. In such matters, reasonable
19 satisfaction should not be produced by inexact proofs,
20 indefinite testimony or indirect inferences."

21 Bearing those propositions in mind, we say that this
22 matter most clearly deals with matters of gravity, it
23 concerns the question of death, and in those circumstances,
24 the relevant test must be well beyond, we would say, a
25 simple more likely than not scenario and something that
26 corresponds to but perhaps does not go so high as the
27 criminal standard.

28 Bearing that in mind, we would submit that what is
29 said in paragraph 4 of counsel assisting's submissions is
30 unhelpful. The acknowledgment which appears in paragraph 5
31 seems to be back to the point, which is this is a grave

1 matter.

2 That said, taking that to be the benchmark and that
3 to be the meaning attributed to the word "contribute", we
4 return to our own submissions. In essence what we are
5 saying to the board today in paragraph 3 and similar
6 paragraphs is that it would be unsafe, on the basis of the
7 material that the board presently has, to proceed to a
8 determination in the affirmative as to the questions posed.
9 We say that for three reasons, which we identify in
10 paragraph 4. Essentially, we express in paragraph 4(a) our
11 reservations about the methodology and the data. We note
12 latterly in the submissions that this was not a test of
13 whether people died, this was a generic question about
14 death. We say the latter approach is always an inferior
15 one to the former.

16 We also, at this summary point, draw attention to
17 what we would say is the inadequacies of the data that were
18 used within that methodology, and we'll expand upon that in
19 a moment.

20 In (b) we draw attention to the quality of the
21 outcomes that came from applying the methodology and the
22 test - the methodology and the data, I should say, that
23 appears in (a) and we say that, unsurprisingly, it turns
24 out qualifiers such as "moderate", "some", "not strong",
25 "weak" statistical evidence, yet those are the basis on
26 which this board is called upon to make findings of a grave
27 nature.

28 Thirdly, we say that in the circumstances of the case
29 and the evidence as it has unfolded, there has been,
30 regrettably, insufficient opportunity to properly
31 interrogate some of the critical evidence, and we expand

1 upon that again.

2 May I go to, for cross-referencing purposes, to
3 paragraph 5, where we deal first of all with question 1,
4 the question of the increase. We say there that there
5 should not be a finding as to increase for either of two
6 periods, February to March or February to June. Mr Rozen
7 asked Professor Armstrong was there a straightforward
8 answer to those questions. If I could paraphrase what
9 follows. I think the answer was a resounding no, there
10 isn't a straightforward answer, there is a very qualified,
11 very complicated answer.

12 In paragraph 7 we draw attention to the two ways in
13 which Professor Armstrong chose to answer the question and
14 reminding the board that he said, "I think we have as
15 described moderate evidence for an increase in deaths
16 during that period, so anything I say about the cause of it
17 has to take into account the fact that the evidence for the
18 increase itself is not strong." And we say to the board
19 that that is a caution that always needs to be borne in
20 mind as one proceeds through an understanding of this
21 evidence.

22 We note that in addition to Professor Armstrong
23 taking that position, there was evidence that was not
24 strong. Dr Flander offered two further caveats to that.
25 In paragraph 8(a) she did, and I think this was a constant
26 of her evidence, refer to the better form of enquiry, which
27 is the longitudinal study already under way in one sense,
28 and she also draws attention to the fact that in this case
29 we are constantly bedevilled by the fact that we are
30 dealing with small numbers and in those circumstances it
31 behoves us to be wary of conclusions.

1 From paragraph 9 onwards, we expand upon the idea of
2 what limitations there were in the model that was actually
3 undertaken. We contrast what was done here, not by way of
4 criticism but by way of fact, with an analysis in which
5 particular deaths were investigated with the knowledge that
6 that would have brought. In this case we note a number of
7 things that limit the quality of the outcomes. Firstly,
8 the statistics don't identify the actual place of residence
9 at the time of death or in the period of the mine fire -
10 this appears at 9(a).

11 Now, necessarily what appears from the material is a
12 capture of deaths in a postcode. What we know, and what
13 seems to be constant in the expert evidence, is that if
14 there were deaths caused by this fire at all, it would be a
15 function of emissions from the fire. So the correlation
16 between that proposition and deaths is critical in this
17 case because it deals with the critical question of
18 exposure.

19 Now, it is a fact that the material of postcode death
20 capture is in fact only a function of a residence. What
21 the board, unfortunately, does not know at this point is
22 whether those persons known to have died were associated
23 with their place of residence at the time of death. We do
24 know that, from a cursory look at the mortality data that
25 latterly came in the Excel spreadsheets, I think
26 Exhibit 35, and unsurprisingly, that many of those who are
27 captured by this data were elderly. It would be notorious
28 and unsurprising that at the end of life, many elderly
29 people do not occupy their usual place of residence.

30 Now, we do not know, and there is no reliable basis
31 for knowing, whether any of the people who are associated

1 with a residential address within a postcode had any
2 exposure at all to this fire, whether they were in respite
3 care, whether they were in hospitals, whether they were
4 away on holidays, any number of variables enters the
5 equation, we don't know. That is not a criticism per se,
6 someone has done the best they could, but it is to
7 acknowledge the gross limitations of what was done.

8 At subparagraph (c) of 9, we also note the concern
9 that in this case there's been a capture variously of four
10 and six postcodes. What we do know from the evidence of
11 Professor Abramson is that the CSIRO did a modelling, and
12 the board will no doubt remember the graphic that he
13 produced, which indicated an east-west distribution of
14 emissions from the fire. It is uncontroversial that many
15 postcodes that are included here are some distance removed
16 in a north-south axis from the fire - on our calculations,
17 perhaps up to 70 kilometres north or south. Now, that of
18 itself is problematic when we know that everybody within a
19 postcode who died at a certain time has been captured by
20 the data.

21 A constant feature of the statistical analysis in
22 this case was that one could look at two periods, February
23 to March 2014 and February to June 2014. Now, as best we
24 can understand it, the medical evidence for extending
25 beyond February to March is unsatisfactory. It seemed
26 largely to proceed from what was described by
27 Professor Gordon as "a logical assumption". Interestingly,
28 Professor Abramson doesn't stand for that logical
29 assumption, nor, as we understood it, did
30 Professor Armstrong. Now, any one of us is in a position
31 to make supposed logical assumptions, it is no better that

1 it comes from the mouth of Professor Gordon than from
2 anybody else.

3 The point we would make is generally that the period
4 of February to March is the best indicator if one is to
5 look at mortality figures and it is significant because
6 generally, on the statistical evidence, one sees a greater
7 statistical strength produced out of an analysis of
8 February to June than one does out of February to March and
9 a real caution needs to be exercised in that context in
10 discriminating why are we allowing it to extend beyond that
11 period.

12 We note generally that once you get into the February
13 to June extension, what are called the P-values, the
14 probability values, et cetera, sometimes gather strength
15 because of that fact, but one shouldn't be blinded to the
16 idea that why are we looking at that period in the first
17 place.

18 In our submissions we note, apropos the legitimacy of
19 that approach, that Professor Armstrong turned his mind to
20 the question of whether or not we should be looking at a
21 correlation between - based on a daily basis based on
22 exposure and his testing was well, we should take it to a
23 time lag period, and I think he tested three days, but his
24 evidence would suggest perhaps a lag of five days was
25 appropriate.

26 Now, as we understand it, the mine fire was out by
27 25 March, so in fact the end of March is a very convenient
28 point to say that is the time at which we would most
29 relevantly expect to examine data about death from
30 emissions from the fire.

31 We note that Associate Professor Barnett called in

1 aid a study, the author of which is Brook, and at paragraph
2 9(d) of our submissions, towards the end, we actually quote
3 what that study had to say and without reading the quote,
4 the relevant extract is that the effect was tested during
5 the preceding one to five days, which seems to be the
6 relevant point for examination. It does not justify
7 Associate Professor Barnett or others extending the period
8 to June.

9 At paragraph 9(e) we also draw attention to the
10 question of temperature. Now, we understand the evidence
11 largely to stand for the proposition that extreme
12 fluctuations of temperature may have an effect on death,
13 extreme cold, extreme heat. What we understand here to
14 have been done is that monthly averages of temperature were
15 applied, which would, of course, obscure a study of
16 particular periods of very hot or very cold weather. So if
17 one had a heatwave but had in the same month several very
18 low temperatures, the average for the month, of course,
19 would tend to blend that out, which is unhelpful in terms
20 of understanding what effect heat, acknowledged as it does,
21 had on mortality in this case.

22 At paragraph (f), continuing with what we say is some
23 of the inherent limitations of the approach that was taken
24 to answering the questions we're concerned with, we note
25 that there is a limited sample size of the data and it
26 seems the statisticians were at one in saying small data
27 samples are much less satisfactory than large ones because
28 they can tend to give random variations based on very small
29 figures.

30 We note the further proposition: if one takes an
31 originally small data set like death in a particular

1 postcode and then, as it were, splits it into an
2 examination of all causes of death and then mortality
3 caused by cardiovascular or respiratory disease, one
4 increases the problems in relation to the reliability of
5 the data and it might be an appropriate time to briefly
6 refer the board to the table that we annex to our
7 submissions on the last couple of pages, where we endeavour
8 to capture some of the critical joint report findings. We
9 sourced them to their material in the evidence and we then
10 note two things: the confidence intervals and the P-values
11 and just by way of making good the point that I was then
12 attempting, for example in the first of those - at the top
13 right hand of the page, under Confidence Intervals, we note
14 that the February-June period of 2009-2013 has a confidence
15 interval of .80 to 1.001 and the February-June 2009 P-value
16 is therefore .04, which we take to be within the concept of
17 statistically significant because it is below .05.

18 We note, however, that if you look at February to
19 March, the next figure under that, so the smaller data set,
20 if you like, the confidence intervals are markedly
21 different, .68 to 1.02 and the P-value becomes .08. I
22 don't want to take the board to that document in its
23 entirety, but what will be seen is that as the period
24 extends, the P-value tends to rise and as the data are
25 subdivided, the confidence intervals tend to widen and the
26 P-values tend to get less. So when you're looking at
27 specifics like cardiovascular and respiratory subsets of
28 small populations, we are very probably dealing with
29 material which might indicate no increase at all, which
30 might indicate an increase or a decrease and on that
31 account, one proceeds with great caution to attach much

1 significance to them.

