
TRANSCRIPT OF PROCEEDINGS

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

2014 HAZELWOOD MINE FIRE INQUIRY

MORWELL

THURSDAY, 12 JUNE 2014

(13th day of hearing)

BEFORE:

THE HONOURABLE BERNARD TEAGUE AO - Chairman

PROFESSOR EMERITUS JOHN CATFORD - Board Member

MS SONIA PETERING - Board Member

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1 MS RICHARDS: Good morning. I mentioned yesterday afternoon
2 that the Inquiry's accumulated a fair number of
3 documents that have been provided largely in response
4 to requests made of witnesses during their evidence.
5 What I would like to do now is to tender those as a job 10.04AM
6 lot, as it were.

7 Ms Stansen and her team have assembled a folder of
8 these additional documents, starting at No.73 which is
9 the exhibit number that we are up to. What I'd like to
10 do is to identify the documents and tender them as a 10.05AM
11 bundle now, which is I think the most efficient way of
12 doing it.

13 The first document in the folder which is numbered
14 73 are the ESTA logs which cover the period
15 7-24 February. They were provided by the Victorian 10.05AM
16 Government Solicitor's Office in response to a request
17 made of Mr Lapsley on the first day of the hearing.

18
19 #EXHIBIT 73 - ESTA logs from 7-24 February 2014 provided by
20 VGSO.

21 The second is a bundle of information that's been
22 obtained directly from the Bureau of Meteorology that
23 includes automatic weather observations from the
24 Latrobe Valley Automatic Weather Station from
25 9 February, a letter from the Bureau estimating the 10.05AM
26 time of the wind change at Morwell, which for the
27 record was approximately 1.40 in the afternoon, and
28 then a printout from the Bureau's website of daily
29 observations from the Latrobe Valley Automatic Weather
30 Station from February and March, which is important 10.06AM
31 because it indicates the prevailing wind on each of

1 those days. Clearly conditions in Morwell varied
2 considerably depending on the prevailing wind
3 direction.

4 The second two documents are both in response to a
5 request made of the Inquiry to on the one hand the CFA 10.06AM
6 and on the other hand GDF Suez to provide some internal
7 agency operating procedures that are referred to in the
8 Hazelwood Emergency Response Plan.

9
10 #EXHIBIT 74 - Bureau of Meteorology weather information 10.15AM
11 (x3).

12 Document 75 is the response received from VGSO on
13 behalf of the CFA, and document 76 is the response
14 received from GDF Suez's solicitors.

15
16 #EXHIBIT 75 - Email from VGSO dated 27 May 2014.

17
18 #EXHIBIT 76 - Letter from King & Wood Mallesons dated 27 May
19 2014.

20 Document 77 is a summons for production issued by 10.07AM
21 the Inquiry addressed to GDF Suez, really for the
22 record so that it was clear what was asked for, and
23 document 78 is a quite detailed covering letter that
24 explains what has been produced in answer to that
25 summons. 10.07AM

26
27 #EXHIBIT 77 - Summons for production of documents addressed
28 to GDJ Suez Australian Energy dated 28 April 2014.

29 #EXHIBIT 78 - Letter from King & Wood Mallesons dated 3 June
30 2014.

31 There are then as documents 79 and 80 two quite 10.07AM
 detailed letters from King & Wood Mallesons on behalf

1 of GDF Suez with some enclosures responding to specific
2 requests made of them and their witnesses.

3
4 #EXHIBIT 79 - Letter from King & Wood Mallesons dated 3 June
5 2014.

10.15AM

6 #EXHIBIT 80 - Letter from King & Wood Mallesons dated 6 June
7 2014.

8 Document 81 is two diagrams of the Fire Service's
9 pipe network. You may recall that an annexure to
10 Mr Dugan's statement was a schematic of the Fire
11 Services pipe network as it was at 9 February, and he
12 explained in his evidence, and we'll hear more evidence
13 about that this morning from Mr Polmear, that some new
14 pipes were laid during the fire. What we'll now have a
15 diagram of those new pipes and a diagram of the
16 finished product or the current Fire Services pipe
17 network.

10.07AM

10.08AM

18
19 #EXHIBIT 81 - Fire services pipe network diagrams (x2).

10.15AM

21 Document 82 is a bundle of correspondence that
22 was provided to us by GDF Suez after Mr Pullman had
23 given his evidence about timber plantations in
24 proximity to the mine and indicates some correspondence
25 between GDF Suez and neighbours about timber
26 plantations. Regrettably one of those letters was to
27 Mr John Mitchell, who was in 1998 the CEO of Gippsland
28 Water but the letter came into our possession after
29 Mr Mitchell had given his evidence so we had no
30 opportunity to ask him about it at the time.

10.08AM

10.08AM

1 #EXHIBIT 82 - Correspondence provided by GDF Suez in
2 relation to neighbouring timber plantations.

3 Document 83 is a response from the Victorian
4 Government Solicitor to a request that was made of
5 Mr Kelly of WorkSafe, I think by Professor Catford, to 10.09AM
6 provide the occupational standard for carbon monoxide
7 exposure, and that's been provided and it's at document
8 83.

9
10 #EXHIBIT 83 - Letter from VGSO dated 10 June 2014. 10.15AM
11

12 We're nearly there. Document 84 is a statement
13 of Steven Warrington, who was the Deputy Regional
14 Controller for almost the entire duration of the fire.
15 We propose to tender that without requiring 10.09AM
16 Mr Warrington's attendance.

17
18 #EXHIBIT 84 - Statement of Steven Warrington.
19

20 CHAIRMAN: If there had been more time I would have liked to 10.09AM
21 have seen Mr Warrington, but given the circumstances
22 that's understandable.

23 MS RICHARDS: Time is our enemy, I'm afraid. Document 85 is
24 a bundle of different material provided by the
25 Environment Protection Authority arising from 10.10AM
26 Dr Torre's evidence. It became clear during his
27 evidence that there was some more detailed data that
28 could be provided, and that is included at document 85.

29
30 #EXHIBIT 85 - Documents provided by the EPA (x5). 10.15AM
31

1 Then document 86 concerns an enquiry that was made
2 of the State to provide the maps that were considered
3 by the meeting referred to by Mr Mitchell in his
4 evidence on 28 February and those maps have been
5 provided. They're the three-dimensional
6 representations of the travel blanket data, it would
7 appear, and we've been advised that Mr Merritt confirms
8 that these were the maps considered at that meeting on
9 28 February. There will be an opportunity tomorrow to
10 check that with Mr Lapsley.

10.10AM

10.10AM

11
12 #EXHIBIT 86 - Maps provided by John Merritt in a meeting
13 with Latrobe City Council on 28 February 2014.

14 If I could tender all of those as a bundle with
15 the exhibit numbers as identified in the index.

10.11AM

16 MEMBER PETERING: Ms Richards, in relation to the
17 documentation, could I just clarify, a document that
18 was referred to by Mr Niest yesterday in his evidence
19 was the safety management system. Could I just get
20 clarification from either the Victorian Government
21 Solicitor's Office or Ms Doyle on behalf of GDF Suez as
22 to what particular document he was referring to and
23 whether that is being produced to the Inquiry, please?

10.11AM

24 MS DOYLE: We had some discussions with Counsel Assisting
25 yesterday. We've obtained that document. We were
26 hoping it would make it into the tender document this
27 morning but it's too large, so we've just making
28 arrangements for that to be made available.

10.11AM

29 There's a shorter document called, "Safety
30 management system manual", but because I'm looking at
31 it after court yesterday I could see that it includes

10.12AM

1 references to a number of other documents that comprise
2 a larger suite, we're having to get those, I think
3 they're actually being copied as we speak. They'll be
4 available later today.

5 MEMBER PETERING: Thank you. Just to you, Dr Wilson, I just 10.12AM
6 wanted clarification, that was the document Mr Niest
7 was referring to?

8 DR WILSON: That accords with our understanding.

9 MR ROZEN: In relation to that response to Ms Petering's
10 question, I can confirm that we have, either late 10.12AM
11 yesterday or early today, I'm not sure, been provided
12 with a document, "GDF Suez Hazelwood safety management
13 system manual", which is a 16-page document, and I note
14 what Ms Doyle has said about further material that is
15 coming to us. It is regrettable, to say the least, 10.13AM
16 that this information is arriving on the second-last
17 day of the hearing when it's information that was
18 sought some time ago in correspondence with solicitors
19 acting for GDF Suez. Anyway, we'll do our best to get
20 on top of the material and draw it to the attention of 10.13AM
21 the appropriate experts before they give their
22 evidence.

23 MS RICHARDS: With all of those housekeeping matters out of
24 the way, the first witness today is the last community
25 witness for the public hearings, Lisa Wilson. 10.13AM
26 Ms Wilson, could you come forward please?

27 <LISA JANE WILSON, affirmed and examined:

28 MS RICHARDS: Good morning, Ms Wilson?---Hello.
29 Can you please repeat your full name and tell us your
30 address?---Lisa Jane Wilson, No.1 Donald Street, 10.14AM
31 Morwell.

1 You are employed here in Morwell as the Gippsland Homeless
2 Network Coordinator for Quantum Support
3 Services?---That's correct.

4 Which is located in Princes Drive just on the other side of
5 the railway line?---Exactly.

10.14AM

6 You've made a statement to the Inquiry which attaches a
7 submission that you made to the Inquiry and has 45
8 paragraphs?---That's correct.

9 Are there any corrections you would like to make to that
10 statement?---No, I think this is an accurate portrayal
11 of both.

10.14AM

12 I tender that, thank you.

13
14 #EXHIBIT 87 - Statement of Lisa Wilson.

10.15AM

15
16 MS RICHARDS: Ms Wilson, in the second paragraph of your
17 statement you tell us that you and your partner are
18 expecting a baby in July?---Yes.

19 It's your first baby?---It is.

20 And you were in much earlier stages of your pregnancy during
21 the fire in February and March this year?---Yes, around
22 18 weeks at the start.

10.15AM

23 The reason why we're calling you first today is that your
24 obstetrician has made very clear that an appointment
25 with him is much more important than giving evidence to
26 the Inquiry?---He did think that.

10.15AM

27 Can I ask you, a little before we move to the events of
28 9 February, about the organisation that you work for,
29 Quantum Support Services. What's the nature of that
30 organisation?---Quantum Support Services is a local
31 welfare agency that's been operating for approximately

10.15AM

1 30 years within Gippsland. Primarily the clients that
2 we work with are either homeless, experiencing family
3 violence or needing the provision of home based care.
4 About how many people work for Quantum Support
5 Services?---We've just proudly gone over 100 staff. 10.16AM
6 Does it operate across Gippsland?---It does, we have three
7 main sites, one being Morwell, Warragul and Bairnsdale.
8 As you say in paragraph 3 of your statement, you are fourth
9 generation Morwell?---That's correct.
10 And you've lived here your entire life?---Yes, other than a 10.16AM
11 brief period away overseas I've always been in Morwell.
12 You've travelled but you've come back?---Yes.
13 Can we move to the events of 9 February. You were actually
14 away from Victoria on that day, weren't you?---We were.
15 We were in Queensland on a family holiday. 10.16AM
16 The first you heard about the fire was the CFA warnings that
17 arrived on your mobile phone?---That's correct.
18 You weren't able to return home when you had planned?---No.
19 Because the roads were closed, but you returned home the
20 following day, the Monday?---We did. 10.17AM
21 What did you find when you returned home?---Better than what
22 we thought we would find. Our last recollection of any
23 fire in this area was from the Black Saturday Fires and
24 having that image in our head we thought it would be
25 the same because it was closer, if not worse. We came 10.17AM
26 home to what appeared to be very smoky and gritty air
27 and we came home to probably some uncertainty more so
28 than anything, trying to understand what was going on.
29 In that first week how easy did you find it to find
30 information about the fire and the likely effect of the 10.17AM
31 fire?---We became really optimistic when we were given

1 ideas like CFA had put on their website that we could
2 contact NURSE-ON-CALL or we could contact various
3 different groups to be able to give us information
4 about health and what was going on, and also to be able
5 to attend community forums.

10.18AM

6 We started to find out quite quickly that the
7 information that was available through those sources
8 were not what we were looking for and were not as
9 helpful as we had hoped.

10 So, what information were you looking for?---Firstly, our
11 thoughts were around, we had a child that was
12 developing at about 18 weeks, so lung development stage
13 for a child, and not knowing whether or not there was
14 an increased risk to our child due to what was in the
15 air. The things we wanted to know was what was in the
16 air, whether or not it would be advisable for us to
17 look to stay somewhere else, how long this might be
18 going on for, and also what we could do to make sure
19 that the pregnancy was safe and that we were healthy
20 enough to help that pregnancy.

10.18AM

10.18AM

10.19AM

21 Where did you look for the answers to those questions?---I
22 must admit, one of my first port of call was the
23 Department of Health website. Having worked within
24 Government for many years, relying on information that
25 comes through a central source is always valuable, so I
26 started there and didn't get very far. Then went to
27 CFA information centres and then went to community
28 meetings. We listened to radio, we tried to get as
29 much information as we could. Our employer gave us
30 what they knew, but we struggled to find the
31 information that we wanted.

10.19AM

10.19AM

1 So you clearly are connected to the internet?---Yes.
2 And that was a source of information for you; no difficulty
3 with connectivity?---No.
4 Although you note that there was a significant increase in
5 your internet usage during that time?---For us, the 10.20AM
6 main reason for seeking information online was around
7 some independent information that was up-to-date and
8 accurate and that could have come from any source
9 anywhere across the world, let alone what was happening
10 for us locally. 10.20AM
11 You say that you live near the mine. I might get you to
12 point out where on the map possibly. There's a ruler
13 there near your right hand?---I'll have to get my
14 bearings. We live just here, right here, on the corner
15 of Quigley and Donald Street. 10.20AM
16 So Donald Street runs off McDonald Road?---Yes.
17 So it's on the northern side of the railway line, directly
18 to the north, opposite the leisure centre, performing
19 arts centre?---That's correct.
20 MEMBER PETERING: Ms Wilson, you have just given evidence 10.21AM
21 around, that you were searching for information, but
22 what particular information would have helped you?---I
23 think, first of all, we were looking for anything
24 around, knowing that when you're pregnant your
25 respiratory system is struggling anyway because of 10.21AM
26 what's within you, I wanted to know how to best keep my
27 respiratory system going well so that my baby got the
28 oxygen that it needed and so that it would grow
29 effectively.
30 Some of the things that we wanted to know was, was 10.21AM
31 there any toxins that we needed to be more mindful of

1 given that we did have a foetus; was it possible for us
2 to determine around health checks; was there a way of
3 determining whether or not our child had been affected
4 already or likely to be affected. I'm easily intrigued
5 by events such as these because I see the opportunity 10.22AM
6 to learn from them, so it was also about finding out,
7 if they didn't have any information, how might we be
8 involved in assisting in gaining that information; we
9 had ourselves and our child that could be observed,
10 monitored, looked at. So for us initially it was just 10.22AM
11 around what kind of risk there is.

12 I have a belief, having grown up here for four
13 generations now, that there is a level of risk
14 associated with living so close to a coal mine;
15 respiratory issues, fertility issues et cetera, none of 10.22AM
16 it's necessarily proven but it's about family
17 experience. So we knew there was some level of risk
18 living and raising a child in this area, but we wanted
19 to know what the increased risk was, but in order to
20 get that we had to get people to at least acknowledge 10.23AM
21 that there was any risk in the first place, and we knew
22 that was hard, we knew that was going to be difficulty.
23 But we just wanted information around, should I be
24 doing something different to what I was doing, should
25 we look to relocate? 10.23AM

26 We knew there was inevitable things that you
27 wouldn't be able to determine - how long the fire would
28 go for, what exactly was going to be the impacts on our
29 child, but we thought there might have been information
30 around what was in the air. So it for me was probably 10.23AM
31 the most tangible evidence anybody would have. If they

1 could do testing, if there was information about what
2 was there, we could then learn from that. So, if there
3 was toxins in the air that might usually cause this in
4 an unborn foetus, well, we could respond to it in that
5 way.

10.23AM

6 All of the information that we found when we
7 looked at the impacts of smoke on an unborn child was
8 around passive smoking, so passive tobacco smoking. So
9 we took that information a little bit, and it was about
10 the grit and the grime that was around as well, it was
11 to thick, thicker than usual, so what was the increased
12 risk.

10.24AM

13 MS RICHARDS: I understand from what you've said that you
14 were looking for advice about what precautions you
15 should be taking?---Exactly. I think in my experience,
16 being informed in making a decision is the best way to
17 make a decision; you can consider all options, but the
18 most important part is being informed, and I just
19 didn't feel that we had that. That left me feeling, a
20 woman who I think is relatively well educated and well
21 connected to her community, as inadequate and unable to
22 make a decision for her family.

10.24AM

10.24AM

23 Returning to some more prosaic matters, you tell us in
24 paragraph 11 of your statement that dust in your house
25 is nothing new, but that it was significantly worse
26 during the mine fire?---It was. We live in an old
27 commission house so the windows aren't as sealed as
28 you'd like them to be, and we get accustomed to the
29 black grit that comes from coal dust, we've always had
30 it, we've always known about it, just wipe it up when
31 you see it. But during this period it got worse and it

10.25AM

10.25AM

1 took more effort to clean than you usually would have,
2 and particularly exterior was really bad.

3 And practical difficulties with drying your washing, you had
4 to run the dryer, even at the height of summer?---Yes.

5 You also mentioned your phone and your internet bill. You 10.25AM
6 remark in paragraph 13 on the worst visibility that you
7 experienced; was that on the weekend of the 15th and
8 16th, the first week of the fire?---We had moved
9 ourselves out of the area at that time. What we were
10 doing was going out during the day to be away as much 10.26AM
11 as possible and we'd return in the afternoon, and it
12 was the Saturday, and it was the worst; it was also the
13 day where we got another CFA warning about air quality,
14 so I would say that was the worst for us. But because
15 I have a job that covers the whole of the region as 10.26AM
16 much as possible, I got out to other areas during the
17 day. And at night-time where it seemed to have the
18 greatest impact, you couldn't really see what it was
19 looking like outside.

20 You say by the second week you were having some difficulty 10.26AM
21 yourself breathing. You took the step of contacting
22 NURSE-ON-CALL; was that of assistance?---I think
23 NURSE-ON-CALL did the best with what they knew. I had
24 contacted them asking the question around, look, some
25 of these symptoms could be the same as being pregnant, 10.26AM
26 difficulties breathing, feeling congested, those kinds
27 of things.

28 The thing that disappointed me most about
29 NURSE-ON-CALL is, yes, it is a service that spans more
30 than just the Latrobe Valley, but even when I provided 10.27AM
31 her information about the increased asthma and

1 increased bronchitis that we have in the area, could
2 she give me some more information about what might be
3 happening due to the smoke? She said, "We don't know
4 and we don't have that information." Looking back now,
5 I think about it and I think, well, fair enough, it was 10.27AM
6 early days, when it started to become within a week
7 people seeking advice and information, that they may
8 not have had time to collect.

9 I did feel though that I was trying to save my GP
10 from yet another person taking up a spot; it's hard to 10.27AM
11 get GP appointments here in the valley because of the
12 lack of medical staff, but in the end that's where I
13 went and the NURSE-ON-CALL had said to me, "If you
14 hadn't of spoken to us today, what would you have
15 done?" I said, "Well, I would have gone to the doctor 10.28AM
16 because what else are you supposed to do?" So it felt
17 a little bit like we were being questioned about who we
18 were and what we were doing, more so than us trying to
19 get information from them.

20 You went to the second of the community meetings at Kernot 10.28AM
21 Hall on 18 February, and it's clear from paragraph 15
22 that you didn't find that to be a good experience?---I
23 was disappointed, largely because I'm pretty proud to
24 be from Morwell and, like you said earlier, went away
25 and came back again and I think I have a good sense of 10.28AM
26 community, and to see the level of aggression that was
27 involved in that meeting, and the number of people
28 that - it may not have been as many as I thought, but
29 it really made an impression on me that there was a lot
30 of people that weren't local that got near a microphone 10.28AM
31 and got an opportunity to speak, and they monopolised

1 the time with experts which meant that locals couldn't
2 actually ask the questions that they wanted to ask
3 either.

4 When you say not local, do you mean don't live in the area
5 or had not lived in the area for long?---Those who I 10.29AM
6 heard speak were talking about coming from outside of
7 the area for brief periods of time working in the area,
8 because they were taking contracts mining all around
9 the country. There was people who didn't identify
10 whether they were from Morwell or not, but later it was 10.29AM
11 found that they weren't, some information had come
12 through social media about them not being from that
13 area, and just people's views around our local area is
14 very different to what I had expected to hear, and
15 there was a lot of people who were trying to - and fair 10.29AM
16 enough - take a stance on an environmental level around
17 what should and shouldn't be happening within this
18 community, but forgetting the fact that we live in a
19 community that is next to a coal mine and we're very
20 aware of that. So, to me the sense of local response 10.29AM
21 was somewhat absent.

22 We had some evidence yesterday from another member of the
23 community who attended the meeting who commented that
24 it wasn't particularly well run to begin with, but
25 that, as the meeting went on, people were persuaded to 10.30AM
26 line up and take turns?---Mmm.

27 As that happened, were the answers that you were looking for
28 being provided by those who were there to answer
29 questions?---Again, I probably put too much emphasis on
30 the Department of Health, having thought that they 10.30AM
31 would be the superior information point for us, and

1 they were probably the most disappointing in the
2 information that they provided.

3 I think the CFA did the best they could to run
4 what was a very big community event with very different
5 issues in a community that has varying views. But what 10.30AM
6 we found was, we chose to leave towards the end because
7 it wasn't getting anywhere and people were just
8 escalating in their views and behaviours which, to us,
9 wasn't conducive. We thought it was better to go home.
10 The information we got out of that that was valuable 10.30AM
11 was that there was CFA information buses; we struggled
12 to find where they were on days but we did find them
13 eventually, and that there would be some access to
14 further information through community bulletins and
15 written newsletters. 10.31AM

16 So for us, we thought we'll leave everybody else
17 to continue with their angst and we will go and see
18 what we can find out.

19 You did seek out the CFA mobile information van who referred
20 you to the Health Assessment Centre?---They did. We 10.31AM
21 were fortunate in that, after a couple of attempts to
22 track the van down, we got a fantastic local ambulance
23 officer named Kim who was able to talk to us about what
24 was going on as far as health goes, why there was
25 uncertainty, why there was a lack of information and 10.31AM
26 where we might seek some more support. It was only at
27 that time that the health assessment centres had been
28 opened and obviously that was her recommendation that
29 we go along.

30 So, you attended the Health Centre on a number of occasions, 10.32AM
31 and also saw your local GP regularly?---Yes.

1 As you say in paragraph 19, you were alternating between the
2 two and seeing at least one of them at least a once a
3 week?---Yes. For us the reason we chose to do that was
4 more so the pressure from family and friends that
5 didn't live in the area that kept saying, it's unsafe, 10.32AM
6 why are you there? Media reports are this. So for us
7 we wanted to satisfy that we were doing everything that
8 we could possibly do to make sure that our health was
9 okay, and contact with health centres and our GP were
10 all the same. At this stage we've not received any 10.32AM
11 advice to say it's unsafe for you to be here, keep
12 coming in and getting yourself checked, it's the best
13 you can do.

14 At one point you were advised by an ambulance officer that
15 you saw that you should wear a mask. What mask did you 10.32AM
16 and your husband use?---My employer had been quite
17 proactive about getting dust masks that had a filter on
18 them for people, so we ended up using those masks. It
19 was the same ambulance officer that told us to go to
20 the Health Assessment Centre. She was really clear 10.33AM
21 about the uncertainty within the particles within the
22 air means that the caution that you need to apply is
23 around, how do you make sure those particles don't go
24 through to your own oxygen. So, every time we were
25 outside of a building we would wear those. 10.33AM

26 In paragraph 22 you relate trying to contact the Department
27 of Health and actually telephoning the Department of
28 Health to seek information. Approximately when did you
29 make that telephone call?---I can't recall off the top
30 of my head but I think it was about 26 or 27 February. 10.33AM

31 How did you find the number? Was it on a community

1 information sheet or did you look it up in the white
2 pages?---I Googled it and was sure to - because I've
3 worked for the Department of Human Services
4 previously - ensure that I had the Department of
5 Health's phone number, and clearly saying that that was
6 who I was looking for.

10.34AM

7 What experience did you have when you made that telephone
8 call?---I got a receptionist who was very prompt and
9 transferred me through to who I thought would be
10 someone who could give me some information about the
11 effects on our child or what they might have been
12 studying or trying to find out more about and things
13 that we needed to be cautious of.

10.34AM

14 When I got through to the person I was transferred
15 to, they were a Department of Human Services Grant Line
16 Operator, so completely different; they were dealing
17 with the grants that were available through the
18 Department of Human Services for relocation assistance.
19 So when I first started to speak to them, they did
20 their triage and determined who I was, where I lived,
21 what my income was and then promptly told me that I
22 didn't qualify for the support that they had available.

10.34AM

10.34AM

23 I reminded them that I wasn't ringing for that
24 reason and that I'm very aware of what they do do and
25 wasn't seeking that assistance, I was looking for
26 information and that I'd been transferred obviously
27 inaccurately to them and how do I get back to the
28 Department of Health to speak to a health officer who
29 might be able to give me some local information. I was
30 told I'd get a call back that day. I haven't heard
31 anything.

10.35AM

10.35AM

1 That, as you say in paragraph 22, made you feel insulted and
2 angry?---Yes.

3 Both then and subsequently?---And I felt like I was wasting
4 the resources of those who needed it. So, I'd gone to
5 lengths to determine who best to talk to about what I 10.35AM
6 wanted to know, and I don't think that there was
7 anything more that I could do. When I ended up put
8 through to a grants officer who clearly would have been
9 very busy dealing with these issues all the time and
10 I'm guessing I wasn't the first one inappropriately 10.36AM
11 transferred there that day, it was taking up the
12 resources of those people, and it made me frustrated
13 that, after making myself so clear about what I was
14 looking for, that there was an assumption that this was
15 about money. 10.36AM

16 Over the page in your statement you tell us that you and
17 your partner did relocate, although perhaps not as soon
18 as you would have wished because you needed to find
19 somewhere that would also accommodate your cats?---Yes.
20 I must admit, I'm a bit of a crazed cat lady. I felt 10.36AM
21 that my family was more than just the three of us. We
22 had to look at options that meant that my partner
23 wasn't travelling two hours to work. We had been
24 living together and this was most of our experience of
25 living together, was this experience, and so we didn't 10.37AM
26 want to be separated, we didn't want to be in separate
27 places; he knew I was uncertain and upset, which is not
28 something that's common for me, so he wanted to be with
29 me, and that was fair enough, he wanted to know that
30 both of us - all three of us were okay. 10.37AM

31 So initially we went and stayed with friends for

1 weekends in other areas that weren't so far away, and
2 then suddenly we had these fantastic friends from East
3 Gippsland who offered us the opportunity to go down
4 there, but having animals themselves in the first week,
5 we couldn't take ours. So we set up a contingency
6 plan, dad hung out with the cats, and then the week
7 later we took them down to Metung with us where we
8 stayed for another two weeks.

10.37AM

9 You say in paragraph 27 that your move to East Gippsland
10 coincided with the announcement by Dr Lester that
11 people in high risk categories, including pregnant
12 women, should consider temporary relocation. Did you
13 relocate because of that advice or had you already
14 decided to do it?---We'd come to the point that we felt
15 distressed and useless, basically, so we were thinking
16 we had to move and these friends had contacted us a
17 couple of days before Dr Lester's announcement and had
18 said, look, come and try it, come and see how you go,
19 it's better to be safe than sorry.

10.37AM

10.38AM

20 Because of the uncertain timelines we started to
21 think we need to, and then our employer came out and
22 said there was the opportunity to work from another
23 site and were prompting us to do the same. So it had
24 got to us, it had got to us, everybody who had an
25 opinion based on media coverage around what was going
26 on, for us meant that we decided we would move on.
27 Then, when we heard from the Chief Health Officer we
28 decided that was the confirmation that we needed, an
29 independent person who was able to say to us, it's
30 recommended that you relocate. We knew we weren't
31 going to get much more than that.

10.38AM

10.38AM

10.39AM

1 We thought we clearly fell within the criteria of
2 those who are high risk. Later we heard things like,
3 it was only for anyone in the south side of Morwell, I
4 didn't know the south side of Morwell existed before
5 this. Then it was around, do what you think you need
6 to do for yourself, so we decided it was time to go.

10.39AM

7 Having made that decision, and for you it was not an easy
8 decision to come to, what was your reaction on learning
9 that on 28 February Dr Lester had advised people,
10 including people in your group, to consider
11 relocating?---I think when you look at any crisis it's
12 very hard to make the right decision at the right time,
13 but you really do rely on the authorities that are in a
14 position of authority, because you expect them to have
15 all of the information available to them. That means
16 that anything shared with the community is up-to-date
17 and relevant and it allows you to make an informed and
18 considered choice.

10.39AM

10.40AM

19 I felt, when she did come out and say, "We
20 recommend you relocate", and it was only a matter of
21 days before we'd heard everything is fine, no one needs
22 to relocate, I just felt inadequate, I just felt like
23 everything that I had portrayed to people about what we
24 were doing was right and informed and considered,
25 became something of, "You would have been better off
26 just trusting yourself and your family rather than an
27 expert", not to be rude.

10.40AM

10.40AM

28 Would it have been useful to you to have that advice earlier
29 in the fire?---It would have because I think, when you
30 have a bushfire, we've gone through so much in the last
31 few years around, you must get out, you must have a

10.40AM

1 plan, you must do this. But when the risk isn't as
2 tangible or as visible through something like smoke,
3 you really do rely on those who have greater
4 information than you to assist you in making that
5 decision.

10.41AM

6 I've always said to my family, you have to trust
7 in the information you get from Government authorities
8 or people who know what's going on. In this instance I
9 couldn't feel like I could make that same statement
10 because we'd felt let down.

10.41AM

11 You stayed away for about three weeks, it was a relief to be
12 out of Morwell, even the cats improved?---Mm-hmm.

13 On return after about three weeks you had a wonderful
14 surprise to find that your family had cleaned your
15 home - - -?---And I'm not going to look to my left, to
16 my sister. We thought, the thought of cleaning our
17 home, knowing what it was like when we'd gone home to
18 visit, was just overwhelming, and not knowing - you
19 know, we'd been told to wear masks in the clean up, but
20 we'd also been told it was safe and then told it wasn't
21 safe to go home. I'll clarify that: So we originally
22 were told it was safe to remain in our home and then we
23 were told the recommendation is to relocate, so how
24 much did we know was true around wearing a mask would
25 be safe enough to clean your home?

10.41AM

10.42AM

10.42AM

26 As a person's who's quite independent, to think
27 that I would need to ask for assistance or look for
28 assistance was overwhelming. My partner, he, "Oh we'll
29 be right, we'll clean it up." But thankfully I have a
30 fantastic family which lots of people don't, but we'd
31 found out on the Monday, I think, that we could go home

10.42AM

1 and we thought we'd go home on the weekend and do what
2 we could to clean up and rally whoever we could to
3 clean up and my sister had rang me Monday night to say
4 her and her husband and two sons had gone and cleaned
5 our entire house. When we got home there was still a
6 slight smell, but it was amazing to think that we could
7 go home.

10.42AM

8 There's one thing to be said about - I work with
9 homeless people so I know that being displaced from
10 your home with no choice at all is a horrible
11 experience, and I always thought I understood that; I
12 now understand that, and having no choice about, not
13 feeling informed enough to make a choice about what was
14 right and wrong, and always feeling like whatever
15 choice you made was wrong, being able to go home to
16 your own home where, yes, your cats were more
17 comfortable because they weren't hiding under the bed
18 any more, and where your partner could get to work
19 reasonably and not be tired all the time, and that you
20 yourself felt like you were able to continue to grow
21 your home. We were 18 weeks pregnant, so we'd been
22 given gifts for our baby that had never been opened,
23 that we had to think about how we were going to clean
24 them.

10.43AM

10.43AM

10.43AM

25 We had to think about things like, if we were
26 going to clean all those goods, should we do that now
27 or should we wait, because is it still in the air, is
28 it still? What was going on? So, yes, we were very
29 lucky that we were able to come home earlier than we
30 anticipated. But, we just got engaged; our engagement
31 cards had been on the mantelpiece, they stunk. My

10.44AM

10.44AM

1 sister was wise enough to put them in a plastic bag so
2 we could keep them and put them with our other
3 keepsakes; the little things that you don't expect to
4 be confronted with in a time like that, that really
5 overwhelm you, so that was our experience.

10.44AM

6 I'd like to ask you, moving from your personal experience,
7 and it's been a particularly personal dimension to this
8 for you and your partner, I'd like to ask you about the
9 group of clients that you're employer supports and that
10 you work to support.

10.44AM

11 How did the mine fire affect that group of
12 people?---I think you've read in my statement that I
13 don't do direct service delivery, so therefore clients'
14 exact experiences I'm not able to speak about. I run a
15 practitioner forum which is all of the welfare agencies
16 that deliver homelessness services in Latrobe come
17 together and I consult with them and support them and
18 look at some of the trends and issues that are going on
19 within the area.

10.45AM

20 Our meeting that we had just after the coal mine
21 fire in March was dominated by how helpless staff felt
22 in that period of time in assisting people who were
23 homeless and experiencing family violence. Some of the
24 most interesting points for us were that, regardless of
25 what crisis is going on, other crisis still occurs.