2 I'm reminded of the time, so I will try and pick up
3 the pace, consistent with making understandable what we
4 want to say. Could we pass then to the question dealt with
5 at paragraph 9(g), which is simply to say again that this
6 is a relatively crude approach because what we have is
7 monthly data and all deaths within a given month. So we
8 would know, if we were able to examine the material in
9 greater detail, that there would be some deaths which
10 should automatically be excluded; if an elderly person
11 falls, breaks a hip and dies of complications, that is not
12 going to be related to this fire.

13 We also note at (h) that in this case the capture of
14 material for February-March included deaths that predated
15 the fire.

16 In paragraphs (i) and (j) we make a point, which I
17 won't labour here, in relation to the lack of
18 randomisation, as it is called, and the inability of the
19 board to discriminate between adverse outcomes, respiratory
20 and cardio, which might be referable to fires but not
21 necessarily to the mine fire.

22 We pass at paragraph 10 then to question 2 and the
23 question we raise here is, firstly, the value and the role
24 of statistical analysis. We say that what one has in this
25 case is a maybe as to a temporal correlation and then a
26 super-added discussion of cause. Now, what we want to say
27 about that is it is really a very strange proposition of
28 logic that we're dealing with. We're dealing with did
29 something happen? Well, perhaps. What was the cause of
30 what perhaps happened? It is a bit like us going out in
31 the morning and saying, "Is the grass wet?" Well, if the

1 answer is, "Nobody knows", to ask the question, "Why is the
2 grass wet?" is, in one sense, nonsensical, but if someone
3 then adds the view to the first proposition, "No-one knows
4 if the grass is wet, but if it is, it was caused by the
5 rain", well, can we conclude from that that it rained last
6 night? The answer is, obviously, no. The question is
7 hardly sensible at that stage. We say, with great respect,
8 that the evidence in this case suffers from a very similar
9 vice, that one is considering and trying to ascribe cause
10 to an event that no-one is persuaded actually happened.

11 We want to draw particular attention to the way in
12 which Professor Armstrong gave evidence on this point, and
13 at paragraph - and by reason of time, I want to pass over
14 some of the intervening paragraphs and go to 16, not to
15 diminish them - but what we note about Professor Armstrong
16 is this: his answer, on the second day of the evidence, to
17 the direct question from counsel assisting as to any link
18 between the mine fire and an increase in mortality was very
19 heavily qualified. He emphasised in his evidence that the
20 evidence for an increase in deaths was only moderate and
21 anything about cause of the increase had to take into
22 account the fact that the evidence for the increase itself
23 was not strong and with that caveat he added the idea that
24 the most likely explanation for the various explanations
25 one can put forward was that the increase, if one occurred,
26 was due to the increase in particulate pollution of the air
27 during the period of time, most likely due to the mine fire
28 but possibly added to by the bushfires that occurred at the
29 same time.

30 Now, what really that amounts to is a proposition
31 that if something occurred, we are more inclined to

1 attribute it to one of three or four variables that we've
2 considered. That is not an answer to an absolute question
3 what caused the increase, it is an answer to we considered
4 a number of scenarios and we consider that of the four we
5 nominated, one was preferable.

6 Now, we don't know, as we stand here, whether or not
7 there were other health issues raging through this
8 community at the same time as the fire, which may well be
9 an explanation for any increase, if there was one. So one
10 needs to understand the inherent limitations of the
11 proposition that the expert picked out a particular
12 probable cause of those that they limited themselves to.

13 In relation to the expert evidence, we should say
14 this: we take Dr Flander not to have gone beyond the
15 proposition that there may have been an increase and that,
16 in those circumstances, one should not exclude the
17 hypothesis that the fire had a causal relationship with it
18 but it did not substantiate that hypothesis. We think that
19 very clearly emerges from what was put to her in
20 cross-examination and we don't say that she ever took a
21 step back from that proposition and we do remind the
22 Inquiry that a question that my learned friend asked
23 latterly of witnesses about contradiction between - my
24 learned friend asked the question as to contradiction
25 between evidence-in-chief and cross-examination. I just
26 want to come to the effect of that in a moment. The first
27 point to make is he didn't ask that question with
28 Dr Flander present, she'd gone by that stage, and secondly,
29 we, with great respect, say that there is no value in that
30 question. The question was you've dealt with in
31 examination-in-chief all these issues, you've given answers

1 to all those issues. In cross-examination you're asked
2 about the same issues and you gave differing answers to
3 those questions. Then my learned friend says globally did
4 you intend, if there were contradictions, to make
5 contradictions and he gets the answer, unsurprisingly,
6 "no". That has no value at all, with respect.

7 If you wanted to ask a question, you would need to go
8 to the specific answers that were given, point them out to
9 the witness and say, "This and this stand side by side.
10 They may appear to be different. If they are, what do you
11 want to say?" With great respect to my learned friend
12 Mr Rozen, you can't have an abracadabra question. You
13 can't say at the end, "Did anything you say in
14 cross-examination which is inconsistent with your
15 evidence-in-chief, can we forget about it?", you can't.

16 Can I say, in relation to Associate Professor
17 Barnett, that we do not depend in our submissions, so it is
18 clear, on characterising him as being ungenerous or
19 deliberately misleading, or anything of the nature, that is
20 not what we would put. We put to him that he was too close
21 to the cause that he was giving evidence about and that in
22 those circumstances there is a natural inclination that
23 tends away from impartiality and independence and we put it
24 simply that he can't be considered as the same sort of
25 independent witness as others who appeared in this case.

26 I skipped out of sequence to him. Can I cross-refer
27 the board back to paragraph 21, where we comment about the
28 evidence of Dr Flander. She put in answer to one question
29 in cross-examination, I think, something that certainly
30 resonated very much with our thinking, which was, we say at
31 paragraph 22, there is a concept in observations and

1 evidence around epidemiology which speaks of the
2 under-determination of observations and evidence, and
3 that's the case here, there are simply not sufficiently
4 reliable and robust observations to enable the board to
5 choose between alternative explanations or alternative
6 hypotheses as to causal relationship in this case and that,
7 we say, was the basis on which she was then happy to accept
8 the proposition put to her in cross-examination, "Well, are
9 we at the point here where there may be enough evidence to
10 think an increase is a conceivable idea and then to further
11 test whether or not it had a particular cause" and that's
12 why we say she answered the question. We would accept that
13 that hypothesis is still a viable hypothesis but it is not
14 a substantiated hypothesis. We think that is a very
15 correct way of understanding the evidence.

16 If I may go to what we say at paragraph 31, which is
17 making comments in relation to the joint report much relied
18 upon in this proceeding. Firstly, as we say, when the
19 board is able to look quietly at the material in
20 annexure 1, many of the important findings that are made in
21 this case by the experts are in the category of not
22 statistically significant at the conventional levels.

23 Secondly, we make the point that the tenor of the
24 expert report, the joint expert report, is somewhat
25 disquieting. It is disquieting because it seems to proceed
26 in the context of an assumption in favour of an increase in
27 death at least. Now, we say that the joint report
28 certainly doesn't reveal that of itself, but when one looks
29 at its language, we are puzzled by the change in language,
30 why things like "some data" become "weak data", why "weak
31 data", which is suggestive of no increase, is translated to

1 "some data", which is more suggestive of increase. We note
2 the odd expression "lack of increase", which is preferred
3 to "decrease". We note with some bemusement that the
4 proposition added to 2.5, "A large increase in mortality in
5 Morwell cannot be ruled out", when challenged in
6 cross-examination about why that was said,
7 Professor Armstrong, to his credit, said yes, the corollary
8 proposition is equally open, that there may have been no
9 increase or there may have been a large decrease. When
10 asked about why that answer was given in that form, he made
11 a reference to Freudian thinking, but what we say is that
12 that should be regarded as somewhat disturbing, that what
13 is said in the report tends to presume something which the
14 data dealt with in the report does not. And in particular
15 in that context, as to what Professor Armstrong was
16 prepared to concede, we note that the confidence intervals
17 in that case were .51 to 1.26 and, if we're correct, more
18 consistent with decrease than increase. So in that sense
19 it is a somewhat perverse way to express an outcome.

20 In the last part of our submissions, from paragraphs
21 33 onwards, we make points about the timing of the delivery
22 of material and our capacity to absorb and intelligently
23 interrogate the witnesses based on that. The point of that
24 is not an abstract complaint, it is simply to say this: we
25 understand as a general principle, and we imagine the board
26 would accept, that evidence is the better when it is
27 intelligently cross-examined. For it to be intelligently
28 cross-examined, the cross-examiner has to be apprised of
29 what is going to happen. That would happen by timely
30 delivery of material and in particular we note that the
31 evidence of the expert witnesses, in their individual

1 reports and their joint reports, conspicuously did not deal
2 with the proposition if there was an increase, what was its
3 cause. So those of us who came to the hearing saying the
4 experts appear to be agnostic about that point were only
5 disabused of that idea at the very end of their
6 examination-in-chief, when my learned friend Mr Rozen asked
7 them what might be called a form of ultimate question. We
8 are uninformed as to why things happened that way, but we
9 note the consequence, which is that those who would seek to
10 challenge that idea had only at the very last moment the
11 opportunity to even know that it was being raised. That
12 necessarily rebounds in terms of the quality of the outcome
13 and the ability of those who might wish to challenge that
14 proposition to do so in an informed way.

15 The submissions that we ultimately make proceed from
16 paragraph 39 onwards and they include the propositions that
17 we've adverted to at the start, that we would respectfully
18 submit at this stage that the evidence is unsafe to come to
19 a conclusion of the gravity that is in front of this board.
20 We say it in large part depends upon statistical analysis
21 which is often times not conventionally regarded as strong
22 material. We say that in relation to the second question
23 of if there was an increase, is there a causal correlation,
24 we say would be far better, with respect, dealt with in
25 what is the long-term health study because that study is an
26 inherently superior process. It is going to deal with
27 actual people, with actual medical histories, with actual
28 exposure knowledge, with knowledge of smoking and many
29 other co-variants that the witnesses say are extremely
30 important when one wants to make a causal association
31 between two events.