10.45AM

26 So, women were still leaving family violence
27 situations, and we were having to relocate them - we
28 couldn't get a hotel this side of Sale or this side of
29 Drouin, so they were going outside of their own
30 community where all their supports are, where we would
31 usually work with them to make them as safe as

10.45AM

10.46AM

1 possible, and it made some of them think about whether
2 they'd made the right choice in leaving in the first
3 place, their family home.

4 With homeless people, we don't have the
5 traditional rough sleeping that people talk about; we 10.46AM
6 have people that sometimes live on the creeks, more in
7 East Gippsland than locally, but we have a lot of couch
8 surfers, so they move around from house to house. So
9 when these houses were in crisis, they didn't have the
10 opportunity to go to those places. They talked a lot 10.46AM
11 about, the ones that I did have contact with blew me
12 away; they said, "Well, Lisa, you know, we always end
13 up with nothing anyway and we've got nowhere to go, how
14 is this any different?" Some of them qualified for the
15 support that meant they could get some respite outside 10.46AM
16 the area, by that I mean the grants, but a lot didn't
17 because family violence and homelessness doesn't just
18 affect people in low socio-economic areas that qualify
19 for a healthcare card or a pension card, so there was a
20 lot of low income earners who didn't qualify for 10.47AM
21 support and had nowhere else to go. They were in
22 public housing which isn't your best ventilation and
23 they felt quite trapped.

24 They went to places like the shopping centre, to
25 the bowling club, to places where they knew that the 10.47AM
26 air conditioning was relatively good to get a reprieve
27 during the day but then they still had to go home. The
28 same with the recovery centre in Moe, most of the
29 responses from people was around, "That's really great,
30 but we've still got to go home", and it was the 10.47AM
31 sleeping at night and what they felt like the next

1 morning that was impacted upon.

2 I think in all of the experiences that I heard
3 from staff, the thing that really sat with me was, most
4 of our offices or main offices are based in Morwell, so
5 staff who didn't even live in the area would have to 10.47AM
6 come in and deliver a service; we're a crisis service,
7 we're a welfare service to we very rarely shut our
8 doors and we had had no advice about whether or not
9 it's time to shut the doors for staff. But what we did
10 find was that staff kept showing up because they said, 10.48AM
11 "At least we can go home at night and have a restful
12 sleep, these guys have got nothing", so they worked
13 very hard all day to try and get information for
14 people, and particularly one of our indigenous services
15 spent a lot of time transporting clients to the Health 10.48AM
16 Centre and making sure that they got checked out and
17 keeping them as informed as possible.

18 One last thing I'd like to ask you about which is the last
19 paragraph in your statement. You make the point that
20 it was disappointing that the good work that many local 10.48AM
21 people and organisations were doing was not recognised.
22 Have I understood that correctly?---Yes.

23 It's a call for recognition of what was good here in Morwell
24 during the fire?---And I think I may or may not have
25 included it in my written submission, but I made it 10.49AM
26 very clear at the community feedback sessions. People
27 like the Morwell traders did an amazing job in being
28 able to keep community pride going and keeping
29 information up-to-date. The welfare agencies that were
30 local just got on with what they usually did and came 10.49AM
31 up with plans on the hop. I do think that people did

1 the best they could, even when they went to the
2 Recovery Centre that was set up here in Hazelwood Road,
3 for information, they were local DHS staff and local
4 staff who were able to stay to you, "We don't have a
5 lot of information but we can hear your story." And
6 that must have been difficult for them too. So where I
7 think we did well is what we've done a lot in Gippsland
8 and that's just get on with it. Where we had some
9 difficulty was when we were then told information by,
10 whether it be a local Member of Parliament or whether
11 it be by a State Government authority, that we would
12 encourage people to follow through on and then find
13 that it hadn't been tried and tested, and so these
14 people were ringing, getting frustrated by the fact
15 that they didn't qualify or weren't able to receive any
16 support. So it was a little bit of, we could have
17 probably got on with it a little bit more if - yeah.

10.49AM

10.49AM

10.50AM

18 I have no further questions for you, Ms Wilson. I think
19 Mr Burns for the State may have some questions, unless
20 the Board have questions at the moment.

10.50AM

21 <CROSS-EXAMINED BY MR BURNS:

22 Good morning, Ms Wilson. This won't take very long and I'm
23 certainly not hear to prolong the agony of giving
24 evidence?---That's fine.

25 I, led by Dr Wilson, appear for the State. You've raised
26 some concerns, and it's very understandable that you
27 had those concerns with regard to your current
28 situation being with child. I just really want to
29 raise a couple of things with you, clarify a couple of
30 things that are not so much in your submission but in
31 your submission to the Board?---Sure.

10.50AM

10.51AM

1 You talk about the Fire Services Commissioner, Craig
2 Lapsley. The words in your submission was, "It was
3 great when we had one consistent voice from Emergency
4 Services who appeared to be balanced and
5 knowledgeable?---That's exactly right.

10.51AM

6 You found that Mr Lapsley was honest and he wasn't trying to
7 sugarcoat the message?---Yes.

8 And that was useful to you?---It was.

9 You talk about the EPA's website, you said that you found
10 their website useful as a source of guidance?---Mm-hmm.

10.51AM

11 You've talked about the distress of - not only in your
12 public submission, but in your evidence today - you've
13 talked about the stress of leaving your home. It's
14 obviously no small thing to ask people to relocate, is
15 it?---That's right.

10.51AM

16 You talk about the Chief Health Officer, Dr Lester, and you
17 said it was reassuring to hear an independent voice in
18 relation to health advice?---That's what we thought
19 initially, yes.

20 You ultimately were dissatisfied but initially you found it
21 helpful?---And the distress that we talked about in
22 this evidence today was more around later finding the
23 information could have come to us quicker and trying to
24 make an informed decision was difficult because,
25 although there was some consistent voices, the
26 information wasn't quite there.

10.52AM

10.52AM

27 I want to ask you about activist groups. You've put that
28 heading in your submission, "Activist groups." I'll
29 just remind you what you said in your submission; I'll
30 read it to you, "After attending the community meeting
31 on 18 February I became angry at those who claimed to

10.52AM

1 be Morwell residents with adverse effects from the
2 fire. These people appeared to be everywhere,
3 monopolising time available to residents to ask
4 specific questions. We were not even able to get close
5 to experts at this meeting or any other. These people 10.52AM
6 should have been moved on."

7 Do we take it from that, that you discerned an
8 undercurrent that there was some activist groups who
9 were attempting to hijack the issues somewhat?---I did,
10 and particularly on 18 February at that community 10.53AM
11 meeting, seeing familiar faces popping up in every
12 single media event or every single community event,
13 with talk about their angst and their issue. I'm a
14 welfare worker so I'm okay with people who have
15 activist groups and okay with people having an opinion, 10.53AM
16 but what it did was, it took away from the opportunity
17 for local people to be seen as wanting information,
18 wanting to be included.

19 There was a local group that I think was formed
20 during the fire, I can't recall their name, where they 10.53AM
21 did present a local voice and they used sources such as
22 media independently to express that.

23 That's the Voices of Valley you're talking about?---That's
24 exactly right. So I felt that they were able to better
25 pick their target audience and were able to do it from 10.53AM
26 a perspective that was more related to our local area
27 than others. What they did was, they spoke up and were
28 able to identify the exact issues based on what we
29 needed as a community, whereas we would go to a lot of
30 community meetings where people would be yelling from 10.54AM
31 the back consistent messages around inadequacies and

1 their health issues and all those kinds of things,
2 which is fair enough, but there was a forum provided
3 that people could give that feedback and they chose to
4 monopolise it.

5 Did you get the impression that some activist groups were
6 effectively pushing an agenda and providing
7 misinformation?---You've just heard me talk about
8 feeling like I was ill-informed and unable to make a
9 decision because of that. I would not say that they
10 were the only people that maybe gave incorrect
11 information. I got to a point where I stopped
12 listening to them.

10.54AM

10.54AM

13 Did some of these groups have a tendency to mix the message
14 that Fire Services Commissioner Lapsley was giving
15 out?---I think so, and I think that in the community
16 meeting that we went to on 18 February, Craig Lapsley
17 did a fantastic job of holding that audience and
18 saying, "Yes, I'm not from here but I do have a country
19 experience of living in a country, great CFA", blah,
20 blah, blah, but then you were hearing messages around
21 his - the inadequacies of his information. For me,
22 drawing on my own conclusions, was the fact that he
23 gave me the information I needed to know, or that I
24 thought was reasonable. I didn't necessarily think
25 that he had a hidden agenda, I think he was probably
26 the most honest person I heard.

10.54AM

10.55AM

10.55AM

27 Ms Wilson, thank you for your time and your perseverance.
28 They're the questions I have.

29 MS RICHARDS: Do Members of the Board have any questions for
30 Ms Wilson? Thank you very much for your time today and
31 very best wishes for the months ahead.

10.55AM

1 <(THE WITNESS WITHDREW)

2 MS RICHARDS: The next witness this morning is James

3 Faithfull. Mr Faithfull, could you please come up to

4 the front.

5 <JAMES ANTHONY FAITHFULL, recalled: 10.56AM

6 MS RICHARDS: Welcome back, Mr Faithfull. We've done the

7 preliminaries, we know your full name and we know your

8 work address. On your second appearance you come with

9 a statement that you prepared over recent days. You

10 have a copy of that there in front of you?---I do have. 10.57AM

11 It's a statement that has 65 paragraphs and, from memory,

12 eight annexures. Have you re-read that statement

13 recently?---Yes, I have.

14 Are there any corrections that you would like to make to

15 it?---No. 10.57AM

16 Is your statement true and correct?---Yes, it is.

17 I tender that.

18

19 #EXHIBIT 88 - Further statement of James Faithfull.

20 10.57AM

21 MS RICHARDS: Mr Faithfull, we did go over your role and

22 your position in the mine briefly when you gave your

23 evidence on the first occasion during the first week of

24 the hearing, but I might ask you to recap on that

25 evidence. You're employed as the Technical Services 10.57AM

26 Manager, Mine?---That's right.

27 What does that role involve?---So mine planning, mine

28 survey, mine geotechnical, mine geohydrology, and

29 management of mine rehabilitation plan.

30 You provided us with, in Annexure 1, a new organisational 10.58AM

31 chart, it's not one we've seen before; this one comes

1 with photos?---It does.

2 But the photos are very small and I have to confess not

3 being able to recognise your face. We'll have it on

4 the screen please. The Board have the advantage of a

5 large magnifying glass. We also now have the advantage 10.58AM

6 of a large screen so we might get you to point out

7 where you are?---Scroll across to the right, and that

8 would be me there.

9 So you're on the third level on the far right-hand side.

10 Who is the person above you?---That would be Gary 10.59AM

11 Wilkinson.

12 So you report to Gary Wilkinson who in turn reports to

13 George Graham, the Asset Manager?---That's right.

14 You can't really tell if it's a good likeness or not?---I

15 think I've got more hair there. 10.59AM

16 You told us this on the last occasion but, just to be clear,

17 you've been at Hazelwood since the beginning of

18 last year?---That's right, since January last year.

19 So coming up to 18 months now. Previously you've worked for

20 a range of different companies in the mining sector, 10.59AM

21 most recently GHD Engineering Consultants?---That's

22 right.

23 And a range of others. In the coal mining sector but also

24 in other mining sectors?---That's right, a combination.

25 Your original qualification is as an engineer?---Yes, a 10.59AM

26 mining engineer, that's right.

27 You also obtained a Masters of Business Administration.

28 Your statement deals specifically with issues around

29 rehabilitation of the mine. Before we get to that, you

30 set out, starting at the bottom of the first page of 11.00AM

31 your statement, some information about the mining

1 licence and the work plan. The mining licence is a
2 document that Kylie White, from the Mine Regulator,
3 annexed to her statement. I might ask you this
4 question: On looking at that mining licence it's
5 expressed to be for 30 years and yet your evidence and 11.00AM
6 Ms White's evidence there's been a clear plan that the
7 end of the mine life would be in 2031. The mining
8 licence was granted in 1996, I make the 30-year period
9 to end in 2026. Where does that extra five years
10 that's planned for come from?---It comes from the mine 11.01AM
11 strategy, so the overall mining plan, so we develop
12 mine plans that go out for a period. If it's deemed
13 that we need to extend the mining licence to cover that
14 period, then we engage with discussions with the DSDBI
15 to extend that mining licence. 11.01AM

16 Am I correct in understanding that the mining licence is
17 still only for a 30-year period?---That's right, it's
18 still only for a 30-year period.

19 But that GDF Suez is planning to mine for an additional
20 5 years?---Yes, that's right. 11.01AM

21 On the second page of your statement you talk about the
22 rehabilitation bond and rehabilitation obligations
23 under the mining licence and work plan. Again, this is
24 a matter about which Kylie White gave evidence on
25 Monday. You say in paragraph 18 that the concept that 11.02AM
26 underpins the rehabilitation bond is that it is liable
27 to be forfeited at the end of the life of the mine if
28 final rehabilitation standards are not met. It's also
29 the case, is it not, Mr Faithfull, that the fact that a
30 rehabilitation bond has been paid acts as an incentive 11.02AM
31 for the mine operator to complete progressive

1 rehabilitation during the life of the mine?---Yes, that
2 would be correct.

3 So it's both a carrot and a stick; would you agree with
4 that?---I agree with that.

5 At paragraph 19 you set out what appears in the mining 11.02AM
6 licence in relation to progressive and final
7 rehabilitation. The starting position is that
8 progressive rehabilitation, or reclamation as it's
9 called there, is to be conducted as per the
10 rehabilitation plan, and we'll go to that shortly. But 11.02AM
11 there's an additional power, is there not, and we see
12 this over the page at Clause 15.2 of the licence, that
13 an Inspector of Mines can direct further progressive
14 rehabilitation to take place over and above what's in
15 the rehabilitation plan?---That's correct. 11.03AM

16 That's the source of the Mine Regulator's ability to require
17 further rehabilitation work to be done within the
18 course of the licence?---Yes, that's right.

19 So we don't see it in the Act, we see it actually in the
20 terms of the licence. I'd like now to go to the work 11.03AM
21 plan and the way you set out the rehabilitation that is
22 planned to occur.

23 MEMBER PETERING: Sorry, Ms Richards, if I might ask
24 Mr Faithfull. In your experience, and perhaps not
25 directly, has the Inspector of Mines ever issued such a 11.04AM
26 change to the condition or a notice to undertake
27 further rehabilitation?---Not to my knowledge, no.

28 MS RICHARDS: And you wouldn't expect that to come out of
29 the blue, would you?---No, absolutely not.

30 You would expect there to be some considerable prior 11.04AM
31 discussion before any such direction is

1 made?---Absolutely. No, we proactively work positively
2 with the DSDBI on site, we have a good relationship
3 with them. I expect that, had they identified an issue
4 with rehabilitation, they would bring it to the front
5 and we would certainly discuss it.

11.04AM

6 We spent some time with Ms White on Monday morning talking
7 through the work plan and the rehabilitation
8 requirements of the work plan. You have also set out,
9 starting on the fourth page of your statement at
10 paragraph 25, some of the concepts in relation to
11 rehabilitation. Could you talk through that part of
12 your statement and explain those concepts?---Certainly.
13 I noted in paragraph 25 that the overall rehabilitation
14 plan is about bringing back the mining environment and
15 progressively doing so to an amenable visual and a
16 usable state, and that it uses methods that are
17 technically feasible to achieve that and also to ensure
18 that the site remains safe and stable going on in time.

11.05AM

11.05AM

19 I've made a number of comments there in regards to
20 the original concept for Hazelwood for the long-term
21 rehabilitation of the mine was to flood the bottom of
22 the mine and to create a lake. Part of doing that is
23 that - and indeed there's been studies that have been
24 done which show how high this water level comes up - is
25 that it comes up to a point where the batters need to
26 be progressively rehabilitated and built down to that
27 water level so that we end up with a state that we have
28 a lake and we've got a progressively rehabilitated
29 slope surrounding it.

11.05AM

11.06AM

30 The rehabilitation plan that we're now working with is a
31 little more sophisticated than planning to fill up the

11.06AM

1 mine with water at the end of the mine life?---That's
2 right.

3 This is demonstrated by a diagram that appears below
4 paragraph 30 of your statement. Perhaps you could
5 explain what this diagram shows?---Certainly. What it 11.06AM
6 shows is, it's a typical mine cross-section, it
7 demonstrates the geology if you were to picture it and
8 take a slice through and to look at it on a side
9 profile. What it shows there is that it shows the
10 number of coal mining ventures, so your benches that 11.07AM
11 have been left by the bucket wheels, and then also the
12 planned future water level that occurs six years after
13 we've completed mining, so that comes up to RL minus
14 22, so indeed all of the batters above it need to be -
15 they're proposing that we need to rehabilitate. 11.07AM

16 Just to be clear, the mine itself is about 120 metres
17 deep?---That's right.

18 It is, as some of us have seen, a vast space indeed. The
19 top level, the grass land, the crest of the mine, is
20 some distance above sea level, is it not?---Yes, it is, 11.07AM
21 it's about 60 metres above sea level, so the overburden
22 thickness is in the range of 10-20 metres so that
23 physically sits over the top of coal, so that's the
24 material that's stripped off to uncover the coal, and
25 then the coal seam goes anywhere between 80-100 metres 11.08AM
26 in thickness.