1 Now, true it is that the long-term health study has a
2 prospective character, but it should be recalled, I think,
3 that Professor Abramson said once it is done, it may well
4 be possible for us, by inference, to reflect on the period
5 that's before the board and one can imagine circumstances
6 where the long-term health study looks at people in, say,
7 Morwell South, in the same area, with similar age, with
8 similar health profiles, et cetera. If the long-term
9 health study were to say, "Notwithstanding exposure, we do
10 not find that there was any mortality arising out of the
11 mine fire", that would be a proper basis for an inference
12 that the period under consideration here also is
13 susceptible to the same outcome. What we say, with
14 respect, is that if it is accepted that that is a
15 qualitatively superior process than the one that the board
16 has been able to have insight to, then it is preferable not
17 to endeavour to make hypothetical decisions which are then
18 liable to contradiction, because that will undermine the
19 whole value of what this important Inquiry is to do.

20 The final propositions that we wanted to say were in
21 relation to the submissions made by counsel assisting and
22 again I bear in mind that I have probably exceeded my
23 statutory allowance, but may we take the board in
24 particular to paragraph 69. What we say is remarkable
25 about that series of proposed findings is really that, (f),
26 the mine fire contributed to an increase in deaths in the
27 Latrobe Valley in 2014, is really, for term of reference 6,
28 that if you are to answer that question, it would appear
29 you ought to have regard to paragraphs (a) to (e) as the
30 foundation for it. What we say about paragraphs (a) to (e)
31 is that they are not the foundation factually for what

1 appears in paragraph (f), they are heavily qualified
2 propositions which don't, as a matter of logic, lead to
3 (f), which has in it not the contingencies that all the
4 preceding paragraphs have but the statement of fact that
5 there was an increase. One never gets to that point unless
6 one is happy to accept (a) to (e) in the first place and in
7 our respectful submission, (a) to (e) don't allow you to
8 get to (f).

9 One of the vices, we would say, with this sort of
10 highly contingent finding is that at the end of the day,
11 all the hypothetical bases will fall away, people will
12 forget that and they will look at paragraph (f) and say the
13 board found the mine fire contributed to an increase,
14 albeit that the evidence for doing that doesn't really
15 allow one to do so. That is a mischief which we say, with
16 great respect, the board should avoid at all costs. If the
17 board is able to make a finding in relation to (f), it has
18 to do so on robust evidence and, in our respectful
19 submission, that robust evidence is not available. If the
20 board pleases.

21 CHAIRMAN: Thank you, Mr Neal. Mr Blanden.

22 MR BLANDEN: Thank you, Mr Chairman. We have an outline of
23 submissions that we will pass around to everyone and there
24 are copies for the members of the board as well. While
25 that's being done may I say as to many of the matters
26 raised by counsel for GDF Suez we are in agreement and as
27 to the preliminary matters we are specifically in agreement
28 in relation to the meaning of the word contribute
29 (indistinct) we are considering it and we adopt counsel's
30 submissions in relation both to that and the application of
31 the *Briginshaw* test, I won't repeat what was said but we

1 simply adopt those submissions and agree with them.

2 Our primary position as the board will see from our
3 outline of submissions set out in paragraph 1 and that is
4 that there is no sufficient evidence, no adequate evidence
5 upon which the board can make a finding on the balance of
6 probabilities that there was or was not an increase in
7 deaths at the relevant time, and if a finding of increased
8 deaths was made we say contrary to the evidence, there is
9 certainly no evidence that the fire was a cause of any
10 increase having regard to the evidence.

11 We say the practical conclusion of the evidence in
12 relation to the statistics leads us to a position where the
13 board can be satisfied that there could have been an
14 increase in deaths during that period based on the various
15 statistical models and the analysis of particular data, but
16 the statistical evidence goes no further than that, that is
17 there can have been an increase, whether there was or was
18 not it is not possible to determine at the present time.

19 We say the second limb of the term of reference
20 requires some factual or medical causation to be
21 established in terms of the link between any punitive
22 increase in deaths as compared to the causative element
23 provided by the mine fire as posited in the terms of
24 reference. We say that evidence simply does not exist at
25 the present time.

26 Our conclusion is very much along the same lines as
27 GDF Suez, that is that the best vehicle for determining the
28 term of reference is in reality the long-term health study
29 being undertaken by Professor Abramson and Monash
30 University. It will satisfy the problems present with the
31 data as it exists at the moment, it will provide much

1 better data, a much bigger sample, it will in fact link in
2 a proper medical causative way any deaths due to exposure
3 and that is what we say is at the nub of the term of
4 reference.

5 I'm not going to read the outline of submissions, the
6 members of the board have them, they can be read at
7 leisure. Instead I want to spend a little time on the
8 submissions of counsel assisting and on some other aspects
9 of the evidence.

10 In terms of the evidence as such it is important to
11 note, and I think it's already been referred to and it
12 appears at transcript 50.5, that Professor Armstrong was
13 keen to point out that the report, that is the joint
14 report, only addresses the first part of the question, that
15 is the statistical question about whether the statistics
16 can be said to demonstrate an increase in deaths, and he
17 went on at transcript 506 to confirm that there are
18 additional considerations when one starts to look at the
19 cause and effect component of what we say term of reference
20 6 includes.

21 We say at the outset that we share the concern about
22 the joint expert process. We in fact did not find out
23 about it until after it had happened, we were first advised
24 about the process that was to be undertaken, the joint
25 meeting, who was to be involved and how it was to be done
26 on the Monday after the meeting had occurred and clearly
27 could have no input into the parameters under which that
28 was to take place, and we say there are some real concerns
29 about the process. We say it for this reason, it's
30 well-known that joint expert routes can be of value,
31 certainly of value in terms of saving time and expenditure,

1 but of value to a trier of fact, a decider of fact because
2 they tend to collate the evidence and put it in hopefully
3 an understandable form.

4 This, however, was an exercise that didn't adopt the
5 normal parameters that such exercises adopt. Ordinarily
6 when there is to be a joint meeting of experts one would
7 find that the trier of fact, the decider of fact would
8 outline the assumptions of fact that the experts were to
9 adopt, the experts themselves would have the same
10 qualifications and specific questions would be posited to
11 the experts for their answer in order to assist the trier
12 of fact. None of that process was followed here, and
13 indeed the rather unusual course of adopting as it were the
14 further parameters of the discussion, the agenda of the
15 discussion were the views or conclusions of one of the
16 experts himself.

17 So we have some real concerns about the way that was
18 done and the fact they are differently qualified. It's
19 not, with respect, sufficient to simply say well, they have
20 sort of got similar qualifications or crossing
21 qualifications or complementary qualifications, it's not to
22 the point because they don't have the same qualifications
23 and the parameters are not set. Then one experiences what
24 with respect the board experienced, and that is experts
25 straying outside their area of expertise, and coming back
26 to Professor Armstrong's comment at transcript 506, that
27 the cause and effect component of the term requires
28 additional considerations. Professor Armstrong was quick
29 to acknowledge that in that respect, a causation respect,
30 he was not the expert who ought be asked the question.

31 We make the point in our written submissions but it's

1 worth noting again, that if he with medical qualifications
2 and his other qualifications was not qualified or not best
3 qualified to answer those matters how could it be said
4 statisticians or straight epidemiologists were qualified to
5 answer the question, and it's a rhetorical question
6 obviously because the answer is they are not. Yet despite
7 the lack of qualification we see some of those experts
8 seeking to rely on reports or studies again outside their
9 area of expertise in order to posit a view that contributes
10 to that cause and effect discussion.

11 We say there are a number of issues that arise from
12 the general discussion. I want to deal with them generally
13 before I go to counsel assisting's remarks. There is what
14 we might call the extension of the period within which the
15 risk of the fire should be considered and that's been dealt
16 with. We concur with the view expressed that really this
17 was a piece of speculation by Professor Gordon and nothing
18 else in relation to the extension of the period of risk of
19 the fire. There is no literature before the board and the
20 acknowledged expert in that area, which is Professor
21 Abramson, was never asked about it, he was not asked the
22 question about whether it was appropriate to extend the
23 period or not, in fact he was never asked any question
24 about that at all.

25 Can I come to counsel assisting's comments and there
26 are, and the board will have to excuse me because again we
27 got these reasonably late so I will have to go through them
28 seriatim where we see an issue rising, but the comment in
29 paragraph 14, for example, that Associate Professor
30 Barnett's never been held out as an independent witness by
31 Voices of the Valley or anyone else I'm sure will come as a

1 big surprise to him because he spent considerable time in
2 evidence trying to establish his independence. The comment
3 that his statistical analysis was endorsed by others
4 applies equally to the statistical analysis undertaken by
5 Dr Flander, indeed by all the various people who looked at
6 the statistics. There was no essential disagreement with
7 them about the statistical side of the matter, each came,
8 we say, to the conclusion we have noted at the commencement
9 of our submissions.

10 Coming to the part of the report where counsel
11 assisting refers to the approach that should be taken by
12 the board, so I'm up to paragraph 33, counsel assisting's
13 submissions, what's put there is that the board should
14 approach its task by seeking to answer two questions
15 posited by Professor Armstrong. We say if the board does
16 that it will be falling into error, that it is not the
17 approach that should be taken at all. It's up to the board
18 to determine the term of reference, it's not up to the
19 board to adopt an approach taken by an expert to a
20 particular confined matter which is relevant during the
21 course of the Inquiry. We say what is posited as the
22 second of the two questions is in any event not the
23 appropriate second question to be asked when determining
24 the matters that arise from the term of reference: Was
25 there an increase in mortality in the Latrobe Valley during
26 the coal mine fire is presumably a question that relates to
27 the statistical evidence. Part B, what environmental
28 exposures might have increased mortality does not go to the
29 issue before the board. The issue before the board is if
30 there is an increase in mortality shown in the statistics,
31 can it be said that increase in mortality is related

1 causally to the mine fire? And it's important that
2 distinction be borne in mind because simply saying what
3 exposures were there does not address at all the question
4 of causation.

5 So we say that the second element of the term of
6 reference is in reality whether any demonstrated
7 statistical increase has been shown to be caused by the
8 fire.

9 We say that the board contrary to the invitation of
10 counsel assisting should not be limited to adopting simply
11 the evidence of the four experts as the invitation is
12 extended in paragraph 35. The submission reads as follows:
13 We submit the board should answer the question in precisely
14 the terms employed by the four experts at paragraphs 1.1
15 and 1.2. If that were done that would be tantamount to the
16 board ignoring all the other evidence before it and much of
17 that evidence is important, much of that evidence is
18 evidence which goes to the two issues combined which lead
19 to the term of reference. There is, for example, the
20 evidence of Professor Abramson, there is the evidence of
21 Professor McNeil, that's a report we tendered and relied
22 upon. There are other witness and authors of reports all
23 of whom have had a contribution to make in relation to the
24 evidence before the board and it's all that evidence that
25 needs to be looked at and decided upon in terms of what
26 conclusion the board reaches.

27 In terms of the suggested inconsistencies outlined at
28 paragraph commencing at 42 of the submissions of counsel
29 assisting, the three main areas in which it was suggested
30 the evidence was inconsistent with the two ultimate
31 conclusions are set out there. What's omitted from that

1 list of areas is the lack of any evidence before this board
2 that any death was actually caused by exposure to
3 particulate matter at the time of the mine fire. There is
4 simply no evidence at all that that occurred or has
5 occurred as a result of the mine fire. We say that's a
6 very important fact that the board needs to bear in n mind.

7 The Coroner's Court when asked if it could provide
8 assistance said they were not aware of any death that could
9 be considered in that group and indeed there simply is no
10 evidence of any such death.

11 In terms of the Morwell data, what we might call for
12 our purposes the Morwell inconsistency with the theory that
13 the mine fire was a cause of any statistical alteration in
14 the death rate, Professor Armstrong eventually trying to
15 base an explanation on people moving away is in the absence
16 of any evidence, and there is no evidence about it, simply
17 speculation. So the Morwell inconsistency, if I can call
18 it that, on the data can't be dismissed simply by positing
19 or supposing that really there is an explanation for that
20 that people simply moved out at the time, there is simply
21 no evidence to support that and that would be indeed a
22 speculative exercise to conclude it was the case.

23 The imprecise nature of the Morwell data, this is
24 where Professor Gordon had something to say including the
25 very small numbers, the actual description given by
26 Professor Gordon about the data itself providing that
27 inconsistency is to be found at transcript 520 where he
28 said the possibility that by chance other factors came into
29 play is something that could be taken into account. Now,
30 again, that is pure speculation, not based on any evidence
31 at all. And similarly, for his evidence given here before

1 the board but certainly not finding an avenue in his report
2 or the joint report, that perhaps people lived more in this
3 area than that or the wind blew into particular direction
4 or it blew more in one direction than another falls in the
5 realm of pure speculation and nothing else. So the only
6 thing that's really been called in aid to diminish or
7 discount the Morwell inconsistency is speculation and
8 nothing else, there is no evidence before this board on
9 which that inconsistency can be dismissed.

10 In terms of submissions, I'm still on the Morwell
11 data, this is on page 9, that seems to incorporate
12 paragraph 51, not only Professor Gordon's speculation about
13 where people live in Morwell but counsel assisting seems to
14 have been assisted by the provision of its own evidence in
15 there as well comparing readings not being terribly
16 different on comparable days of the fire and the like, of
17 course none of the experts relied on that or referred to
18 it.

19 In terms of the balance of the Morwell data as
20 referred to on page 10 the note that in paragraph 53
21 Professor Armstrong noted as early as 14 February citizens
22 of Morwell were in an at risk group, in fact he didn't say
23 that at all, that comes from first report of the board.
24 That wasn't Professor Armstrong's evidence, and the
25 footnotes, 71 and 72 do not support the propositions they
26 are there to advance.

27 We have some concern also at the speculation in
28 counsel's submissions contained in paragraphs 55, 56 and 57
29 and these are pure speculation, again, advanced by counsel
30 assisting where he says for example, in 55: "It is likely
31 that a significant part of the population of Morwell

1 generally but southern Morwell in particularly acted on
2 this advice and left Morwell." Zero evidence before the
3 board about that. In 56 there is a reference to Professor
4 Barnett explaining on his analysis that if people left, 20
5 per cent left or 30 per cent left, again sheer speculation,
6 no evidence for that assertion at all, and again, we refer
7 to Professor Armstrong, transcript 60, he was asked about
8 that, he very properly said he didn't include any of that
9 speculation in his own report because it was simply
10 speculation.

11 Lastly in 57 it is posited as follows, "It is likely
12 that some residents of other Latrobe Valley locations such
13 as Moe and Traralgon travelled to Morwell to work in
14 Morwell during the period of the fire", again that's
15 speculation, there is no evidence. It is footnoted though
16 as footnote 76 purports at the bottom of that page to say
17 as Dr Lester accepted at transcript 419, and I will just
18 read to the board what transcript 419 actually says, it
19 can't be just an insignificant reference to a page because
20 not only is it cited at transcript 419 at lines 22-29,
21 lines 22-29 read as follows: Question: "The other thing
22 about that analysis of Moe is it assumes people in Moe, for
23 example, don't come to Morwell to work and therefore would
24 have been exposed during the mine fire"; the answer is:
25 "Yes, exposure is very important as you heard Professor
26 Abramson speaking yesterday knowing more about patterns of
27 exposure and ill-health and mortality is extremely
28 important." So the proposition was never put to Dr Lester
29 that residents of other Latrobe Valley locations travelled
30 to Morwell to work in Morwell during the period of the
31 fire. It might be a fact, it might be a reasonable

1 supposition but there is no evidence about it and to put it
2 on the basis that this was a proposition agreed with by
3 Dr Lester is simply false, it's misleading, it is a
4 misrepresentation of the evidence as was given.

5 Unfortunately there are numerous instances of the
6 footnotes in counsel assisting's final address document
7 which in fact do not seem to correspond with the evidence
8 they purport to represent so can we caution the board that
9 the footnotes need to be kept very carefully to ensure that
10 in fact they stand for the proposition that is asserted
11 that they support.

12 The rapid health risk assessment is the next issue
13 raised by counsel assisting, and it is interesting that at
14 paragraphs 59 counsel assisting sets out some what are said
15 to be relevant limitations of the rapid health assessment,
16 each and every one of those limitations applies to the data
17 used by all the experts who gave evidence to the board
18 without exception. There is no point in saying the rapid
19 health risk assessment is irrelevant because it has
20 limitations because the limitations it has are exactly the
21 same limitations as the data that each and every expert
22 used, and they are the limitations which relate to
23 causation.

24 When one looks at those limitations, the modelling
25 used during exposure events was not directly comparable to
26 the mine fire. There is no data for exposure levels in
27 Morwell during the first few days. The modelling might
28 have under-estimated or over-estimated exposures, didn't
29 consider occupational exposure, didn't take account of any
30 particularly vulnerable group and there was no data
31 available for a number of pollutants, all exactly the same

1 limitations the data that the experts considered.

2 The rapid health assessment was we say a useful
3 document and remains a useful document, given its clear
4 relevance and usefulness one wonders why it was seemingly
5 never going to see the light of day before this board.
6 Professor Abramson was not going to be a witness before the
7 board until the rapid health assessment and his latter
8 review of the documentation and articles in relation to the
9 relevant exposures was appended to my client, Dr Lester's,
10 statement. It was only after those documents were appended
11 to her statement that the office of counsel assisting
12 contacted Professor Abramson and a draft statement was
13 prepared by that office. Even that draft statement did not
14 refer to the rapid health risk assessment and it's very
15 difficult to understand why in the circumstance. It's also
16 difficult to understand why Professor Abramson was not
17 initially contacted to be to be a witness in this
18 proceeding.

19 It is difficult to understand why when Professor
20 Abramson came to the board and gave evidence he was asked
21 no questions by counsel assisting that related to medical
22 or factual causation as a result of particulate matter
23 exposure in the course of the mine fire, not one, not one
24 single question despite the fact that clearly it was either
25 known or should have been known he was the pre-eminent
26 expert in this area, how was that known? It was known
27 because Professor Armstrong readily volunteered the fact he
28 was indeed the expert in the area.

29 One rhetorically asks why wasn't he invited to be
30 part of the joint expert study? He after all was a man who
31 had done a predictive report at the time of the fire as to

1 its likely effect, he after all was the man who was
2 conducting the long-term health study. Why exclude him,
3 the expert, from the obvious middle ground which was
4 consideration of the effect of the mine fire on any
5 statistical alteration in the death rate? It makes no
6 sense and it makes for no assistance to the board in terms
7 of the causation issue which we could have and should have,
8 we would respectfully submit, addressed.

9 We say if the board were to make the proposed
10 findings in paragraph 69 numbered D, E and F there is
11 simply no evidence to support those findings. Indeed, such
12 findings are likely to be contrary to the evidence before
13 the board. Again, in relation to the proposed finding C we
14 say and share with counsel for GDF Suez this submission,
15 there is no cause or reason to extend beyond the actual
16 time of the fire the period of risk, there is simply no
17 reason for doing that, there is no basis on which to do it
18 save for the speculative attempt of Professor Gordon to do
19 that but it is not found in the evidence anywhere.

20 We take issue with the assertion that what follows
21 from paragraph 71 on are matters that are reasonably
22 incidental to what precedes it. We have some specific
23 concerns in relation to what are the comments made in
24 relation to Dr Lester's involvement, may I ask the board to
25 turn to paragraph 85 of counsel assisting's comments.

26 The concerns there and the requests et cetera are in
27 fact a reference to the email chain that was sought to be
28 tendered by counsel assisting this morning. They weren't
29 in evidence until an hour or so ago and none of the
30 contents of that paragraph was ever put to Dr Lester.

31 Indeed the emails one will see over the page, there is a

1 reference to Linda Cristine, they were never put to her
2 either so they in fact weren't put to anybody in the course
3 of the hearing. It was never put to Dr Lester that she
4 failed to fulfill her statutory duty under the terms of the
5 Public Health and Wellbeing Act at any stage, she never had
6 an opportunity of answering such an allegation. The
7 allegation put in 88 that there had been no real
8 application by the department at least under her watch of
9 the functions and guiding principles required by the Act
10 was never put to her.