27 It's anticipated that the mine will fill over that six-year
28 period that we heard about from Ms White to a level of
29 RL minus 22?---That's right.

30 What does that mean?---That's a level that's relative to sea 11.08AM
31 level, so it's 22 metres below sea level.

1 So that's some significant distance from the crest of the
2 mine?---That is, yes.

3 You also talk in paragraph 30 about, after that six-year
4 period it's anticipated that the mine will fill further
5 with water from natural sources and will eventually 11.08AM
6 reach a level of RL plus 8?---That's right.

7 So that's another 30 metres that over many years it's
8 anticipated it will fill?---Over many years, that's
9 right.

10 The question then is this: Will the shaping of the batters 11.08AM
11 and the covering of them with overburden be to the RL
12 minus 22 level or the RL plus 8 level?---The current
13 plans are to take it to minus 22.

14 So, to the level that it's anticipated will be reached after
15 six years?---That's right. 11.09AM

16 Rather than at some indefinite point after?---Yes, that's
17 right.

18 CHAIRMAN: Can I clarify in relation to that diagram, it
19 does look as if the shaded part really represents what
20 additionally is to be added to the, if you like, the 11.09AM
21 white part, the white part being, if you like, the
22 batters without any additional material, and that seems
23 like it, but on the other hand the shape of the
24 left-hand end of that shaded part is more like what one
25 would expect the present batters to be, and I just 11.09AM
26 wondered whether it was misleading in that respect or
27 have I just misinterpreted it?---No, I think you
28 quite - look, the intention here was to demonstrate
29 that the water level comes up a distance over the top
30 of the coal. Now, this isn't the final rehabilitation 11.10AM
31 profile, okay.

1 If the lines were swapped it would make more sense,
2 almost?---Yes. What the intention was, this here, is
3 that's a step before rehabilitation. So that's just
4 showing - what this diagram was purely about showing
5 was where the water level came up to, which was 22, to 11.10AM
6 indicate that this is the area above the water level
7 that needed to be rehabilitated.

8 MS RICHARDS: The point of this exercise is to divide the
9 batters into the areas that need reshaping?---That's
10 right, yes. 11.10AM

11 And the area that will be below the anticipated water
12 line?---So, in regards to the plan, these batters here
13 won't be rehabilitated, they'll be left there because
14 they're covered by water; these batters above will be
15 rehabilitated. 11.11AM

16 MEMBER PETERING: So this isn't a photograph of final
17 rehabilitation?---No, it's not. No, it's not.

18 Just for understanding, the batters that - the top part
19 there, the overburden, the batters is it one from the
20 bottom or one from the top? So when you call it 11.11AM
21 Level 1, 3, 5, 7, I think it is?---It's one from the
22 top.

23 Thank you.

24 MS RICHARDS: Over the page in your statement you set out in
25 some detail what is involved in reshaping the 11.11AM
26 batters?---Yes.

27 So we've identified that part of the batters that will need
28 to be reshaped for rehabilitation. What is the aim in
29 reshaping? What state are you trying to get
30 to?---We're trying to get to a point where we can leave 11.11AM
31 a slope, leave a rehabilitated slope that's safe, that

1 provides a secure batter going forward, going into the
2 future for an indefinite period. So we're bringing it
3 back to a - we regrade it to a point where the ongoing
4 concern with that batter is essentially taken away.

5 Both from a stability point of view and

11.12AM

6 from - - -?---Especially from a stability point of
7 view, absolutely, and also from a visual community
8 point of view as well.

9 The aim is to shape those batters back to a slope of - at
10 present they're somewhere between 45 degrees and
11 vertical, are they not?---Presently they're around
12 about the 45 degrees, so the 1:1 slope.

11.12AM

13 And the aim is to lay it back so to that it's 2:5 or?---2
14 and a half, better if it's 3:1. So 3 horizontal, 1
15 vertical.

11.12AM

16 So about 30 degrees?---No, much less than that, it's
17 probably about 18.

18 MEMBER PETERING: Mr Faithfull, does that include the
19 northern batters? Because the way the mine, the
20 position it is next to the freeway and the town, is
21 there enough room?---It does include the northern
22 batters.

11.13AM

23 MS RICHARDS: Just to talk through the theory of what's
24 involved in reshaping the batters, you set out in
25 paragraph 3 what the purpose of it is, stability's the
26 primary one, to enable revegetation, make the areas
27 visually compatible and actually enable some non-mining
28 use of that land after rehabilitation.

11.13AM

29 In paragraph 34 you set out in some detail the
30 steps that are involved in reshaping the mine, and
31 there's a significant assessment and planning stage

11.13AM

1 that you need to take first - - -?---Absolutely.
2 - - - before you get out any earthmoving equipment. Can
3 you talk about those two stages first, please?---These
4 are the critical stages first up. We've proposed that
5 these areas are rehabilitated. In order for that to 11.13AM
6 start taking shape, then there's work in regards to
7 stability assessments. We need to try and determine
8 what's the best profile to lay these batters back to.
9 We need to understand what are the consequences if
10 there's an earthquake, what are the consequences of 11.14AM
11 rising water levels. How do we ensure that the factor
12 of safety on those batters remains at a suitable
13 standard going forward? The way that we do that is, we
14 carry out the stability assessments. So that we take
15 the current shape of what the batters are at the moment 11.14AM
16 then we model different profiles to try and determine
17 what is going to be the safest state going forward.
18 That's a process that you say would take up to
19 12 months?---Absolutely.
20 Can that occur concurrently with the planning for 11.14AM
21 rehabilitation works? So can those things happen at
22 the same time ?---No, because the output of the
23 stability works is that it defines the overall slope,
24 it defines the geotechnical monitoring equipment that
25 will be required to ensure that things - to ensure the 11.14AM
26 water pressures can't build up in the batter, it
27 defines a system to ensure that those batter profiles
28 are going to give you that factor of safety that's
29 going to last you the longer term, so it can't occur
30 concurrently. The output of those assessments is - the 11.15AM
31 next step of that is the plan, because once you can

1 demonstrate you've got the right slope, you've got the
2 right profile, you have the right geotechnical
3 equipment that needs to be put in, then you can go to
4 the step of putting it all together in a plan.

5 CHAIRMAN: Can I interrupt to enquire whether that which has 11.15AM
6 been done already, what I think of as the eastern end
7 of the northern batters is what you have in mind for
8 the middle section of the northern batters and other
9 parts?---We'd be doing that for all of the areas, yes.

10 As an example of what has been done going through these 11.15AM
11 processes, you can look to the eastern end of the
12 northern batters?---Yes.

13 MS RICHARDS: As we'll see when we get to the rehabilitation
14 plans and the different stages that you've reproduced
15 in your statement, the rehabilitation of the northern 11.16AM
16 batters is proposed to happen in different sections,
17 some of it's been done already?---That's right.

18 There's some to be done associated with the end of block 1C,
19 we'll talk about the timing in a little while, and some
20 to be done at the end of the mine life. Do you do one 11.16AM
21 stability assessment for the entire batters or is that
22 a staged process ?---No, look, it's a staged process
23 and there's a number of different ways that that can be
24 done; it can be done through taking slices through
25 sections within each of the batters, so there could be 11.16AM
26 a number of sections which we call stability sections.

27 So, if you were to look at a plan of the mine you'd
28 have a number of cross-sections, similar to what we
29 showed before, would be generated for each profile of
30 that within that batter, and then we'd carry out a 11.16AM
31 number of different analyses on that. But that's only

one method of doing the analysis, that's a two-dimensional method. Then there's also three-dimensional modelling that's really coming to the front at the moment, and that enables almost like a living breathing batter profile to be generated.

11.17AM

That's not something that you can do once and for all for (indistinct - multiple speakers)?---No, indeed we are doing it, and not just for this, but we do it as an ongoing process to ensure that those batters remain stable.

11.17AM

You've told us that the stability assessment might take up to 12 months. The planning stage, how long would that take?---That depends on the output of the first one.

Depends on how complex it is?---Depends on how complex it is and given the proximity of the infrastructure and indeed the Morwell main drain obviously and then the Princes Highway, we obviously want to make sure we get things right.

11.17AM

Can you hazard a range, three to six months, six to 12 months?---Look, yeah, I don't know.

11.17AM

But it's more likely to be months than a couple of weeks?---Absolutely.

It's not a simple task ?---No.

The third stage is to remove mining infrastructure in the vicinity of the batters?---That's right.

11.18AM

Again, that will depend on the extent of the infrastructure to be moved, and then the fourth step is that you get to the stage of reshaping, which is a significant earthmoving exercise and it's prolonged by the fact that it can really only happen in the dryer months of the year?---That's right.

11.18AM

1 You have an earthworks season, you call it?---We have an
2 earthworks season that generally goes from Anzac Day
3 to - sorry; it goes from November through to May,
4 through to April.

5 So many people think about putting in their tomato plants on 11.18AM
6 Cup Day, you think about getting out the earthmoving
7 equipment?---Yes, that's pretty much how it goes.
8 That's generally what happens in the valley, but what
9 also happens is that, even in that earthworks period
10 itself, subject to environmental and rain et cetera, 11.19AM
11 that your progress can be limited even through that
12 earthworks period as well.

13 So if you have a very wet summer, you can lose time as
14 well?---If we have a very wet summer, then we're pretty
15 much parking up the equipment. 11.19AM

16 Equally if you have a dry winter you might get a longer
17 period, for example?---Absolutely.

18 If you have a very warm May, as we've had, you may be able
19 to continue working into May. To get a sense of the
20 time that would be taken to reshape the segment of the 11.19AM
21 northern batters that is closest to Morwell, is that
22 something that could be done within one earthworks
23 season or would you need several?---No, several. We're
24 talking several.

25 So you're talking about doing that work over a three-year 11.19AM
26 period?---Yes.

27 Then, once you've done the reshaping, overburden is placed
28 over to the depth of about 1 metre, and the ideal
29 situation is that you would be able to source that
30 overburden from elsewhere in the mine?---The ideal 11.20AM
31 situation is that we can push the material from the top

1 over it if it's suitable.

2 Sorry, the top?---The top overburden, so if I refer back to

3 the section again. So, if we rehabilitate those coal

4 batters - sorry, profile those coal batters, if the

5 material at the top is of good enough quality, then 11.20AM

6 that is our first area of call because we can simply

7 push it over the top.

8 So that's deeper than a metre at the top?---That's right.

9 Although, looking at that diagram, it's quite clear that the

10 overburden would not be adequate to cover the area that 11.20AM

11 needs to be covered, but it's a start?---It's a start.

12 There is an issue with the overburden that's being removed

13 in the current stage of mining?---Yes, that's right.

14 Described by Ms White, who claimed no technical expertise,

15 as being too wet?---Yes. 11.21AM

16 I think you have the technical expertise to explain the

17 problem?---Just to be blunt, it's the old Morwell River

18 flood plains. So, it's mining through the old

19 riverbed, there's a high percentage of silt, high

20 percentage of wet clays, all the material is saturated. 11.21AM

21 Indeed, we have only small pockets of good material

22 that we can use to progress our pump, so that's why the

23 link to using the material that's in 2A to do the

24 rehabilitation and 2B because that has been identified

25 as better material. That material that's in 1C I'm 11.21AM

26 pretty much certain that anybody can come up and

27 testify that it is absolutely very poor quality.

28 So it's been removed and at present it's being placed on the

29 internal overburden dump on the mine floor?---That's

30 right. 11.22AM

31 Is it intended that it will just stay there?---That's right,

1 it is.

2 It's not being put there to dry out to be used

3 further?---No, it isn't, no.

4 You do refer in paragraph (e) to the possibility that, if

5 overburden is not available from mining operations, it 11.22AM

6 may need to be sourced from elsewhere?---That's right.

7 MEMBER PETERING: I assume a significant cost then,

8 Mr Faithfull?---Yes, it is. Any time you talk about

9 moving overburden or indeed coal with smaller truck and

10 shovel fleets, it starts to add up in cost, they're 11.22AM

11 physically higher labour cost, smaller outputs, so

12 we're starting to talk about significant cost increases

13 as opposed to using any of the existing plant that's

14 there.

15 MS RICHARDS: The last step in the process is to revegetate 11.23AM

16 the area?---That's right.

17 Once there's overburden in place.

18 CHAIRMAN: If you're about to move on to the next area,

19 could I just raise this point because it's referred to

20 in paragraph 36 of the southern and southeastern 11.23AM

21 batters. It seems relatively easy to, in effect, draw

22 a point at which one distinguishes between the

23 southern, the southeastern and the eastern batters. On

24 the map that was provided through Mr Riordan last week

25 there's a reference to TP-8, that's effectively where 11.23AM

26 the southern batters are divided from the

27 southeastern?---Yes, that's right.

28 And the knuckle, is that which effectively divides the

29 southeast batters and the eastern?---Slightly further

30 around towards TP-7, but we'll call it the knuckle for 11.24AM

31 discussion purposes.

1 So it's close to that. There's not the same means, as I
2 would perceive it, on this map that refers to the
3 northwest batters, the northern batters and the
4 northeast batters because it appears to be referenced
5 generally to the northern batters in that area. Is 11.24AM
6 there some point at which you think of as
7 differentiating the northeast batters from the northern
8 and the northern from the northwest?---To go back a
9 step, the naming convention was set around about the
10 fields that were entered over time through mining 11.24AM
11 sequence. So the mining operations started out in east
12 field, so it became the east field northern batters.
13 Then it went to southwest field or southeast field and
14 therefore you had the southeast field northern batters.
15 So I'd have to actually lay a plan over the top which 11.25AM
16 could differentiate the points and show it quite
17 clearly, so that's something I can take away and
18 produce a plan that clearly divides it out.

19 If we look at this one that's up there now - - -

20 MS RICHARDS: This was the map that was provided after 11.25AM
21 Mr Harkins' efforts to point out various landmarks.

22 CHAIRMAN: It makes a distinction between those in
23 understandable terms, quite helpful here, but they're
24 not necessarily the terms that are linked to anyone
25 who's had a long association?---No. 11.25AM

26 Is there a reasonable defining point or is it a blurred
27 defining point between the ones to the north?---No I
28 mean, generally when we refer to the northern batters
29 we're talking about this section in here, so in the
30 buffer points. In the area that we're talking 11.25AM
31 about - - -

1 So almost right up to the point that you have rehabilitated
2 more or less the northern batters?---Sorry, just
3 rephrase that one? From here we're talking about?
4 That's where you've rehabilitated to the east of that
5 point?---From that point, yes, that's been 11.26AM
6 rehabilitated.
7 To the west of that, you think of that, and the description
8 refers to the northern batters?---Yes, that's correct.
9 MS RICHARDS: Let's move now to the rehabilitation plan
10 that's set out in the 2009 work plan variation. Were 11.26AM
11 you present in the hearing room on Monday when Ms White
12 gave her evidence?---Yes.
13 You heard the discussion I had with her about the timing of
14 the various blocks of mining and - - -?---I missed the
15 first part of her - when she was up here. I was only 11.26AM
16 present from probably halfway to the end.
17 Perhaps you missed that part. Her evidence was completely
18 in accord with yours about the four stages of
19 rehabilitation that are set out in the rehabilitation
20 plan, but her evidence differed from yours in one quite 11.27AM
21 important point. She made it plain that the
22 expectation of the Mine Regulator is that the
23 rehabilitation work will be completed by the end of
24 each of those mining blocks and not, as you say in your
25 statement, that it will commence at the end of those 11.27AM
26 mining blocks. Have you considered that
27 evidence?---Yes.
28 Since it was given?---Yes, I have.
29 I assume it was drawn to your attention?---Yes.
30 Is it still your view that the mine's obligation is to 11.27AM
31 commence rehabilitation works at the end of each of the

1 mining blocks?---The intention of the work plan was to
2 make it clear that, when the better material in blocks
3 2A and 2B became available, then the rehabilitation
4 could commence on those areas identified.

5 We see from the mining schedule or work plan, the revised 11.28AM
6 work plan, that the overburden for blocks 2A and 2B is
7 to be removed in 2016-2017?---That's right.

8 And for block 2B it's going to commence in 2018, so all of
9 the overburden from block 2A will be available by 2019,
10 will they not?---That's right, providing the mine is at 11.28AM
11 a point in time where it's physically transferred into
12 2A, because there's obviously - there's other mining
13 practical considerations that take place here. It's
14 been identified in a work plan that at that point in
15 time we will hit the better material in 2A, but 11.28AM
16 practical mining constraints might limit that and limit
17 our ability to get there when we do.

18 So it might mean you're not on schedule?---Absolutely, we're
19 not on schedule.

20 But that overburden will be available, and indeed placing of 11.29AM
21 the overburden is the fifth step in a fairly long
22 sequence of works, is it not? You've got to do your
23 stability assessment, you've got to do your planning,
24 you've got to move your infrastructure, you've got to
25 reshape the batters, and it's only after you've done 11.29AM
26 all those things that you've got to put your overburden
27 on the top?---That's right.

28 So you don't actually need your overburden until you get to
29 step 5 in the process, do you? So you can actually
30 start the process before the overburden's 11.29AM
31 available?---Yes, that's right.

1 Having become aware of Ms White's view and the Regulator's
2 quite firm view that the rehabilitation in block 1C is
3 to be completed in 2019 rather than started by 2019, is
4 that something that is achievable?---Providing we
5 achieve those targeted milestone dates, and if we're 11.30AM
6 already behind schedule, then it's really based on the
7 ability to get to that material to be able to deliver
8 that material to the worked out batters. If that means
9 that the mine doesn't get there until 2019, well,
10 that's a point that I will indeed bring to Anne and to 11.30AM
11 Kylie's attention and to talk to them about that issue,
12 that if we are behind schedule, if we've missed hitting
13 a milestone, as I said before, I think we've got a very
14 good relationship with the DSDBI, that we'd bring it to
15 their attention and indeed we'd talk about it and we'd 11.30AM
16 talk about the practicalities and what their
17 expectations are and go through that process.

18 Given the steps that you've outlined and the fact that the
19 reshaping of the batters is likely to take three or
20 several earthworks seasons, on the basis of the 11.30AM
21 evidence that you've given this morning, it appears
22 that the process of rehabilitating the section of the
23 northern batters that's up next is likely to take four
24 to five years. So, if you started that process now,
25 you'd complete it in 2019, providing that the 11.31AM
26 overburden is available on schedule?---Providing the
27 overburden is there and providing obviously that all
28 those other steps prior to putting down the overburden
29 had been completed.

30 Is the mine operating on the basis that it will start that 11.31AM
31 process now and try to maintain the mining schedule so

1 that the overburden is available when required?---At
2 the moment what we've been dealing with is obviously
3 the immediacy of the situation that we've been
4 presented with by the fire. In terms of starting
5 additional activities such as this, these haven't been 11.31AM
6 started as yet.

7 But it would be feasible to start - - -?---It could be
8 feasible to start relatively soon.

9 Start with the stability assessments that are
10 required?---Yes, that's right. 11.32AM

11 And we would see the end product of that work, assuming that
12 the overburden is available on schedule, in
13 2019?---Providing that the overburden is available,
14 yes.

15 If we can move to the various stages of rehabilitation that 11.32AM
16 you've extracted in your statement, starting at page 7.
17 Perhaps we could expand that diagram a little so that
18 it's clearer.

19 MEMBER PETERING: Just while you're doing that, Ms Richards.

20 A number of members of the community, Mr Faithfull, 11.32AM
21 have put to us in community consultations and in
22 submissions that there should be clay capping. Your
23 evidence is talking about rehabilitation. Do you clay
24 cap, is that part of rehabilitation?---Yes, it is, it
25 is part of rehabilitation, putting in overburden, 11.33AM
26 covering over the top of profile batters, that's right.

27 So overburden over the top is the same as clay
28 capping?---That's right.

29 MS RICHARDS: Although clay capping can be done on a much
30 more limited basis, can it not, to cover over exposed 11.33AM
31 coal for example so that it can be used as a road or as

1 we've seen with some of the fire holes that clay
2 capping can just be placed, over those to exclude
3 oxygen from the area?---Yes.

4 And that's not the same as rehabilitating it, is it?---No.
5 It's just covering it?---That's right. 11.33AM

6 So there's a distinction between the two. Full
7 rehabilitation involves a great deal more than clay
8 capping?---Absolutely, there's the whole profiling
9 stability analysis part that comes into the equation.
10 Clay capping, as you mentioned, is simply putting a 11.33AM
11 cover over a road or indeed covering a fire hole.

12 MEMBER PETERING: Dealing with issues of fire protection
13 which presumably we might get to and if we don't we'll
14 come back to, I don't know whether you were in the room
15 when Mr Gaulton gave evidence?---No, I wasn't. 11.34AM

16 He was proposing a new suggestion, which I don't think has
17 been trialled anywhere in the world, according to his
18 evidence, around a mixture of clay and another material
19 to apply it for fire prevention. Have you investigated
20 that or initiatives like that?---No. 11.34AM

21 Do you see a problem with that?---I do from a practical
22 sense, yes.

23 Because of the steepness of the batters?---Because of the
24 steepness of the batters and because of the problems
25 that it will pose if you indeed go down that line of 11.34AM
26 covering those batters. One of the things that we do
27 on site to ensure stability is to make regular, indeed
28 weekly, visual inspections of those batters. If we are
29 to cover them in any way with a shotcrete or a fly ash
30 or a product, then it doesn't give us the ability to be 11.35AM
31 able to identify issues before they become major

1 issues.

2 MS RICHARDS: If that solution is rejected on a practical
3 basis, does that mean that the only way of covering the
4 exposed coalfaces is for rehabilitation?---Yes.

5 So there's preparedness on the part of the mine to consider 11.35AM
6 a means of covering exposed coalfaces on a temporary
7 basis that would provide fire protection that is short
8 of full rehabilitation of those batters?---No, there
9 is, and there is in terms of a fire protection system,
10 so a mine fire fighting system. The intent of the 11.35AM
11 firefighting system is to provide that coverage until
12 it can be rehabilitated.

13 Yes, although the evidence is clear that that coverage
14 wasn't provided sufficiently in the northern batters to
15 prevent the fire on the night?---That's another matter, 11.36AM
16 but the intention is that you can provide firefighting
17 prevention to those areas.

18 So, recent experience suggests that that was an inadequate
19 control measure, and there will be evidence later today
20 that really the only possible options are to provide 11.36AM
21 for a much more extensive pipe network and spray
22 coverage of all exposed coal, whether it's operational
23 or not, to cover the coal; so water or coverage by some
24 other means.

25 Witnesses have raised the possibility of a more 11.36AM
26 temporary means of covering the coal short of full
27 rehabilitation of the worked out batters. Is it your
28 evidence that that is being dismissed out of hand by
29 the mine as impractical?---It's my evidence that I
30 haven't totally reviewed that and gone over it, but the 11.37AM
31 information that I've seen so far is that it seems

1 impractical and that there's a number of geotechnical
2 considerations that need to be taken into consideration
3 before any of those options are explored in more
4 detail. But on the face of it, no, I don't think it's
5 a very valid solution.

11.37AM

6 But if the options available to the mine were to speed up
7 full rehabilitation of the northern batters or to
8 explore the practicality of covering those exposed
9 coalfaces on a more temporary basis, would there be a
10 willingness to explore that alternative?---I think that
11 there would be a willingness to explore the
12 alternative, absolutely.

11.37AM

13 Notwithstanding the practical identifies that you've
14 identified?---No, we'd put it out and we'd talk about
15 it and we'd understand it and we'd go through that
16 process, indeed with any other solution that comes onto
17 the table, but the intention of the mine at the moment
18 is that those areas are covered by Fire Service.

11.37AM

19 MEMBER PETERING: Mr Faithfull, could I just understand what
20 you mean by, I think you used the words "mine fire
21 fighting system", so what are the elements of
22 that?---That's the Fire Service network.

11.38AM

23 The Fire Service network, so that's the water, reticulated
24 water pump?---That's right, the reticulated water
25 pumping stations that supply water throughout the mine.

11.38AM

26 And the pipes?---And the pipes.

27 MEMBER CATFORD: Just one supplementary. If you were to
28 re-slope the batters, does that in itself decrease the
29 risk of fire or aid fire suppression? So, in other
30 words, if the slope is created, does that mean that you
31 can get vehicles in or it's less likely to spread as

11.38AM

1 quickly as is these virtually vertical batters?---With
2 the profiling of the batters to the two and a half to
3 3:1, they're physically being shaped to that angle so
4 that access can be maintained. So even though that
5 they have it - the intention is to have the clay cap 11.39AM
6 over the top, that these batters are still
7 maintainable, so that we can get on them with plant.
8 So it does present a solution that is easily
9 maintainable.

10 So it's preferable to actually keep the batters in their 11.39AM
11 current shape until you go for the full rehabilitation
12 process? Is partial rehabilitation by providing that
13 slope any prevention against fire?---So we're talking
14 about partial rehabilitation now?

15 Just creating the slope that you were talking about. Okay, 11.39AM
16 you've got a problem with overburden, that's got to
17 come at some point?---Yes.

18 But does actually creating a slope actually assist fire
19 prevention?---I think by having an overall profile of
20 3:1, yes it does, because you can physically access 11.40AM
21 onto that slope.

22 Thank you.

23 MS RICHARDS: We're looking at a representation of the
24 rehabilitation that is currently proposed for 2019.
25 There is a section of the northern batters right at the 11.40AM
26 very eastern end that has already been rehabilitated.
27 Can you point that out on the diagram there,
28 please?---That would be that section there.

29 I think we had this evidence from Mr Dugan, but I'll just
30 confirm with you; that section did not burn in 11.40AM
31 the February fires, did it?---No, it didn't.

1 Is it safe to conclude from that experience that
2 rehabilitation is a very effective fire prevention
3 measure?---Rehabilitation, providing the slopes are
4 managed for vegetation, yes.

5 There's sections on either side of that that are proposed to 11.41AM
6 be rehabilitated in 2019. Can you explain why the
7 rehabilitation does not extend to the west of that
8 section in the northern batters immediately west of the
9 already rehabilitated section? Why is the
10 rehabilitation to the west of that proposed to not be 11.41AM
11 done until the end of the mine life?---This area
12 through here?

13 Yes, what's the reason for delaying that?---The intention is
14 to mine out through there, so we're not going to
15 rehabilitate prior to progressing mining. 11.41AM

16 So at what point is it proposed to mine out through there?
17 Sorry, at what point on that diagram?---We're talking
18 at the moment somewhere in through here.

19 In fact in the application that is currently before the Mine
20 Regulator to vary the work plan and the rehabilitation 11.42AM
21 plan, you're proposing not to do those two parts of
22 rehabilitation at the western end of the northern
23 batters until later?---That's right. We're saying with
24 that new work plan means that these areas here won't be
25 rehabilitated until a later point in time. 11.42AM

26 What about the middle section there? Why is it proposed
27 under the current plan to delay rehabilitating that
28 part of the northern batters?---Can you say the
29 question again please?

30 On that diagram along the northern batters there are two 11.42AM
31 large red sections as things currently stand that are

1 proposed to be rehabilitated in 2019. Why not do the
2 bit between them? What stands in the way of
3 rehabilitating that area there until 2031?---This area
4 here. The main consideration there was that mining
5 would progress at some stage through that point.

11.43AM

6 But we've now established that it's proposed to be well to
7 the west of that point?---We've established that the
8 mining at the moment, the plan is that it would come up
9 to this point here. So this area through here contains
10 a lot of infrastructure that's required for the ongoing
11 nature of the mine, so you can't physically take that
12 out and still operate a functional mine.

11.43AM

13 Just to be clear, what is that infrastructure?---You've got
14 Fire Service pipes, you've got power, indeed power of
15 all the dredgers, you've got your de-watering system
16 and firefighting system at the bottom of the mine, so
17 you've got a hell of a lot of infrastructure in that
18 area that's required for the ongoing nature of the
19 operation.

11.43AM

20 And the power is the high voltage lines that come in
21 externally?---Yes.

11.43AM

22 And there's dual lines that come in through that central
23 area.

24 CHAIRMAN: Can I just clarify the diagram on the next
25 page that does have in yellow, or it's the eastern part
26 of the yellow that you're saying is the appropriate
27 division between the yellow and the red, indicates
28 where - - -?---That's right. The sequence was, as
29 north field, which is this area at the moment, as this
30 is completed, so as it's physically mined out, all of
31 the rehabilitating of the slopes is occurring as we're

11.44AM

11.44AM

1 pulling the mining equipment out, so it makes logical
2 sense to be doing it at that time. So physically what
3 we're calling it is doing a retreat pass, we're
4 physically moving away to the west, pulling out
5 infrastructure and gear as we go and then 11.44AM
6 rehabilitating behind us.

7 I'd just like to go through each of the stages of
8 rehabilitation and ask you with each to identify how
9 long you anticipate that the work will take. If we can
10 go back, please, to the figure 6.1 at the top of 11.45AM
11 page 7, that's block 1C. How long will this work
12 take?---To be honest, I haven't looked at the timing
13 specifically at the moment.

14 Based on our previous discussion, it might take four to five
15 years, so if it's to be completed in 2019 you'd be 11.45AM
16 starting pretty soon?---Providing the availability of
17 the overburden material, yes.

18 Yes, which you won't know until 2017-2018, but you wouldn't
19 delay starting the process until then, would you?---No.

20 That large red triangle at the bottom, that's the internal 11.45AM
21 overburden dump, isn't it?---That's the internal
22 overburden dump. Part of the 2013 submission is to
23 actually not include that as part of the
24 rehabilitation.

25 Because although overburden has been placed there, it will 11.46AM
26 continue to be placed there beyond 2019?---That's
27 right.

28 If we can look at the second stage, and the additional work
29 is coloured blue. That's proposed to be done, on the
30 Mine Regulator's view, by 2028. How long will that 11.46AM
31 work take, do you anticipate?---Look, I don't know. I

1 haven't looked at the planning or indeed the timing or
2 indeed any of the volumes required to do that
3 rehabilitation.

4 Then if we look at the last two. That one is to be
5 completed again by the end of the mine life. As I 11.46AM
6 understand the time, both block 3 and block 4 are to be
7 completed at the end of the life of the mine?---That's
8 right. As I explained before, it happens
9 progressively, so as the mine is packing up its
10 infrastructure and the dredges are being 11.47AM
11 decommissioned, and the coal, we do the thing called
12 the retreat pass where we've got to this point out here
13 and we're physically starting to rehabilitate the mine
14 ourselves, so the natural progression is that we start
15 in the north and then we progressively work our way 11.47AM
16 around to the south.

17 So that will be a work in progress as mining is completed in
18 the area?---That's right.

19 You provided us at Annexure 4 of your statement, which is
20 referred to at page 51 at page 9, with a diagram that 11.47AM
21 shows what rehabilitation works have been done to date.
22 If you could have a look at that and ask you to explain
23 that please?---What it shows is, it shows a planned
24 view of the mining operation. It shows the areas
25 indicated in green are the areas that have been 11.48AM
26 rehabilitated to date. It does not show the areas that
27 we've planned for 2014. So you can see that the
28 majority of the rehabilitation has occurred in the
29 eastern overburden dump, so that's that large area in
30 through there. There's been some work of 11.48AM
31 rehabilitation that's been done on the green

1 embankment, indeed on the southern operating batters.
2 Is that the work that you refer to in your statement as the
3 easy wins?---Yes, I refer to it as an easy win.
4 Unfortunately it means that that overburden is not available
5 for rehabilitation within the mine now?---That was a 11.48AM
6 decision made well before my time.
7 The work that's been done since privatisation, can you point
8 that out, please?---Since privatisation, no, I can't
9 actually, no.
10 There's more recent work that was done close to the Morwell 11.49AM
11 township between 2008-2012. Can you point that out on
12 the diagram please?---These areas here.
13 So that's that area in the northeastern corner that you
14 already referred to. There is currently with the Mine
15 Regulator an application to vary the work plan, 11.49AM
16 including the rehabilitation plan. Perhaps attention
17 hasn't been focused on that given events of February
18 and March, but I'd just like to ask you about what that
19 will mean for the rehabilitation plan if it's approved.
20 Does it involve a change to the rehabilitation 11.50AM
21 schedule?---Yes, it will do.
22 It's set out at Attachment 3 to your statement. The best
23 way of looking at it might be to look at the diagram on
24 page 29, it's figure 6.3. I think this gives a
25 complete picture of what is proposed and the different 11.51AM
26 stages that are now proposed. Essentially the change
27 in works to the northern batters is that the work at
28 the western end of the northern batters would not be
29 done in stage 1C; is that correct? The work that's
30 currently proposed, there were two red patches on the 11.51AM
31 diagram we just looked at?---Yes.

1 At the western end of the northern batters?---That's right.
2 It's proposed that that be done later?---That's correct.
3 Is it proposed that any other rehabilitation work be done
4 instead of that?---Yes, there was a comment in the work
5 plan where we spoke about additional rehabilitation on 11.51AM
6 the southern batters of the mine to offset that area
7 that was not being done in the northern batters.
8 The reason for proposing a delay in that rehabilitation is
9 that it is now proposed to mine that area in
10 future?---That's right. 11.52AM
11 So it would effectively be wasted work if you were to
12 rehabilitate it now just to dig it up in a few
13 more years?---Yes.
14 It's also proposed to continue putting overburden in the
15 internal overburden dump between 2019, so that part of 11.52AM
16 the rehabilitation would not be completed until later
17 beyond 2019. Are they the two material changes to the
18 schedule or are there other changes that are
19 proposed?---It changes in regards to the timing and
20 also the proposed life of the operation. 11.52AM
21 Can you explain those please?---At the moment there's the
22 mining licence which expires in 2026. The proposal
23 under the work plan was for an extended life of five
24 years to 2031. The proposal under this scenario is to
25 provide continuity of station coal up until 2025, but 11.53AM
26 then also provide some ongoing output, whether it's
27 reduced in relation to capacity of the station out to
28 2042.
29 Does that mean accelerating the mining process or extending
30 the mining process?---Extending the mining process. 11.53AM
31 Does it involve the final rehabilitation work now happening

1 10 years later than is currently proposed?---That's
2 right.