11 A comment in 89 about an exacerbation of the mistrust
12 felt by the community, I might have missed it but that
13 didn't seem to figure in the evidence anywhere and is more
14 speculation by counsel assisting.

15 In terms of the continued submissions over the page
16 at 91, the contention in paragraph 91, and this is in the
17 fourth line, that Dr Lester showed poor judgment in
18 deciding to take charge of the investigation, was not put
19 to her. Indeed we say that she by asking for an
20 independent analysis of the data from Dr Flander confirmed
21 what she was doing was conforming with section 5 of the
22 Public Health and Wellbeing Act, that is making decisions
23 based on proper evidence.

24 There is no reasonable basis on which to suggest that
25 it was not appropriate for her to undertake that further
26 investigation in relation to the statistics and the
27 suggestion that the investigation of the statistics should
28 have been overseen by someone with no vested interest in
29 the outcome again is a matter which was not directly put to
30 her.

31 She was asked in the course of evidence whether she

1 thought she might have had a conflict of interest to which
2 she replied no, she didn't. It was never then gone on, the
3 questioning never then went on to say to her well, you were
4 wrong about that, you did have and I want to suggest to you
5 that you did have a conflict of interest; that was never
6 put. So the failure to put it implies an acceptance of the
7 answer, and while I'm on that point it is a trite point but
8 it's worth remembering that the evidence before the board
9 is not found in the question that's asked, the evidence
10 before the board is found in the answer to the question,
11 and if the answer to the question is no or the non
12 acceptance of a proposition that is the evidence, not the
13 proposition that still hangs about in the question, but the
14 answer to the question, that is an important matter for the
15 board to bear in mind.

16 The proposition starting at 95 that the department
17 fact sheets were unbalanced and misleading again was never
18 put to her in those terms, transcript 397. In 98 the
19 proposition that the fact sheets were by their own claim
20 accurate and clear information is the quote that wasn't
21 put, it was accurate and complete was the quote, and well
22 understood; again not put to her. In part B, it wasn't
23 ever put to Dr Lester that the information given in the
24 various fact sheets was in some way, shape or form contrary
25 to the requirements of the Public Health and Wellbeing Act.
26 The referral by Dr Lester to the fact that the statistics
27 showed there was a decrease in the number of deaths in
28 Morwell as compared to the average for the previous five
29 years can hardly be criticised as that was the fact. Again
30 in paragraph 100, the proposition that the limitations of
31 the figure were not acknowledged in any of the public

1 documents was not put to her, the speculation again in the
2 evidence about whether there was a significant increase in
3 the number of deaths and people could have been working in
4 Morwell at the time of the fire, that wasn't put to her and
5 it's based on speculation in any event.

6 In 102 the proposition that emphasising the Morwell
7 figure without reference to the limitations was misleading,
8 was never put. The comment that equal prominence should
9 have been given to the statistical treatment of other data
10 which tended to confirm an increase in deaths is a nonsense
11 given the actual evidence before the board because of
12 course there was no such data.

13 We have some disquiet about the attack on Melbourne
14 University and Dr Flander. It seems to us that it's hard
15 on the one hand as is done at the commencement of these
16 submissions to accept Dr Flander as an eminent expert and
17 then somewhat schizophrenically at paragraph 104 and on,
18 effectively try and discredit both her competence and
19 independence, not only her independence but the
20 independence of Melbourne University who I'm sure will be
21 surprised to hear about that.

22 The fact that Professor Nolan was contacted was of
23 course acknowledged but then paragraph 107 seems to
24 criticise Dr Lester for the choice of Dr Flander as the
25 person to undertake the study, made it absolutely clear she
26 contacted Professor Nolan whose choice it was, very
27 difficult to see how she can be criticised for that choice,
28 a choice not made by her. The criticism of course is that
29 she's an epidemiologist rather than a statistician, we note
30 in passing the board chooses its own expert and
31 epidemiologist so one wonders how criticism can be levelled

1 at Dr Lester for doing exactly the same thing.

2 We also note in passing that Dr Flander's work has
3 never been the subject of any actual criticism in terms of
4 either its method or its conclusions, there is indeed
5 agreement either tacit or actual by all the other experts
6 engaged. So the submission that somehow Melbourne
7 University weren't independent we say simply does not bear
8 any reasonable scrutiny.

9 Again we take exception with the suggestion that the
10 report of Melbourne University was a collaborative rather
11 than independent document. We note with some curiosity
12 footnote 104 in paragraph 116 which says as follows: "It
13 is significant in the three reports provided to the
14 department by the University of Melbourne there is no
15 disclosure of the changes that were made to earlier drafts
16 in response to comments made by the department officer."
17 It is well accepted practice that an independent expert who
18 changes her or his opinion on a material matter should
19 disclose in a supplementary report the nature of the
20 changes made."

21 Footnote 154 down the bottom of the page then refers
22 to the Supreme Court of Victoria Expert Witness Code of
23 Conduct. This of course was not the retention of an expert
24 to give evidence at court where that Code of Conduct
25 applies, the Code of Conduct doesn't apply to anybody who
26 has given evidence before this board. Certainly none of
27 the experts have adopted it. It is ludicrous we say to
28 refer to it in the context of that comment, not only
29 ludicrous but unfair when of course the arrangement between
30 the department and Dr Flander was a commercial one. She
31 had been given a brief for want of a better description to

1 do an analysis and a report and as the board heard it's
2 perfectly normal and acceptable in those circumstances to
3 forward a draft to find out whether it actually answers the
4 question that you want answered. Of course that is another
5 example of the evidence not being the question but the
6 answer, and we refer the board to Dr Flander's evidence at
7 transcript 448 in that context.

8 We submit that the questions that also arise, and
9 this is now at paragraph 131, we simply don't understand
10 how D or E in that list arise at all from anything that the
11 board's heard. The level of independence the study has
12 from DHHS, we would have thought the perfect person to
13 answer any questions or suggestions about that matter would
14 have been Professor Abramson when he came and gave evidence
15 to the board, yet another example of something not being
16 asked of a witness who was in the perfect position to
17 answer it, yet it's still said by implication at least that
18 there is some level or lack of a level of independence in
19 that study when there is simply no basis for drawing that
20 conclusion, and again (e), the level of community
21 engagement and ownership, one would have thought if there
22 was a concern there, Professor Abramson, as head of the
23 study, would have been the perfect person to ask, but no
24 questions were asked.

25 We want to conclude by simply saying the following:
26 we have issues with the way this Inquiry has been conducted
27 by counsel assisting. Our submission is we could have
28 reasonably expected accurate references to the facts and
29 evidence and an open, objective approach according
30 procedural fairness to the witnesses and in particular my
31 client. Instead what we have is, at best, inaccurate

1 referencing of facts and evidence, at the worst some of
2 that is misleading and the references are almost always
3 selective. We, regrettably, make the submission that the
4 presentation of the evidence and the questioning of the
5 witnesses was, rather than being open and fair, partisan
6 and clearly agenda driven. It failed to accord procedural
7 fairness to my client by serially failing to put
8 propositions to her which have now been seen to be the
9 source of comment in the final submissions.

10 I've referred already to the failure to advise us of
11 the joint report procedure, the failure to retain Professor
12 Abramson as a witness, to involve him in the joint report
13 procedure, a failure to refer to the rapid health response
14 assessment, a failure to ask him anything about the CSIRO's
15 modelling of exposure - one would have thought, again, a
16 matter clearly relevant to the issue of causation. It is
17 inconceivable that that could have been thought irrelevant
18 in terms of the terms of reference that we are dealing
19 with, and the result of that is that there is a significant
20 deficiency in the evidence before the board on which it is
21 able to make findings.

22 We submit that the community of the Latrobe Valley is
23 not best served by a report based on inaccuracies and
24 speculation but one based on the evidence produced and by
25 recognising the deficiencies and limitations of that
26 evidence. We say the evidence does not allow the board to
27 make a finding one way or another and we agree with the
28 proposition already put, that the long-term health study is
29 the key to the resolution of the general proposition as to
30 the involvement of the mine fire with any statistical
31 alteration in the death rate. They are the matters we wish

1 to put to the board.

2 CHAIRMAN: Yes, Mr Blanden. Ms Szydzik.

3 MR BLANDEN: And can I just say, in line with the invitation
4 given, can we simply reserve our right, on the point of the
5 late-served emails, to file an extra statement.

6 CHAIRMAN: Yes.

7 MS SZYDZIK: If the board pleases, just by way of a preliminary
8 matter, I note the time. It is almost 1. I presume we
9 continue, but I just thought I should check.

10 CHAIRMAN: We're continuing, yes.

11 MS SZYDZIK: Thank you. I'm grateful for that indication. The
12 first point that we seek to make is to reiterate one that I
13 said in the opening statement, and that is that Voices of
14 the Valley are very grateful to be here and they're also
15 very grateful for the board in considering these matters
16 with the thoroughness that they have. We indicate at the
17 outset that we, in large part, agree with the submissions
18 that have been put by counsel assisting and the
19 recommendations. I'll just pause there for a moment. We
20 too have some written submissions that have been prepared
21 and they are being provided to the parties at the moment
22 and we'll also hand up copies to the board. I won't be
23 taking the board through them step by step, but there are
24 some passages of the submissions that I will ask the board
25 to go to particularly.

26 Indeed, one of those matters arises from the
27 submissions that have been made by in particular my learned
28 friends Mr Neal and Mr Blanden regarding the applicable
29 standard to be applied. Reference in particular has been
30 made to the Briginshaw standard. It is our submission that
31 the present question for the Inquiry is analogous to the

1 question of causation in negligence cases and so it is
2 instructive then to look to some of the principles that
3 have been applied by the courts, although, of course, not
4 binding upon you, but to see how it is that the courts deal
5 with complicated questions of causation, in particular when
6 there is an issue about medical evidence and how cause can
7 be determined from that evidence.