3 That is the area that we see shaded on this diagram in
4 yellow and green?---That's right.

5 So if this work plan variation were to be accepted, the area 11.53AM
6 shaded red would be completed in 2019, the area shaded
7 blue would be completed still in 2028?---I'd have to
8 check the dates.

9 Can you clarify what's proposed?---They're due to occur at
10 the end of north field phase 2, and north field phase 2 11.54AM
11 was under this alternative planned to finish 2025.
12 2025, so that in fact brings that forward?---That's
13 essentially forward.

14 But the yellow and green areas would not be finished until
15 2042?---That's right. 11.54AM

16 If the extension of the mine life is approved.

17 MEMBER PETERING: Mr Faithfull, the presence of the
18 infrastructure on the northern batters, I think you
19 described it as some power, pipes, de-watering system,
20 is that impeding the rehabilitation proposals? The 11.54AM
21 second question is, can that infrastructure be moved so
22 that the northern batters can be rehabilitated?---The
23 one point that you didn't mention with your three
24 points was that there's a significant amount of
25 geotechnical equipment in that area that provides 11.55AM
26 obviously the ongoing monitoring for stability in that
27 area.

28 They were your points, Mr Faithfull?---The answer is, yes,
29 it does impede it, the infrastructure, because we need
30 that infrastructure to ensure that the mine can still 11.55AM
31 operate, can still be functional.

1 So, can you move the infrastructure?---It's not something
2 I've specifically looked at.

3 So you could, it's just costly?---Like I said, I haven't
4 looked at it.

5 MEMBER CATFORD: Could I just seek clarification. I think 11.55AM
6 you were saying you were going to not complete the
7 rehabilitation in those two red areas to the west of
8 the northern batters, but replace it with some other
9 activity. I just wanted to know where that replacement
10 was going to occur?---Sure, no problem, it was proposed 11.56AM
11 that a section down here would be completed.

12 Why can that be completed quite early when previously it was
13 going to be done 20 years later or so?---That area sits
14 above our trunk line for those, we've got a number of
15 those systems here so we're doing a part of the 11.56AM
16 rehabilitation here which will need to be supplemented
17 in years to come. So we're openly doing a section as
18 in the top batter, so we're not actually profiling the
19 coal in that area, we're just profiling the overburden.

20 So is there more you could do in that general area?---The 11.56AM
21 answer is, yes, and it includes some of these
22 overburden dumps that are placed out through here.
23 There's additional rehabilitation that could occur in
24 those areas that aren't mentioned in this.

25 MEMBER PETERING: Sorry, Ms Richards, just a couple more 11.57AM
26 queries. So just considering rehabilitation, I assume
27 it's an expensive exercise. When you build a house
28 you've got a per square metre depending on the quality
29 of the fittings. Is there a range of rehabilitation
30 per metre, just so I get a sense of, I guess, what the 11.57AM
31 costs are?---It really depends on the method, and

1 there's a whole different number of variables. It
2 depends on whether we're going to cart material in and
3 just fill the batters up with overburden, and it
4 depends on whether we're going to cart material out of
5 the batters to generate the profile and cart a minimal 11.57AM
6 amount of overburden in. It really depends on the
7 scenario, so I can't give you a definitive answer.
8 Is there a range?---Not that we work to, no.
9 But you have a budget to stick to for rehabilitation?---We
10 have a budget, yes. 11.58AM
11 Is your budget the whole lot of the rehabilitation or is it
12 an annual budget? Can you just clarify?---It gets
13 broken down into an annual budget and then we have a
14 budget for final rehabilitation at the end of the mine.
15 And those numbers?---I don't know what they are. 11.58AM
16 MEMBER CATFORD: Could I just ask one more, you're getting
17 bombarded with questions from everybody at the moment.
18 The blue areas there, what is the reason why they
19 couldn't be advanced or rehabilitated sooner?---That
20 area is our overburden dump, our existing overburden 11.58AM
21 dump.
22 So that continues?---So that continues, yes.
23 MS RICHARDS: And that's proposed to be covered by water in
24 the final analysis, is it?---No.
25 No?---No. This area here, this includes the knuckle point 11.58AM
26 that everybody talks about, but at this area here,
27 providing we have good material, it too contains an
28 amount of infrastructure that's required for the
29 ongoing nature of the mine.
30 Specifically the mine offices, yes?---Well, yes, the mine 11.59AM
31 offices sits straight above it. Look, it's an area

1 that - there's a power supply that runs down through
2 the old transfer point in through here, and there's
3 also a number of water pipes that also exist in that
4 area as well. I'd have to take it away and go and have
5 a look at it.

11.59AM

6 MEMBER CATFORD: I think you mentioned, that would be
7 completed in 2025, but the mine continues operating
8 after that day date, so presumably you'd be relocating
9 those services somehow, would you?---Under this
10 proposed work plan the mine is operating at a reduced
11 capacity, so that you have the capability then to be
12 able to pull out some of that infrastructure.

11.59AM

13 And not have to replace it then somewhere
14 else?---Potentially, yes.

15 MS RICHARDS: We're getting close to the end, Mr Faithfull.

11.59AM

16 I'd like to take you now to paragraph 60 of your
17 statement where you set out a number of factors and
18 constraints that need to be taken into account in
19 planning rehabilitation works on the northern batters.
20 A number of these we've covered already in your
21 description of the steps that are necessary. The
22 availability of sufficient quantities of suitable
23 overburden, that's the fifth step in the process that
24 you've provided?---Yes.

12.00PM

25 So it doesn't constrain you at least from commencing the
26 process, does it?---No.

12.00PM

27 Construction constraints you've explained. The
28 infrastructure positioned on the northern batters, is
29 that a consideration for block 1C of the rehabilitation
30 plan? I'd rather understood your evidence to suggest
31 that that area of the northern batters that is proposed

12.00PM

1 to be rehabilitated first has been selected because it
2 doesn't have infrastructure on it. Is that
3 correct?---Yes, that's right, it contains - yes, it
4 sits to the east of our major powerlines and major
5 pipelines.

12.01PM

6 The area immediately to the west of that does have important
7 infrastructure on it?---Does have infrastructure.

8 So that's a consideration for that part of the northern
9 batters?---That's correct.

10 You then mention over the page infrastructure positioned
11 above the northern batters, including SP AusNet's high
12 voltage powerlines, the Princes Freeway and the Morwell
13 main drain. Can you explain how it is that that
14 infrastructure needs to be taken into account when you
15 are rehabilitating inside the mine?---Absolutely.

12.01PM

16 Please do?---The major consideration here is that - well
17 first of all it's what method would you use to
18 rehabilitate, so it's whether you're profiling back,
19 whether you're filling with dirt. The underlying issue
20 with all of this is, is that that is significant
21 infrastructure that, if you don't install and monitor
22 for geotechnical stability in the area, and if you
23 don't get that right, you could potentially impact
24 those assets.

12.02PM

25 You might have some subsidence and very many unhappy
26 people?---That never happens.

12.02PM

27 CHAIRMAN: You were talking about powerlines, could I
28 clarify some uncertainty that I find in the earlier
29 material which relates to the powerlines and the impact
30 of fires. I know you were not there on the day, but in
31 Mr Harkins' material there's reference to these

12.02PM

1 powerlines in a way that might suggest that they were
2 impacted by the fire in the northern batters or by
3 grass fires impacting that area which is different. Do
4 you have any comment upon what your enquiries have
5 revealed in relation to either of those
6 options?---Look, I've made no specific enquiries
7 regarding that, I've been very much focused at the
8 moment on the geotechnical stability of the mine. So
9 no, I haven't been focused on that area.

12.03PM

10 So it's possible that it could have been, either the
11 location of the lines is such that it could have been
12 impacted by the fire from the batters moving, if you
13 like to the north, or could have been impacted by the
14 grass fire which is moving along towards Morwell which
15 has impacted on it; either way, either is possible?---I
16 don't know. I don't know.

12.03PM

17 MS RICHARDS: Just to be clear about what you are referring
18 to when you identify infrastructure positioned above
19 the batters as a factor or constraint, you're not
20 suggesting that any of that infrastructure has to be
21 moved, are you?---Potentially, yes.

12.04PM

22 Will that have to be done for block 1C?---It depends on the
23 method that we go forward going ahead doing the
24 rehabilitation. Once the stability analysis, and we
25 understand the nature of that batter and what we're
26 trying to do with it, once we've determined that, then
27 we can start to understand the impacts and the modelled
28 impacts on each of these areas. And if it did come to
29 a point where we need to talk to SP AusNet regarding
30 their HP powerlines, then that's a discussion we'll
31 have at the time and we'll talk to and engage with

12.04PM

12.04PM

1 them.

2 This is work that's to be completed in about 5 years' time
3 and at present as you sit here you can't say whether
4 it's going to be necessary to move the high voltage
5 powerlines or close the freeway?---That's right.

12.04PM

6 But that's a problem that's going to have to be solved
7 between now and 2019, isn't it?---It is.

8 And so, in a sense it's a factor that has to be taken into
9 account but it's not a constraint on starting that
10 process?---No, it's certainly not a constraint in
11 starting that process, absolutely not.

12.05PM

12 There are two other areas that I'd like to take you to. You
13 say at paragraph 64 that you estimate that the works
14 required to rehabilitate the area of the northern
15 batters between the area that's already been
16 rehabilitated and the area at the western end where
17 there's going to be future mining, that it would be
18 considerably more costly to do that earlier than it
19 would be to do it in the sequence that's currently
20 proposed. Is that mainly because it will be necessary
21 to move the infrastructure that you have identified as
22 sitting on that middle section of the northern
23 batters?---Partially, yes, but that's not the whole
24 picture.

12.05PM

25 Okay, what's the rest of the picture?---The whole picture is
26 that if you were to accelerate that, you would be doing
27 it outside the mining sequence. So at the moment the
28 rehabilitation strategy is linked to the mining
29 sequence. Once you start stepping outside of that,
30 then you start introducing a number of other
31 constraints, restrictions that we presumed will add

12.06PM

12.06PM

12.06PM

1 cost and significant cost.

2 And those are the availability of suitable overburden that

3 you vastly prefer to source from within the

4 mine?---Yes.

5 And the undesirability of rehabilitating an area that you 12.06PM

6 are planning to mine in future?---Yes.

7 And nobody's suggesting that that's a sensible idea. Those

8 are the two additional constraints; is that

9 right?---The availability of overburden material and

10 the mining sequence, yes. 12.07PM

11 Acknowledging all of that, you say in the last paragraph of

12 your statement that within the central region of the

13 northern batters it may be possible to identify smaller

14 areas in relation to which rehabilitation works could

15 be undertaken as a matter of priority?---Yes. 12.07PM

16 So, can you identify for us, perhaps by looking at Annexure

17 6 to your statement, what those additional areas that

18 may be rehabilitated within the next two to three years

19 are. This may not be the best of your annexures to

20 look at, but we'll see if there's a better one?---No. 12.07PM

21 What I'm talking about in that statement is that

22 smaller localised areas within each of these area A and

23 area B sections. So within these sections here. What

24 I'm referring to is, I'm not talking about

25 rehabilitating all of this area; I'm talking about 12.08PM

26 rehabilitating smaller sections where currently they're

27 available, there's no geotechnical monitoring equipment

28 in that area, there's no bores, there's no Fire Service

29 network, there's no infrastructure, it's about

30 identifying areas that we can get to. 12.08PM

31 So that can be done as part of the rehabilitation work that

1 will have to be done close to that area by 2019?---That
2 can be done, yes.

3 In doing that, you would prioritise the areas closest to the
4 town of Morwell?---Yes.

5 MEMBER PETERING: And why would you do that, Mr Faithfull? 12.08PM

6 What are the benefits of earlier rehabilitation of
7 small pockets?---I think it provides an opportunity to
8 profile those batters and to provide some of the longer
9 term benefits and get us ahead in regards to our rehab
10 strategy. Look, obviously with the fire, it's a method 12.09PM
11 that can be used to minimise the fire.

12 MS RICHARDS: I have no further questions for Mr Faithfull.

13 I understand that Ms Nichols for Environment Victoria
14 has some questions.

15 MEMBER PETERING: Just before you do, sorry, Ms Nichols, I 12.09PM

16 just wanted to clarify one point. We had a
17 conversation around earlier temporary covering of
18 batters for fire prevention. I think your answer was,
19 well, you'd either have to look into it or there was no
20 way of doing it on a temporary basis, and your fire 12.09PM
21 protection strategy was, your words, "Mine firefighting
22 system." So there's been evidence around the removal
23 of those firefighting systems from the northern
24 batters, and that's your understanding, that they've
25 been removed from parts of the northern batters?---Yes. 12.10PM

26 And that there was some pipes and things that were put down
27 during the fire?---There was pipes, there was
28 additional pipes that were laid out during the fire,
29 yes, that's correct.

30 I guess it's incongruous and I'm trying to understand, if 12.10PM
31 you're strategy for prevention of fire was relying upon

1 the mine firefighting system, and it wasn't complete,
2 what was the backup plan if it wasn't effective?---The
3 Fire Service Policy sets out clear steps, sets out
4 clear guidelines by where there's clay breaks, there's
5 tanker fill points that mitigate and provide those 12.10PM
6 firefighting services and access to firefighting
7 services for those areas.

8 Was the risk of the firefighting equipment not working
9 canvassed in GDF's policies? Was that risk
10 addressed?---I don't know. I don't know. 12.11PM

11 MS RICHARDS: I've had indications from Ms Nichols from
12 Environment Victoria, and Ms Doyle will also have a
13 short series of questions for Mr Faithfull.

14 MEMBER PETERING: Thank you, Mr Faithfull?---No problem.

15 <CROSS-EXAMINED BY MS NICHOLS: 12.11PM

16 Good morning, Mr Faithfull. As you've heard, I appear for
17 Environment Victoria. Mr Faithfull, I just have a few
18 questions to start off about overburden. Can I just
19 understand where the issue of overburden fits within
20 the mining method you've described in the 12.12PM
21 rehabilitation plan. When you extract coal you
22 necessarily generate overburden, you first remove the
23 topsoil, then you strip out the overburden, and before
24 you can win the coal you need to dispose of the
25 overburden in some way, don't you?---Well, we're doing 12.12PM
26 it essentially at the same time, so we're taking an
27 amount of overburden to expose a coal seam which we
28 mine.

29 In simple terms, the overburden can really go into three
30 places; it can be placed in the internal dump, 12.12PM
31 including the one in the southeastern field in the

1 mine, or placed on the floor of the mine pit or used to
2 be placed on worked out batters; is that correct?---No.
3 No? Where are the other places the overburden goes?---It
4 depends on material quality.
5 Yes, of course, it does depend on the material quality, but 12.13PM
6 depending on the quality, the overburden will go to one
7 of those three places?---That's right.
8 Some of the overburden will be suitable for placement on
9 batters and some will not because of its
10 quality?---Correct. 12.13PM
11 That's a natural product of the type of soil that you have
12 in the mining area?---That's right.
13 Relative to other mines around the world probably, in this
14 mine you have a fairly high proportion of coal to
15 overburden?---That's correct. 12.13PM
16 The ideal situation for you is that you'd be able to use
17 overburden material that is close to the area that
18 you're rehabilitating?---Absolutely.
19 But it's not always going to be possible, is it?---It
20 depends on how structured and how good the mine plan 12.13PM
21 is.
22 Ultimately, in the rehabilitation plan, when you consider it
23 over the whole of its life, you will need to import
24 overburden materials from parts of the mine to other
25 parts to rehabilitate the batters, won't you?---That's 12.14PM
26 right.
27 For example, just briefly in the application to amend the
28 rehabilitation plan in 2013, what's indicated about the
29 final rehabilitation process at page 25 is that,
30 "Overburden from the batters will be dozed over the 12.14PM
31 exposed coal batters to create the final surface to

1 allow plant growth, and where overburden materials are
2 of poor quality, imported good quality overburden will
3 be laid on the exposed coal benches using truck and
4 shovel"?---That's right.

5 That necessarily arises out of the nature of the material in 12.14PM
6 the mine?---And also the mining strategy at the time
7 and the sequence.

8 But you can't exclude the possibility of needing to import
9 material from one part of the mine to the other?---No,
10 I can't exclude it, but in terms of the mining sequence 12.15PM
11 and the mining strategy, it's definitely more
12 beneficial to have the overburden material in close
13 proximity to the rehabilitated slopes.

14 But you're going to have to do some of it one way or the
15 other, aren't you?---You'll have to do some of it, but 12.15PM
16 the aim of it is to keep it as minimal as possible.

17 In relation to the question of progressive rehabilitation,
18 as you explain in your statement, there is an
19 obligation on GDF Suez to rehabilitate the land in the
20 course of doing the work; you accept that don't 12.15PM
21 you?---Yes.

22 And that's a statutory obligation?---Yes, that's a statutory
23 obligation but it's also part and parcel of being a
24 community wise and environmentally wise mining
25 business. 12.15PM

26 Indeed, and that's an important obligation that GDF Suez
27 accepts that it has?---Yes.

28 In a sense, it's the quid pro quo for being able to have
29 permission to extract coal from the land, is that you
30 rehabilitate it finally at the end of its life, but you 12.16PM
31 also rehabilitate it as you go along; is that

1 correct?---That's right.

2 With the 2009 plan, there's been some discussion with

3 Ms Richards that I won't repeat about the sequencing of

4 the rehabilitation and the difference of view between

5 GDF Suez and Ms White of DSDBI?---DSDBI, yes. 12.16PM

6 I won't take you back to the substance of it, but in short

7 it was the Department's view that certain parts of

8 rehabilitation would be concluded at the time at which

9 you considered that they would be commenced?---That's

10 right. 12.16PM

11 Was there ever any discussion in your meetings with the

12 Department in the course of discussing progressive

13 rehabilitation about the meaning of that sequence and

14 the timing required by it?---Not on my watch, no.

15 To your knowledge, or the first you've heard of it is in the 12.17PM

16 course of this Inquiry?---That's correct.

17 So you were operating on the assumption that you've

18 described in your evidence, by reference to the plan,

19 and the Department, as you now know, was operating on a

20 different assumption?---That's right. 12.17PM

21 Can the Board infer from that, that when you communicate

22 with the Department in your regular meetings, for

23 example in the Environment Review Committee, that there

24 is not a discussion regularly based around time

25 milestones?---We speak specifically about 12.17PM

26 rehabilitation that's planned and rehabilitation that's

27 been completed, but in regards to work plan, look, I

28 haven't attended any of the NRC meetings, it was my

29 understanding that those items were covered off in

30 there. 12.17PM

31 If DSDBI had an understanding that you would complete

1 certain phases of the rehabilitation by 2019 for
2 example, to your knowledge they didn't put that to you
3 and ask you how you were going to meet that time frame
4 that they understood existed?---No, they didn't.

5 In relation to the remediation that is scheduled currently 12.18PM
6 to be completed by 2019, have you done a stability
7 assessment yet?---No.

8 When will you commence that?---I don't know.

9 Can you tell the Board why it is you don't know when you
10 will commence that, despite the fact that that process 12.18PM
11 is at the very least due to commence in 2019?---I would
12 tell the Board that at the moment my focus is on
13 maintaining the geotechnical stability of the mine
14 under current circumstances. We've had a number of
15 site issues that we've needed to deal with. The 12.18PM
16 rehabilitation of the plant associated for a 2017 or
17 2019 plan is on the long-term horizon at the moment for
18 me.

19 Accepting that there has been a very major incident at the
20 mine, but perhaps moving back in time before February 12.19PM
21 2014, was there a reason why you did not commence the
22 stability assessment for the next phase of
23 rehabilitation which was due, that you had not
24 commenced it prior to February 2014? Is the answer,
25 no?---The answer is that we were busy doing other 12.19PM
26 things at the time.

27 So it wasn't a priority to start that process?---No.

28 You've emphasised at paragraph 34 of your statement that
29 there are a number of steps involved in remediation,
30 which I won't repeat, and you've said that batter 12.19PM
31 rehabilitation requires extensive planning, significant

resources, plant, labour, equipment and external consultants. You give the example of the rehabilitation of the northern batters, at the eastern end of the northern batters in 2008-2012. You say that those works were complex and labour and time-intensive. Are you able to provide the Board with any understanding of what those works cost?---No. They were all pre my time. I don't have any information on that.

12.20PM

I understand that you commenced quite recently, but you are the person at GDF Suez responsible for long-term rehabilitation, are you not?---That's right.

12.20PM

You would have access, ready access, to records of GDF Suez that should detail what those costs are?---Yes, but I haven't looked at them.

12.20PM

You say in your statement, without having looked at them, that those works were complex, labour and time-intensive?---Yes, that's my understanding, after talking to the people that indeed carried out those works, the guys in the field, that they were indeed practically complex.

12.21PM

You can't, as you sit here now, estimate what those works cost?---No.

On the significant question of whether it is possible or whether GDF is prepared to bring forward the rehabilitation works in sections of the northern batters, what you say in your statement is that bringing those works forward or accelerating them would be a significant undertaking which would require considerable resources. You've already addressed some of that with Ms Richards. I'd just like to take you

12.21PM

12.21PM

1 back to some of those very briefly to understand them
2 better. The stages you identify at paragraph 34 of
3 your statement, if you've got that there just to remind
4 you, start with stability assessments, following on
5 with planning, moving infrastructure, rebuilding
6 infrastructure and placing overburden. Those steps
7 would be required no matter when you do rehabilitation
8 works, wouldn't they?---This laid out the steps
9 required prior to doing rehabilitation works.

12.22PM

10 The nature of the steps involved does not change regardless
11 of when you do the works; it's not a function of when
12 they're done, you must do these things when you
13 rehabilitate in any case?---Yes, that's right.

12.22PM

14 You say at paragraph 59 of your statement, on the question
15 of whether the works in the northern batters could be
16 accelerated, that it would involve those components
17 which you've said would occur in any case regardless of
18 when the works are done.

12.22PM

19 Then you address specifically the constraints in
20 relation to the northern batters. Can I ask you
21 firstly about what you call construction constraints.
22 That issue about having a season within which to do
23 rehabilitation between Melbourne Cup and Anzac Day,
24 that's just the nature of the job, isn't it, when doing
25 rehabilitation?---That's right.

12.23PM

12.23PM

26 It doesn't change because you decide to accelerate the
27 works?---No, it's when you can feasibly and practically
28 operate in the field.

29 It's something that you must do as a cost of carrying out
30 the mining activities on land, you must engage in that
31 process, which includes a cycled period of

12.23PM

1 rehabilitation that can't continue all year?---We do an
2 amount of progressive rehabilitation per year, yes.

3 Another constraint you identify which has been discussed,
4 and I'll just go to briefly, is the need to deal with
5 infrastructure on the northern batters. In answer to 12.24PM
6 Ms Petering's question before, you said you had not
7 looked at whether you couldn't move that
8 infrastructure. So you're not in a position to say
9 that the infrastructure on the northern batters cannot
10 be moved, are you?---I'm in a position at the moment 12.24PM
11 where that infrastructure is critical to ongoing
12 operations at the mine.

13 That's accepted, Mr Faithfull, but the concept of
14 rehabilitation that you explain in paragraph 34 of your
15 statement is that it necessarily involves moving 12.24PM
16 important infrastructure, replacing it somewhere else
17 on the mine, and to the extent necessary rebuilding it.
18 That is correct, isn't it?---Yes, that's right.

19 So you must encounter that issue whenever you remediate,
20 wherever there is infrastructure in place?---Yes, 12.24PM
21 that's right.

22 The fact that you may have to move infrastructure to a
23 different place is ordinarily not a reason not to do
24 rehabilitation at an earlier time ?---No, it's not.
25 No, I disagree. 12.25PM

26 Well, it just comes more costly, doesn't it?---No, it's a
27 matter of practicality and it's a matter of the mining
28 sequence and it's a matter about understanding what
29 that infrastructure is at that particular point in time
30 and what it's being used for. 12.25PM

31 Perhaps we could go through them. It's accepted that

1 infrastructure is on the mine because it's important,
2 because you need to use it?---That's right.

3 So, accepting that, dealing with the ones you mention at
4 page 10 of your statement, the first one you mention is
5 mine powerlines. You don't know as you sit here today 12.25PM
6 whether or not they would need to be moved, do
7 you?---The mine powerlines? If we were to rehabilitate
8 what?

9 I beg your pardon, I was actually directing myself to
10 SP AusNet assets. I asked you the wrong question. 12.26PM
11 SP AusNet's assets, you don't know whether they would
12 have to be moved do you?---No, that's right.

13 And you could have discussions with them, couldn't
14 you?---That's right.

15 You would anticipate that, if permission was required, 12.26PM
16 SP AusNet would give that permission to you?---We would
17 engage in discussions with SP AusNet if we determined
18 that that infrastructure would be impacted by any
19 activities at the mine.

20 There would be no reason to think that SP AusNet would not 12.26PM
21 cooperate with you and give you the permission you
22 needed to do that?---I would expect that would be the
23 case.

24 Going back to mine powerlines which I mentioned before, you
25 probably would have to move the mine powerlines; is 12.26PM
26 that right?---Yes.

27 But you would have the technical capability to do that,
28 wouldn't you?---Yes, that's right.

29 Dealing with the issue of Fire Service main pipes, those can
30 be moved, can't they?---Yes, they can be. 12.27PM
31 They were moved in the course of the rehabilitation of part

1 of the northern batters in 2008-2012, weren't they?---I
2 wasn't there at the time.

3 I think you say that in your statement, Mr Faithfull, that
4 as part of the works done in the northern batters you
5 needed to move Fire Service pipes?---Could you refer me 12.27PM
6 to that section?

7 I'll have the reference turned up in a moment, Mr Faithfull.
8 Roads, ramps and benches, they can be moved, can't
9 they, or rebuilt?---Roads can be, benches can't be.

10 Benches are being rehabilitated, new benches will be 12.27PM
11 constructed in other parts of the mine?---No. No,
12 that's not the case.

13 You're not suggesting that you can't have alternative access
14 arrangements put in place, are you?---No.

15 So, if you can't move or rebuild the bench you can create an 12.28PM
16 alternative access arrangement?---Yes, that's right.

17 Horizontal and vertical bores can also be rebuilt and
18 replaced?---That depends on the location of the bores
19 and the activity at the time.

20 But there's nothing to suggest, on the basis of the 12.28PM
21 knowledge that you have as you sit here, that that
22 can't be done in relation to the northern batters?---I
23 don't think I said that nothing cannot be done, but it
24 needs to be done in a logical set out sequence.

25 The reference I sought to direct you to before, 12.28PM
26 Mr Faithfull, was at paragraph 51 of your statement
27 where you mention the rehabilitation works in the
28 northeastern part of the northern batters, and you say
29 that those works were complex and labour and
30 time-intensive, and, as I suggest to you, all 12.29PM
31 rehabilitation is by its very nature; would you agree

1 with that?---Yes, that's right.

2 "These rehabilitation works were complex. In order to

3 rehabilitate the area Fire Service pipes and mains had

4 to be moved prior to the batter reshaping

5 works?---That's right. 12.29PM

6 So it's been done before, hasn't it?---Of course it has.

7 None of these issues are really a reason that you cannot do

8 these works; they add to the cost though, don't

9 they?---They are all reasons why we can't do works at a

10 particular point in time, yes. 12.29PM

11 There's no technical impediment to doing any of these works,

12 it's just that you prefer to do them in a different

13 sequence?---No, I disagree, I believe that there are a

14 number of technical impediments in terms of doing this

15 work. It has a lot to do with the mining sequence, it 12.29PM

16 has a lot to do with the geotechnical stability at the

17 time. These are considerations that all need to be

18 thought about prior to doing any of this work. I'm not

19 saying this work can't be done, I'm simply saying that

20 it needs to be done in a well thought out and logical 12.30PM

21 sequence.

22 No one is suggesting that you shouldn't think about doing it

23 in a logical sequence, but what is suggested,

24 Mr Faithfull, is that you've simply identified a number

25 of things that admittedly are complex but that would 12.30PM

26 need to happen in the course of any remediation and

27 must be thought about?---That's right.

28 Can I ask you about whether you agree with this proposition:

29 One of the consequences of leaving unremediated areas

30 of exposed coal batters is to increase fire risk. Do 12.30PM

31 you accept that?---No, providing you have an adequate

1 means of extinguishment that's installed or you have
2 the ability to get to water.

3 Yes, I should have probably put it that way. So there's
4 really two options: You need an adequate fire water
5 service?---Yes. 12.31PM

6 Or you need the exposed coal batters to be insulated in one
7 way or the other?---Sure.

8 And, to summarise that, the principal ways of guarding
9 against fire risk in a mine are either rehabilitation
10 which provides insulation or providing an adequate Fire 12.31PM
11 Service?---Providing an adequate Fire Service, that's
12 right.

13 It's one of the two. In the 2009 fire plan in the
14 remediation section it's specifically recognised that
15 covering exposed coal batters in the course of 12.31PM
16 rehabilitation is a fire prevention measure; that is
17 right, isn't it?---Look, I haven't - I don't know the
18 detail in that policy.

19 You should really know it, shouldn't you, Mr Faithfull,
20 because you are the senior person operationally who is 12.32PM
21 responsible for rehabilitation, are you not?---I'm
22 responsible for rehabilitation, but I'm not responsible
23 for Fire Service and Fire Service planning.

24 Can I just direct you very briefly to s.6.5 of the 2009 work
25 plan which deals with remediation, and that's at 12.32PM
26 page 6-3. Do you have that there? I should probably
27 explain, I'm sorry, Mr Faithfull, it's not actually an
28 attachment to your statement, but I'll ask that it be
29 brought up so I can draw your attention to it. While
30 that's being obtained, can I ask, is the 2009 work plan 12.32PM
31 and specifically the rehabilitation plan something that

1 you have looked at in the course of your work?---The
2 2009 work plan?
3 Yes?---Yes, it is.
4 Can you please turn to page 6-3 and you'll find the
5 page numbers near to the bottom left-hand corner. Have 12.33PM
6 you got 6.5 there?---6.5 or 6-3?
7 6-3 is the page number and 6.5 is the heading number. It's
8 entitled, "Progressive rehabilitation
9 staging/sequence." Do you have that?---Yes.
10 Do you recognise this document?---Yes. 12.33PM
11 You'll see that it's stated there under that heading, "The
12 use of overburden materials for rehabilitation roles is
13 determined taking into account the nature of the
14 material. There are two major tasks to be completed
15 using overburden: (1) coverage of coal batters to 12.33PM
16 provide fire protection and a nutrient base to support
17 plant growth that in turn provides long-term batter
18 stability; and (2) placement of the balance of
19 overburden material on the floor of the mine to assist
20 with counterbalance and aquifer pressure." 12.34PM
21 Having read that, would you agree that one of the
22 functions that rehabilitation serves, in particular in
23 relation to exposed batters, is fire protection?---Yes.
24 Is that something that you consider in the course of your
25 planning of progressive rehabilitation of the mine?---I 12.34PM
26 consider that the areas that aren't covered by
27 rehabilitation are covered by the Fire Service network.
28 Is that really the - - -?---It's not the driver behind
29 rehabilitation.
30 Is your working assumption that, for fire risk, you're 12.34PM
31 really relying upon an adequate Fire Service system in

1 the mine for the areas that aren't
2 rehabilitated?---Yes, that's right.

3 Have you made any enquiries about the functionality and
4 effectiveness of the Fire Service system at the mine to
5 protect against fire risk in the unremediated worked 12.35PM
6 out batters?---I think it's pretty significant at the
7 moment.

8 Let me ask you the question in relation to the period of
9 time before the 2014 fire. Had you made any enquiries
10 about that?---No. 12.35PM

11 Why is that, Mr Faithfull?---Why that I haven't - sorry, can
12 you rephrase the question?

13 Why didn't you think about whether or not the Fire Service
14 would be sufficient to protect against the risk of fire
15 in unremediated worked out batters in the mine?---I 12.35PM
16 presume that we have an adequate Fire Service system.
17 It's not my area of speciality.

18 MEMBER PETERING: Whose is it, Mr Faithfull, sorry?---That
19 would fall under Rob Dugan.

20 MS NICHOLS: Were you aware that in 1992 the mine operator 12.36PM
21 undertook a risk analysis in relation to the risk of
22 fire in worked out areas of the mine?---1992?

23 Yes?---No.

24 Did you have any views, other than assuming that the fire
25 system would be appropriate, or effective rather?---No. 12.36PM
26 Just an assumption you made. Can I just finish off that
27 point by asking you about the 2013 proposed work plan
28 variation. I take it you're familiar with that
29 document?---Yes.