8 In that regard, we also note, just in passing, that
9 in relation to that question, so that is how can a causal
10 event be determined from medical evidence, as is the
11 question before this board in relation to the terms of
12 reference, that doesn't involve questions of fraud or
13 intentional or malicious or deceitful conduct that are
14 typically issues that come up in relation to the Briginshaw
15 test, but if I could take the board to the passage in the
16 written submissions concerning the legal principles that we
17 say are instructive. That is located at page 17 of the
18 written submissions, starting at paragraph 3.32. What the
19 board will see is a collection of some of the authorities
20 essentially that deal with or grapple with this difficult
21 question of causation. What we see from the authorities is
22 it is not essential that there be scientific certainty or
23 precision or in any sense absolute data in order to be able
24 to decide a causal link. In fact, doubts and gaps in
25 scientific knowledge will not be determinative. Where
26 expert evidence is before a court, that will assist the
27 tribunal, but the expression of that evidence will not
28 necessarily determine whether or not, on the balance of
29 probabilities, which a court is applying, is to be -
30 whether the balance of probabilities test has been
31 satisfied. Rather, the court's task is to look to all of

1 the evidence before it. That includes the opinions that
2 are given by the experts, but it also includes the
3 additional material that goes beyond that.

4 We've also there made some reference to in particular
5 the High Court authority of *Tabet v Gett*, that identifies
6 that in relation to the question of causation specifically,
7 the threshold is in fact quite low. What we're looking at,
8 as is set out here, is something that is more probable,
9 which means no more than on a balance of probabilities such
10 an inference might reasonably be considered to have some
11 greater degree of likelihood, it does not require
12 certainty, and the court there in fact used the term the
13 threshold is relatively low.

14 If I could ask the board to turn over to the next
15 page. Starting at paragraph 3.34, we address the specific
16 High Court authority of *Amaca v Booth*, which looked at the
17 question that arises in relation to asbestosis cases and
18 how it is that the court can derive from an increased risk
19 that is identified within the medical evidence the link
20 then to cause and as we've set out there, French CJ in that
21 particular decision observed that in some instances the
22 association in statistical data, and there it was
23 epidemiological data, was sufficiently strong to enable the
24 causal link to be determined on the face of the
25 association. Alternatively, it may be necessary that you
26 need to find some other causal explanation to draw that
27 link.

28 Now, we would say in fact the current situation
29 before this tribunal falls absolutely squarely within all
30 of the principles that we've just addressed. In fact, if
31 one were applying the balance of probabilities test, we

1 would far surpass it based on the statistical evidence that
2 is before this board and also then the other evidence that
3 the board will no doubt consider.

4 I make those observations in direct response to some
5 of the issues that have been raised by my friend.
6 Obviously we raise that also in our written submissions,
7 but I'd just like to now go back to the substantive
8 submissions in the order that we were going to address them
9 before the board here today.

10 The first issue that we want to canvass before the
11 board is the course of events. The evidence has been
12 clear, we submit, that despite the seriousness of the
13 health effects on this community, obviously of the most
14 serious kind, that is death, the concerns that were raised
15 by Voices of the Valley more than once were dismissed out
16 of hand and then actively sought to be disproven and that
17 is something that has plagued this community group for this
18 very significant period of time, since they first
19 identified this as an issue way back when the mine fire
20 first began and then immediately afterwards.

21 So just to run through some of the chronology of
22 events, the first request was made by Voices of the Valley
23 back in May 2014. That was in the order now of 18 months
24 ago. They wrote to the Registry of Births, Deaths and
25 Marriages, requesting data for February to June, as we all
26 know, in the 2009-2013 period and then also for the 2014
27 period up to the time the request was made. No response
28 was received. No explanation was given for the lack of any
29 response. Of course, as can be expected, given that they
30 were considering and fearful that there were deaths
31 occurring in their community that were the direct result of

1 air pollution, they wanted then to try and answer that
2 question for themselves and so they undertook the very time
3 consuming, arduous task of going through archived
4 newspapers for a period of five years prior to the mine
5 event itself. Unsurprisingly, that took months. It was
6 undertaken by volunteers. It shows just how dedicated
7 these individuals were, this group was, to try and resolve
8 this question and it is not surprising why. It was a
9 question of the serious effects on their community,
10 including death. They wanted to know the answer.

11 Once they'd compiled that information, they did the
12 first thing that they thought they could, which was
13 provide it to the Hazelwood Mine Fire Inquiry, the first
14 iteration of this Inquiry. Unfortunately, by that time, of
15 course, the board was in its final stages of preparing a
16 final report and so the data wasn't able to be included,
17 but we find ourselves here and we're grateful for that.

18 Continuing with the chronology, there were two
19 further requests for data that were made to the Registry of
20 Births, Deaths and Marriages that occurred on 4 and 25
21 August. On 17 August the registry had inquired with the
22 Department of Health, as it then was, whether the
23 Department of Health could assist in response to the Voices
24 of the Valley request. In accordance with Ms Sim's
25 statement at paragraph 10, the Department of Health
26 declined to provide any assistance. We've also seen some
27 of the email correspondence relating to that.

28 The data was finally received by Voices of the Valley
29 on 4 September. It appeared to Voices of the Valley that
30 the data was consistent with the data that they had
31 themselves obtained by going through archived newspapers

1 and comparing it with the results they knew from 2014.

2 Continuing through the chronology, then there is some
3 media about these particular concerns raised by Voices of
4 the Valley. We had an ABC 7.30 Report about the possible
5 increase in deaths. The ABC then engaged Associate
6 Professor Barnett and Associate Professor Barnett then
7 provided his first report.

8 In relation to the Department of Health's response,
9 in addition to what I have already referred to about
10 rejecting the concerns raised by Voices of the Valley
11 outright, there was also then the statement to the ABC on
12 11 September, indicating that there was no increase in
13 deaths in Morwell and that the data showed no significant
14 pattern. Then there were also the fact sheets that were
15 uploaded on 16 and 17 September, that we've heard a lot
16 about and which emphasised that there was a decrease in
17 fact in the deaths in Morwell and also that the thrust of
18 the facts sheet was there was no increase in deaths and
19 therefore no reason for concern.

20 Dr Flander was engaged to review the data and also,
21 although it didn't happen until later, to provide comments
22 on the report of Associate Professor Barnett. Further data
23 was received in November - there was a further data request
24 by Voices of the Valley in November and that was received
25 in about December and there was a payment fee for that of
26 \$485, which we've now had the invoice for tendered before
27 the board. Voices of the Valley welcomes the State
28 Government's indication that this will be repaid to them.

29 Associate Professor Barnett produced his second
30 report, which, in substance, reiterated the earlier
31 conclusion, although based on additional data, and then

1 following that, as I have already alluded to, Dr Flander
2 was again engaged to comment upon that report in addition
3 to the additional data.

4 Voices of the Valley consider the response in all of
5 those events by the Victorian Government was entirely
6 inadequate. Before the announcement in May this year that
7 this Inquiry would be reopened, Voices of the Valley had
8 been rebuffed in their enquiries and it was done in a
9 really flippant and offhand manner. The Department of
10 Health adopted an adversarial and defensive approach to
11 Voices of the Valley and to the data that was put forward
12 by them and also the analysis that was put forward by
13 Associate Professor Barnett, and that approach is in the
14 context where there were very grave concerns raised. It
15 was also in the context of a mine fire that ran for 45
16 days - or continued for 45 days and shrouded Morwell and
17 surrounds in toxic smoke. It is also in the context where
18 the health effects, including the potential for death, was
19 known, or ought to have been known, certainly not least
20 from the Rapid Health Risk Assessment. It is also in the
21 context where this particular event was unprecedented and
22 so a cautious approach needed to be taken.

23 18 months after the mine fire, Voices of the Valley
24 are finally vindicated, their concerns have been
25 legitimised. The data shows an increase in mortality and
26 the cause is the mine fire, and we say that because the
27 evidence does go that far. It is possible, based on the
28 evidence before the board, to draw conclusions that there
29 was an increase and that that is causally linked to the
30 mine fire.

31 Then I'd like to turn to that data. The two key

1 conclusions that were reached by the experts were in
2 relation to what the particular statistical data shows in
3 terms of the likelihood of the increase in the number of
4 deaths, first that there is moderate statistical evidence
5 for a higher mortality from all causes and from
6 cardiovascular disease. Two, that there is some
7 statistical evidence that the increase in mortality in the
8 February to March period was greater than the increase in
9 mortality across the February to June 2014 period. In
10 relation to the second, we note that when the period of the
11 mine fire is compared to the longer period, what this is
12 really telling us is that when the period of the fire is
13 compared to the longer period, then there is some evidence
14 that there was a greater increase, i.e. the rate ratio was
15 higher.

16 If we go then to the data itself, what we have is in
17 the period February to June 2014 there was a - and this is
18 based upon the analysis in Professor Gordon's report and
19 we've set that out, the citation there, in the submissions
20 - there was a 17 per cent increase in mortality for all
21 causes. The P-value, as calculated by Professor Gordon,
22 associated with that 17 per cent increase was 0.014. Now,
23 flipped around, in the way that the evidence disclosed we
24 can with P-values, that tells us that the probability that
25 the increase was the result of chance alone is 71 to 1, so
26 chance is ruled out. The other way to put it is that it is
27 98.6 per cent likely that the increase was not due to
28 chance.

29 If we look then at the narrower period between
30 February and March 2014, we see that there was a
31 20 per cent increase in mortality, i.e. a higher rate

1 ratio. Again, this is for all-cause data. The P-value
2 here is higher, it is 0.088, and that tells us that the
3 probability that the increase was the result of chance in
4 this instance was 11 to 1, or put another way, it is
5 91.2 per cent likely that the increase was not due to
6 chance.

7 The statisticians refer to this as moderate evidence
8 or some evidence, but when one looks at it in terms of
9 probabilities, the probability is that there was an
10 increase because we've got something so different to what
11 the expected data would have been if the pattern had
12 continued from 2009 to 2013.

13 Then the next question is what is the cause. The
14 experts identified four potential causes and there has been
15 some criticism today about the fact that not all causes
16 were potentially investigated. However, the evidence of
17 the statisticians was at that point, once you determine
18 that there is an increase or, in their view, that there is
19 moderate evidence of an increase, then they scouted around
20 for all the possible causes. The four are the ones that
21 they identified and they are set out in the joint report.
22 So they are fine particle air pollution from the mine fire
23 or bushfires, that is the two, then air pollution from
24 carbon monoxide and then also heat. So they reviewed and
25 considered the data in relation to those and they concluded
26 that it was very likely that air pollution during the mine
27 fire caused an increase in mortality and the reason, as was
28 identified, was that knowledge and learning around the
29 adverse health impacts, including mortality - that there is
30 substantial knowledge and learning around the adverse
31 impacts on health, including mortality, because of

1 particulate air pollution.

2 There has been some discussion before the tribunal
3 about whether the state of the evidence before the board is
4 sufficient to enable that causal connection to be drawn, in
5 particular whether the state of the medical evidence is
6 sufficient. That was raised both in the way that I've just
7 put it but also as a question about whether or not it was
8 appropriate to extend the - to consider the timeframe of
9 February to June in addition to February to March. What
10 those submissions, in my view, ignore is the evidence that
11 Professor Armstrong gave himself in oral evidence. It may
12 be - I'm not sure if the board have transcript or copies of
13 transcript. I certainly didn't flag that I would be
14 referring to that, although I think most of it is set out
15 in the submissions. Let me just check. Certainly the
16 first transcript reference is. The transcript reference,
17 as no doubt the board will see, is on page 13 and in
18 particular it is the second half of that extract, so
19 starting from the fifth line down, at the end of that line
20 essentially, firstly, the evidence that there is a
21 relationship between particulate pollution and risk of
22 death in the Latrobe Valley is observed by Dr Flander and
23 her colleagues and, secondly, there is a large body of
24 evidence to indicate that short-term increase in
25 particulate pollution are associated with short-term
26 increases in death, as well as long-term exposure being
27 associated with longer term increase in death.

28 It is also important in this context to note some of
29 the evidence that Professor Armstrong gave in relation to
30 the particular role he has at present, advising the chief
31 health officer of New South Wales. That transcript

1 reference is found at page 569, it starts at line 14, and
2 Professor Armstrong says, "Let me first say that under
3 normal circumstances I would defer completely to Professor
4 Abramson", about effects relating to particulate air
5 pollution. However, he is saying that he knows somewhat of
6 it because he is a member of the expert advisory panel to
7 the chief health officer of New South Wales in respect of
8 air pollution and he goes on to identify some of the data
9 that he has recently come across relating to cardiovascular
10 illness, which I'll come back to briefly.

11 Importantly, this evidence was not challenged in
12 cross-examination, it stands before the board as evidence
13 of causal connection. We also then have, of course, the
14 evidence of Associate Professor Barnett, which is also
15 extracted within the submissions and I won't read that out
16 for the board. But then moreover, and this is where the
17 layers start appearing in terms of how it is that we can
18 draw this causal link, the experts also look at and
19 consider mortality data by specific cause, namely
20 cardiovascular, and so we have set out in the submissions
21 there some of the analyses - or the results of the analyses
22 that was undertaken by the experts and so we know, for
23 example, that there was an 11 per cent increase in
24 mortality and because the P-value is 0.04, it becomes
25 96 per cent likely that the increase was not due to chance.
26 Then if we narrow that down to the February to March
27 period, the rate ratio goes up, the P-value drops and we
28 have set that detail out.

29 Professor Armstrong, in the transcript reference that
30 I just took you to, in addition to identifying his recent
31 experience in relation to the New South Wales chief health

1 officer, also there identifies that his own recent studies
2 of the literature show quite strong indications of a
3 contrary view, i.e. that respiratory would be dominant and
4 that the dominant effect of air pollution on health has
5 been seen to be cardiovascular, rather than respiratory, in
6 the acute situation.

7 Another factor that is critical, both in the experts'
8 analysis and then also in the material before this board,
9 is the emergency admissions data. Again, we've set out
10 some of these statistics in these submissions, but by way
11 of highlight, the overall admissions increased by
12 16 per cent, with a P-value of 0.001, i.e. a 1 in 1000
13 chance that that is the result of chance alone. Admissions
14 relating to cardiovascular conditions increased by
15 16 per cent, the P-value is higher, so we have a 1 in 4
16 essentially chance of that being the result of chance
17 alone. Admissions relating to respiratory conditions
18 increased by 31 per cent, with a P-value of 0.07. And
19 these conclusions - or this data is then reflected within
20 the conclusions of the joint report, set out at paragraphs
21 3.1 and 3.2 and 4.1, although I won't take the board to
22 those. They are set out within our submissions.

23 As part of their analysis in examining all potential
24 causes, the experts ruled out air pollution, carbon
25 monoxide and also temperature. They did consider the
26 possibility of the 2014 bushfires contributing, but it was
27 identified only as highly as that, a possible contributor,
28 and in respect of that we have included some specific
29 submissions in our written submissions for the reasons that
30 were articulated by Professor Gordon in his evidence, and
31 that is that the duration and the severity of those fires,

1 as in the smoke from those fires, pales in comparison to
2 what was experienced from the mine fire and so the board
3 will see that there are extracted from the first Inquiry
4 report the details of those three fires and how long they
5 burned for, which, as you'll see, was not very long and
6 nothing near the duration of the mine fire itself.

7 Then, moreover, as was the evidence before the
8 tribunal, the nature of the smoke is entirely different, it
9 is an acrid smoke, not, as was described by Mr Ron Ipsen as
10 the smell of eucalypts, which is what you get if you have a
11 eucalypt fire.

12 There have been a number of comments that have been
13 made about inconsistencies in the data and we have sought
14 to deal with the two main inconsistencies in our written
15 submissions that were raised, namely, that in relation to
16 Morwell specifically in the period February to March and
17 then also the decrease in mortality in relation to
18 respiratory illnesses only. We consider we've dealt with
19 those sufficiently in the written submissions and we don't
20 go into the details of that. Needless to say what is
21 important is that those sorts of inconsistencies do not -
22 are not determinative of a finding in relation to cause.
23 The extract from the transcript that we have set out in our
24 submissions from Professor Gordon at the bottom of page 18
25 is useful in that regard. We are not in a situation that
26 is a gold standard paradigm, as he described, where we have
27 a clinical trial, where we control all of the external
28 factors and we can simply tweak one particular variable to
29 assess the direct effect, that is not the universe we're
30 in, and nor could it ever be, because no real-world
31 situation is like that, but the task to grapple with is is

1 there a causal link in those circumstances and there are a
2 body of principles that deal with that, as we have already
3 referred to, in particular arising from cases in negligence
4 and the question of causation that arises there. As I said
5 at the start, what that tells us is that certainty and
6 precision are not required but instead the totality of the
7 evidence is what needs to be looked to and in that regard
8 we submit that there is ample material before the board to
9 draw the conclusion positively that there was an increase
10 in deaths and that the cause of that was air pollution from
11 the coal mine fire.

12 That then brings me to the recommendations that have
13 been put by counsel assisting and a point of difference
14 between the submissions or the recommendations that are put
15 by Voices of the Valley and those that are put by counsel
16 assisting. As you will see from page 20 of the written
17 submissions, it is our submission that the board can and
18 should find that it was probable that there was an increase
19 in mortality for all causes and respiratory illness -
20 cardiovascular illness in the relevant periods and that it
21 was probable that that increase was caused by air pollution
22 from the mine fire.

23 We say that the evidence supports that, but in
24 addition to that what this has is it uses language that is
25 understandable by people other than statisticians. One of
26 the difficulties with the use of terms like "moderate
27 evidence" or "some evidence" is that it is not easily
28 understandable to somebody in the street or in a community
29 who isn't a statistician as to how that translates to how
30 likely it is, but the evidence, for the reasons we've
31 explained, does enable the board to conclude that it is

1 probable that there is the link in relation to both two
2 questions and we urge the board to make findings in those
3 terms.

4 The board will see that a number of further
5 recommendations are set out within the written submissions
6 as well. These arise because of the nature of the matters
7 before this board. We now know - well, we have known for
8 some time, but certainly it has been confirmed on the
9 evidence before this board, that the health impacts were
10 extreme on this community. We also know that they included
11 death and Voices of the Valley are very concerned to ensure
12 that further health effects are appropriately mitigated,
13 given what this community has already gone through and the
14 exposure that resulted from the mine fire, and so the
15 recommendations that we have set out reflect that. It is
16 focused on the further steps that are necessary to ensure
17 that the health crisis that resulted from the mine fire is
18 appropriately responded to.

19 We understand, of course, that term of reference 7 is
20 directed to the very issue of health and so we understand
21 that these recommendations can't arise or may not arise
22 directly from term of reference 6 but certainly should be
23 addressed and considered in full during the course of the
24 consideration of term of reference 7.

25 One final note in relation to the long-term health
26 study. While, of course, that is important and to be
27 commended, Voices of the Valley are very concerned that
28 they're not just a study of the effects of pollution, they
29 want to stop people getting sick, not just watch them
30 getting sick, and so the recommendations that are set out
31 in our submissions and that we say carry into term of

1 reference 7 are as important as they could be to Voices of
2 the Valley. They mean everything to stop this from
3 continuing to happen. There are no further submissions.

4 CHAIRMAN: Thank you. Yes, Mr Rozen.

5 MR ROZEN: If I could just briefly respond to a handful of
6 matters that have been raised in submissions, firstly the
7 submissions that were made on behalf of GDF Suez by
8 Mr Neal. At paragraph 9 of the written submissions, a
9 number of limitations in the data are identified. We'd
10 merely observe that they are limitations and the reference
11 sources for those limitations are from the evidence of the
12 experts, so they are clearly aware of those limitations and
13 they are limitations that the board can be satisfied have
14 been taken into account by the experts in their analysis of
15 the data and the conclusions that they have reached.

16 Secondly, some criticisms seem to be made that the
17 experts have limited themselves to the four possible causes
18 identified initially in Professor Armstrong's report. In
19 our submission that is perfectly reasonable. It was said
20 that there might have been a raging disease, for example,
21 that hadn't been taken into account. That is clearly
22 getting into the realms of pure speculation. There is no
23 evidence before the first Inquiry, or this one, of any such
24 thing and, in fact, no alternative was put to any of the
25 experts as to what another cause might be.

26 At paragraph 32 of Mr Neal's client's submissions,
27 the following appears, "The joint report appears to have
28 been written with some unspoken presumption in favour of a
29 finding of increase in mortality due to the fire" and then
30 some examples of language are given which it seems are said
31 to suggest that rather serious criticism of the four

1 experts. In our submission, there is no suggestion of that
2 at all and, in fact, the very contrary is the case.
3 Everything about the way the experts have gone about
4 assisting the board in this case would suggest that they've
5 approached all of the issues with open minds and have been
6 very careful and, as my learned friend Ms Szydzik has
7 pointed out, perhaps particularly conservative in their use
8 of language to describe the statistical evidence. What is
9 more, I certainly don't recall that being put to any of the
10 experts by Mr Neal or by anyone else, and that is a matter
11 that ought to have been put if that is a submission that
12 the board is being asked to accept.

13 A complaint was made about the late provision of
14 material and that it inhibited in some way intelligent
15 cross-examination by Mr Neal. I'm not sure if that was
16 meant to be quite as self-critical as it came out. We
17 would merely make the observation that the late provision
18 of material in any sort of curial proceedings is something
19 we've all had to deal with from time to time. If one is
20 truly embarrassed or put in a difficult position by the
21 late provision of material, then the way one responds to
22 that is to ask for additional time. There was no such
23 request made here, either of the board or of me, and to
24 make the complaint now that the late provision of material
25 has somehow limited Mr Neal's ability to cross-examine the
26 witnesses is really a baseless complaint in the absence of
27 having raised the issue when something could be done about
28 it.

29 Finally, Mr Neal, and he is joined by Mr Blanden in
30 this regard, says, "Don't worry about all this, it is all
31 very difficult, but you have got the long-term health

1 study, that will answer the question." A couple of
2 difficulties with that. One is that the evidence shows
3 that the long-term health study will not examine deaths in
4 2014. In fact, it is unlikely to examine deaths even in
5 2015, on the evidence of Professor Abramson. So if
6 Mr Neal's submission that one would expect the deaths to
7 have occurred within five days of the exposure is right
8 then a long-term health study is not going to answer those
9 questions and there is an obvious contradiction between the
10 submission that there was five day window for deaths and
11 the reference for the long-term health study not looking at
12 data until late 2015 is in paragraph 126 of our submissions

13 If I could turn to the submissions of Mr Blanden, the
14 first of those was what was said to be the normal process
15 for joint expert meetings had not been followed. It may be
16 that a normal process in relation to civil litigation can
17 be identified along the lines of what Mr Blanden suggested,
18 I make no observation about that but it may be the case,
19 but here we're not dealing with civil litigation. We are
20 dealing with a public inquiry. So for example, the use of
21 the board's expert if I can call Professor Armstrong that,
22 as a basis for discussion is perfectly proper and sensible
23 in my submission. One can't compare what might be the norm
24 in civil proceedings where the parties themselves retain
25 experts, when the experts come together with a situation
26 where a board such as this retains an expert and then that
27 expert meets with experts that have been retained by the
28 parties, a very different situation

29 In relation to the evidence of Professor McNeil which
30 is exhibit 11, there are references to that evidence in
31 both the submissions of Dr Lester and of GDF Suez and it is

1 said the board will be assisted by consideration of that
2 evidence. Obviously it's part of the evidence before the
3 board and the board is to assess and weigh it as it thinks
4 appropriate but we make a couple of observations about
5 Professor McNeil. He didn't examine the data, he is the
6 one expert along with Professor Abramson who hasn't
7 examined the data and so in those circumstances his
8 evidence is in a different category. Further, whilst he
9 did see the reports of Associate Professor Barnett and
10 Dr Flander he did not see the report of Professor
11 Armstrong, that is clear from the letter of instruction
12 that was sent to him and contrary to the suggestion by
13 Mr Blanden in his opening statement at transcript 260.

14 Thirdly, much was made by Mr Blanden of what was said
15 to be, "numerous instances" of inaccurate and misleading
16 references in the submissions of counsel assisting. They
17 are serious submissions indeed. One example was cited out
18 of the 160-odd footnotes in our submissions and that was
19 the reference at footnote 76, we would concede that the
20 transcript reference there does not make out the
21 proposition that Dr Lester accepted the proposition set out
22 in the first sentence of paragraph 57, we apologise to the
23 board for that, but having said that, the proposition
24 that's stated there is hardly a controversial one.

25 The proposition is that it's likely some residents of
26 Latrobe Valley locations such as Moe and Traralgon
27 travelled to Morwell to work in Morwell during the period
28 of the fire, we would say that is a proposition that is
29 well supported by the evidence before the board
30 particularly the evidence from the first Inquiry which we
31 would remind all present is considered to be evidence

1 before this Inquiry, and I don't think I need to go in
2 detail to that evidence but it clearly in our view
3 establishes that proposition.

4 To then extrapolate from that and say there are
5 numerous instances of misleading and inaccurate references
6 in counsel assisting's submissions is a most unfair and
7 improper submission to make without citing any other
8 examples that counsel relies upon.

9 The next complaint made by Mr Blanden is that the
10 rapid health risk assessment was, "Never going to see the
11 light of day", until it was produced by his client in her
12 statement. Firstly the rapid health risk assessment was
13 already in evidence before this Inquiry before we received
14 Dr Lester's submission, it was part of the evidence before
15 the first Inquiry, it was an exhibit at the first Inquiry,
16 it is in evidence, there is no suggestion of it being
17 hidden or not being drawn to the board's attention.

18 Secondly, Professor Abramson told counsel assisting
19 the Inquiry he was not allowed to release the document to
20 us, he did not have permission to release it, therefore it
21 could not be attached to his statement. A related
22 complaint made is that Professor Abramson wasn't included
23 in the expert meeting, the simple answer to that is
24 Professor Abramson never reviewed the data, he was not in a
25 position to contribute in the same way as the other four
26 experts were.

27 Mr Blanden makes the submission that the proposed
28 findings we set out in paragraph 69D and E ought not be
29 made by the board because they are contrary to the evidence
30 before the board. Once again a serious submission to make
31 that counsel assisting would ask the board to make the

1 submission that it's not only not supported by the evidence
2 but contrary to the evidence. We say that on the contrary,
3 proposed findings D and E are supported by the evidence.
4 Without going into detail the references that support the
5 findings are set out in paragraphs 38-41 of our
6 submissions. The words are drawn directly from the
7 evidence of Professor Armstrong and reference is there made
8 to the other experts agreeing with Professor Armstrong's
9 evidence so they are certainly supported.

10 Then a broad procedural fairness concern is raised by
11 my learned friend, Mr Blanden. It is said various matters
12 were not put to his client. It is an interesting
13 submission to make when Mr Blanden on I think at least two
14 occasions on day one objected to questions I asked of
15 witnesses on the basis they were cross-examination, the
16 suggestion seemed to be that would be inappropriate and to
17 a certain extent I would submit that is a legitimate
18 concern because it's not the role of counsel assisting an
19 Inquiry to engage in the sort of wholesale
20 cross-examination one might see in litigation. But having
21 said that I just draw the board's attention to two examples
22 in the cross-examination of Dr Lester when in my submission
23 it was fairly put to her matters that are now the subject
24 of proposed findings. The first of those is in transcript
25 397 at line 15, this is in relation to the proposed finding
26 that the fact sheets are selective and misleading, the
27 question that was asked of her was: "You see, I suggest to
28 you that in relation to the 19 September 2014
29 document there is a degree of selectivity about the way the
30 data is presented to support in effect an argument there
31 was no relationship between the fire and any increase in

1 deaths; what do you say to that?", and she responded to the
2 effect she didn't agree with that proposition. Further,
3 Dr Lester had access to Professor Gordon's criticism of
4 those fact sheets before she came to give her evidence here
5 so any suggestion she was unaware of that criticism or that
6 somehow is now taken by surprise that criticism is being
7 made is entirely baseless.

8 The second example concerns this conflict of interest
9 issue. It seems to be said that for the first time
10 Dr Lester finds out today counsel assisting considered she
11 may have had a conflict of interest in relation to her
12 engagement at the time, I note transcript 400, line 4, a
13 question after referring to the engagement of the Melbourne
14 University: "Did you feel you may have had a conflict of
15 interest in doing this work?---No, I don't believe I had a
16 conflict of interest"; then at line 12: "I understand that
17 but did it not occur to you that it might have been better
18 if you were at arm's length from that process?---No, look,
19 I don't agree with that." So far as the substance of the
20 concern, they were clearly put. There are other examples
21 and I won't take up the board's time but in my submission
22 there is no question of unfairness in the way this Inquiry
23 has been conducted either in general terms or in relation
24 to the specific concerns about Dr Lester.

25 A number of other concerns under the broad heading of
26 procedural fairness or a lack thereof were raised. If I
27 can deal with one, something was sought to be made of the
28 CSIRO modelling, it hadn't been properly examined. The
29 evidence is clearly the case that in Professor Abramson's
30 evidence that not only did he refer to the modelling that
31 was put up on the screen, there was an opportunity for him

1 to give evidence about it and it was observed this was an
2 incomplete process that the CSIRO were doing further
3 modelling which would inform the long-term health study.

4 The final matter I would say by way of reply is to
5 endorse the submissions of counsel representing Voices of
6 the Valley in this regard, and that is that the board has
7 had the benefit of a very thoughtful and considered
8 examination of the evidence particularly from four expert
9 witnesses who gave considerable time and their own
10 convenience to assist the board by coming together and
11 producing a joint report. That joint report when
12 considered in light of the statistical evidence that they
13 referred to in their individual reports provides in our
14 submission a secure basis for making the findings that we
15 urge the board to make, and with respect, whilst we have in
16 our submissions sought to faithfully reproduce the actual
17 findings of the experts, the evidence of the experts, there
18 may well be considerable merit to the observations made by
19 counsel for Voices of the Valley that a formulation of
20 findings along the lines of probability as set out in their
21 submissions could be an entirely appropriate way for the
22 board to approach making any findings in this case.

23 They are the submissions in reply.

24 CHAIRMAN: Thank you, Mr Rozen. There may or may not be
25 further hearings but certainly not in respect to this
26 matter, so I will repeat the thanks I gave to everyone
27 concerned last week and we will now end the proceedings.

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