30 On page 25 of that document; do you have that one here?---I 12.36PM
31 have it here somewhere.

1 Can I draw your attention to the words about halfway down
2 the page, just after the passage I read previously to
3 you, it says, "Generally benches are already covered in
4 good overburden material as part of normal operations
5 to allow vehicle passage and reduce fire risk." I 12.37PM
6 would suggest to you that the plan itself acknowledges
7 that the placement of overburden material on parts of
8 the mine that contain coal and are exposed is an
9 important fire prevention measure?---Well, that's
10 indeed making reference to the roads. 12.38PM

11 I understand that's in a different context, it's not
12 specifically talking about exposed coal, but it does
13 acknowledge the risk of fire, does it not?---It
14 acknowledges the risk of fire for areas that are
15 trafficked by vehicles. 12.38PM

16 I understand. It's the case, isn't it, that GDF did not
17 have, at least before the 2014 fires, any program to
18 cap or otherwise cover the exposed coal batters, other
19 than by way of rehabilitation?---Apart from clay
20 capping roads, yes. We did have a plan that as we 12.38PM
21 generally build roads we clay capped roads, but in
22 terms of final rehabilitation, no. We have our annual
23 plan that we work to, our rehabilitation plan that we
24 work to each year that we generate and we work to that,
25 so we cover those areas. 12.39PM

26 Can I ask you some questions finally about the
27 rehabilitation bond. You've said that GDF has a bond
28 in the amount of \$15 million that it has lodged. What
29 is your understanding of the purpose of the
30 rehabilitation bond?---The bond, as we spoke about 12.39PM
31 before, it's a carrot and a stick and it's, if you fail

1 to meet milestone targets for progressive
2 rehabilitation, or if you fail to do final
3 rehabilitation, you forfeit your bond.

4 I'll just read to you a statement, you don't need to go to
5 it because it's very short, it's contained in the work 12.39PM
6 plan of 2009 - or rather, the progress report that's
7 attached to the work plan which is dated in 2008. The
8 statement is this under the heading of, "Progressive
9 rehabilitation." "The mining licence requires the
10 posting of a substantial rehabilitation bond to ensure 12.40PM
11 that mine closure and final rehabilitation never
12 becomes a burden on the taxpayer."

13 Do you accept that as a current operating
14 statement from GDF Suez's perspective?---I'm not - just
15 read that out to me again, please? 12.40PM

16 Yes. I should say, this is a GDF document, it's the 2008
17 progress report; are you familiar with that?---Not the
18 progress report.

19 I might actually get you to look at it briefly, if you may.
20 Do you have the 2009 plan there. You were given it a 12.40PM
21 few moments ago, I think, Mr Faithfull?---Refer me to
22 what page I'm looking at?

23 Yes, the trouble is that it doesn't really have
24 page numbers. I'll see if I can find a page number for
25 you. If you go towards the back of the document, if 12.41PM
26 you look at the page numbers in the top right-hand
27 corner, the document codes, can you see those?---Yes.

28 Towards the end there's an a page ending in 0812. That
29 should be the commencement of the progress report for
30 2008?---Sorry, I've lost you. Progress report. 12.41PM

31 You have that one there?---Yes.

1 Have you seen that progress report before?---I haven't
2 looked at this in detail, no.
3 You probably have access to it in the course of your work,
4 do you not?---Yes, that would be right.
5 If you turn over two pages and get to the page with the 12.42PM
6 heading, "Progressive rehabilitation"?---Yes.
7 You'll see the statement in the second paragraph, "The
8 mining licence requires the posting of a substantial
9 rehabilitation bond to ensure that mine closure and
10 final rehabilitation never becomes a burden on the 12.42PM
11 taxpayer." Is that still a statement of GDF's policy
12 and attitude?---Look, in seeing this document for the
13 first time, it seems like a fair statement to me.
14 You've spoken in your evidence in your statement about the
15 purpose of the rehabilitation bond. It should be, if 12.42PM
16 it is to conform with that objective that I've just
17 taken you to in that document, the rehabilitation bond
18 should cover the likely costs of the outstanding
19 remediation works; that's correct, isn't it?---Just say
20 that to me again please? 12.43PM
21 If it's to meet that objective of the costs of
22 rehabilitation never becoming a burden on the taxpayer,
23 the amount of the bond should at least be equivalent to
24 the likely cost of the outstanding rehabilitation
25 works?---It should be a function of it, yes. 12.43PM
26 You've never been asked to do an assessment of the
27 rehabilitation costs - - -?---No.
28 - - - for the purposes of advising the Minister under the
29 Act, have you?---No.
30 Almost finished, Mr Faithfull, but in relation to the 12.43PM
31 \$15 million figure, do you accept that that's based on

1 1994 dollar figures assessment of the then estimated
2 rehabilitation costs?---I believe so.

3 And it's not indexed?---I don't know the detail behind it.
4 But you would accept that it seems right, doesn't it, that
5 it hasn't been indexed? It was based on 1994 dollars 12.44PM
6 which you accepted, and the amount of it has stayed the
7 same ever since?---That's not a matter for me to
8 comment on; that's something that's set by another
9 people within the industry.

10 So you don't know how it was calculated?---No. It was in 12.44PM
11 1994.

12 But it hasn't been revised since 1994, has it?---I don't
13 believe so.

14 It was not revised in 2009 when the area of the mining --
15 the operated area of the mining increased 12.44PM
16 significantly?---I don't know.

17 You don't know? All right. But you would accept, wouldn't
18 you, that if the area of the mine increased
19 significantly, then the potential rehabilitation costs
20 exposure would have increased significantly?---No, not 12.45PM
21 necessarily.

22 Well, if you have a lot more area of land to rehabilitate
23 it's going to cost a lot more, isn't it?---No, depends
24 on the method that you use to rehabilitate.

25 Quite frankly, Mr Faithfull, that's not a realistic answer, 12.45PM
26 is it?---I think it's very realistic.

27 Do you accept that per hectare you'll incur costs to
28 rehabilitate?---That's right.

29 And so, if you significantly increase hectarage which is
30 mined, you will significantly increase the hectarage 12.45PM
31 which needs to be rehabilitated at whatever

1 cost?---Depends what method that I use to do the
2 rehabilitation. If I use truck and shovel to do the
3 whole lot, as probably would have been done in the 1994
4 work plan, then it would have been a price. If I was
5 to do rehabilitation now and use a different method,
6 well, it changes the dynamics and it changes the costs.
7 We might be at cross-purposes. The more rehabilitation you
8 have to do, the more it will cost; that is right, isn't
9 it?---That's right.

12.45PM

10 But you can't tell the Board about what your budget is for
11 rehabilitation?---No.

12.46PM

12 And you don't know what its projected to cost?---No.

13 You can't tell the Board about the adequacy of the
14 \$15 million bond?---No.

15 It's likely to be very inadequate, isn't it?---I don't know.

12.46PM

16 You have no idea. Finally, you've talked at length about
17 the costs involved in rehabilitation. A lot of the
18 costs are connected with the need to engage labour,
19 aren't they?---They are.

20 So if GDF was to progress or accelerate its works, it would
21 need to engage more labour?---That's right.

12.46PM

22 And that might have the positive benefit of creating
23 opportunities for local employment?---Sure.

24 I have nothing further.

25 <CROSS-EXAMINED BY MS DOYLE:

12.47PM

26 Ms Faithfull, I just want to clarify some terminology that's
27 come up during your evidence. In your statement and in
28 some of the questions you've been asked about full or
29 final rehabilitation and you've also been asked about
30 progressive rehabilitation, but then you started to be
31 asked about a number of other types of rehabilitation

12.47PM

1 and I just want to clarify some of those other types.

2 Sometimes you were asked about temporary
3 rehabilitation. Is temporary rehabilitation a term
4 that you are familiar with or have tended to use in
5 your work?---No.

12.47PM

6 It seems that there are a number of examples of temporary
7 rehabilitation that people have been keen to ask you
8 about. One you've been asked about is one that
9 Mr Incoll, one of the experts who's going to give
10 evidence today, talks about in his statement at
11 paragraph 281, and it's the type of rehabilitation that
12 I think Ms Petering was asking you about today. She
13 asked you about clay capping. I just wanted to
14 clarify, have you ever undertaking that type of
15 rehabilitation where one puts earth on an exposed
16 batter without laying it back to a fresh profile as
17 you've described under a full rehabilitation?---No.

12.47PM

12.48PM

18 Can you see difficulties with that type of rehabilitation,
19 whether it be called temporary rehabilitation or the
20 Incoll model or clay capping?---Absolutely.

12.48PM

21 What are the difficulties?---The difficulties are that, as I
22 think I mentioned to Ms Petering before, is that a lot
23 of our geotechnical analysis on site is done by visual
24 inspections, so we're visually looking at the mining
25 faces and are looking at the final batters. They
26 provide us an indicator as to how well the batter is
27 performing, so we can see if new joint sets open up, we
28 can map these joint sets, once we understand we can
29 then start taking the next steps in terms of whether we
30 physically need to do something to manage those joint
31 sets and understand why that joint set opened up in the

12.48PM

12.49PM

1 first place. If we were to go with a temporary
2 covering of putting something over the top of that,
3 that limits our ability to do that.

4 Is there any difficulty which arises from not having laid
5 back or changed the profile of the batter first?---It's 12.49PM
6 the practicality of it in the first place. We're left
7 then with essentially a concrete wall which, it's
8 physically hard to maintain, it's not practical in
9 mining nature. I think I mentioned before that it's
10 easier to lay the batters back, then you can physically 12.49PM
11 maintain them for vegetation, you can maintain them to
12 ensure that the stability of the mine and also indeed
13 the fire risk is reduced in future.

14 You just said a concrete wall. You might be talking there
15 about, Mr Gaulton, a community witness, gave evidence 12.49PM
16 about applying a mixture of earth and cement, and
17 Professor Cliff in his statement talks about using fly
18 ash slurry and a stabiliser. Is that the type of thing
19 you had in mind when you said concrete or are you
20 thinking of something else?---Yes, that's right. Any 12.50PM
21 of those short-term fixes, the shotcreting or the fly
22 ash or the clay clapping, there's a number of practical
23 difficulties that go along with trying to implement
24 some of those policies; how do you get the material on
25 the batters? Is it a simple spray? Once it's on there 12.50PM
26 how do you then manage the batter profile behind? At
27 least if you lay the batter back you have the
28 opportunity then to maintain it in a way going forward.
29 If you don't do that, then you've eliminated
30 potentially one risk, but you've brought another risk 12.50PM
31 to the forefront, and that's - - -

1 Mr Gaulton referred to, I think, using a jet or a spray to
2 put earth and cement on, and you just said spray, I
3 don't understand. What would you use to spray a
4 mixture of earth and cement onto a non-laid back
5 batter?---I imagine it would be some sort of concrete 12.50PM
6 pumping truck and an elevated man lift with a platform,
7 so we're talking about people exposed on heights that
8 we're trying to address a 20 or 30 metre batter with,
9 working on some sort of a slope or a bench.

10 In your statement at paragraph 60 when you talk about 12.51PM
11 infrastructure, one of the things you mention is
12 horizontal bores. How would horizontal bores be
13 affected by this type of temporary rehabilitation
14 you've just spoken of?---You'd need to make allowances
15 for - you can't block up the horizontal bores so, if 12.51PM
16 any of these methods cover up horizontal bores then, as
17 I mentioned, we're bringing up another geotechnical
18 risk because we're not able to manage the water within
19 each of these coal batters. So, if we were to put
20 anything in front of these batters that limits our 12.51PM
21 ability to de-water the batters or monitor these
22 batters, then it brings to the forefront a number of
23 other risks.

24 Would the type of temporary rehabilitation, I just want to
25 stick with Ms Petering's version at the moment of clay 12.51PM
26 capping, forget the concrete or the ash model, doing
27 that on a batter that hasn't been laid back, does that
28 make any change in relation to access by road around
29 the mine and, if so, why and how?---Well, it does,
30 because physically when you're putting this material 12.52PM
31 against the batter, so if we're talking about 1:1

1 batter; the natural angle that this material grills
2 down to, so when you tip this material in it might fall
3 at a 35 or a 30 degree profile so it's physically less
4 steep. The issue with it is, then the practical nature
5 of being able to bring that material up to a height
6 where it covers the batter then is, we end up with a
7 batter profile that's significantly larger and blocks
8 up our horizontal bores.

12.52PM

9 The access roads at the moment between the vertical bits of
10 the batters, how wide are they, the benches in other
11 words?---They're anywhere between 20 and 30 metres.

12.52PM

12 Does doing this type of temporary rehabilitation shorten the
13 width of that accessible part of the bench?---It does,
14 absolutely.

15 Why and by what degree?---It has the potential to
16 significantly reduce. As I mentioned, if your material
17 angle changes and we're compacting, the maximum slope
18 you can work on is a two and a half to a 3:1. Once
19 that's set up and that's the maximum angle you can
20 physically put against these batters, your access to
21 the area now has been cut off because you've covered
22 your road, you've covered your drain, you've covered your
23 bung wall, all that infrastructure that was sitting on
24 that bench has now been tipped over.

12.53PM

12.53PM

25 I want to ask you about one other type of what might be
26 called temporary rehabilitation, this is
27 Professor Catford's model that he asked you about; that
28 is, laying back as with full rehabilitation but not
29 covering. Do you see any feasibility/difficulties with
30 that model of what we might call temporary
31 rehabilitation?---Look, I think that that's a more

12.53PM

12.53PM

1 realistic and a practical measure, but how you do that
2 given the nature of obviously the infrastructure and
3 the requirements and the time makes it - yes, it would
4 need to be thought about further.

5 Would you need to think about fire risk, because under that 12.54PM
6 model one increase the surface area of exposed coal,
7 doesn't one?---One does increase the surface area of
8 the exposed coal.

9 Some of these ideas sound as if they were new or newer to
10 you. Would it be the case that if you were going to 12.54PM
11 action any of them, you'd want to undertake a risk
12 assessment?---Absolutely.

13 Would you involve DSDBI in that?---I would involve DSDBI and
14 I would involve WorkSafe.

15 You gave evidence when you were asked some questions by 12.54PM
16 Ms Richards about what you call easy wins and you were
17 referring at that instance to the map at Annexure 4.
18 When Ms Richards asked you about it you said, "They
19 were done prior to my time." Those easy wins were done
20 prior to privatisation of the mine, weren't 12.54PM
21 they?---That's right.

22 I think in your statement at paragraphs 50 and 51, you say
23 that very little rehabilitation had been done prior to
24 privatisation. I wanted to ask you, do you know, was
25 any of the rehabilitation done prior to privatisation 12.55PM
26 of the full rehabilitation nature, namely laying back
27 and covering?---No.

28 You were asked about the current plan to hit a 2019 target.
29 I don't want to revisit that topic, but you were then
30 asked about what you say in paragraph 65, the very last 12.55PM
31 paragraph of your statement, about identifying some

1 other more feasible parts of the northern batters that
2 could be brought forward.

3 Can I ask you to go to Annexure 5 of your
4 statement, there's a map there that's probably an
5 easier one to look at than Annexure 4 for this purpose. 12.55PM
6 Have you got Annexure 5 to your statement? This is the
7 one with some blue cross-hatching. Have you got that
8 one, Mr Faithfull?---Got it.

9 In your statement you described this as areas for
10 rehabilitation in the northern batters that are already 12.56PM
11 earmarked to be done by the end of this year?---That's
12 right.

13 When were they earmarked to be done?--- January 14, start of
14 this year.

15 Before the fires the plan was to get to the blue 12.56PM
16 cross-hatched situation?---It was.

17 Is the current plan still to achieve this map by the end of
18 this calendar year?---It is.

19 In designating or choosing those aspects - sorry, who did it
20 first, was it the Environmental Review Committee who 12.56PM
21 came up with that idea?---No.

22 Who planned for it and who selected those areas?---That's
23 the mine.

24 What process - you don't have to go through all the detail,
25 but what process did they use to select the blue 12.56PM
26 cross-hatched areas?---They were areas that were
27 available.

28 Were they regarded as feasible and achievable in the
29 earthworks season?---Within the earthworks season
30 within the timeframes. 12.56PM

31 As far as you know, nothing's changed about that plan other

1 than, if there's any difficulty with the earthworks
2 season?---Correct.

3 I have nothing further for Mr Faithfull.

4 Could I just ask a quick supplementary. Of course, the
5 Inquiry's trying to look at solutions, Mr Faithfull, 12.57PM
6 and thank you for your advice. What overall would you
7 say was the best technical way to reduce the risk of
8 fire on these batters? You've explored some options,
9 we've asked you some, posed some suggestions, what do
10 you think is the best technical mechanical way, 12.57PM
11 engineering solution to reducing the fire on the
12 batters?---I think a combination of the rehabilitation
13 and also the Fire Service network. I think it all
14 comes within a set of constraints and limit of
15 practicality, so I think definitely a combination of 12.57PM
16 those two methods.

17 Thank you.

18 MEMBER PETERING: Just to supplement that, too, thank you.

19 The Fire Service network and rehabilitation are the two
20 practical ways. So, given the experience of February, 12.58PM
21 is it your opinion that the Fire Service network needs
22 to be expanded?---I think it has been expanded already.

23 During the fire?---During the fire.

24 And any expansion further, do you think, to prevent any
25 further outbreaks of fire at your mine?---That's 12.58PM
26 certainly something we're going to be looking at.

27 Thank you.

28 <RE-EXAMINED BY MS RICHARDS:

29 Just a few more questions, Mr Faithfull. This idea of
30 temporarily covering the exposed coalfaces of the 12.58PM
31 worked out batters with something, be it a fly ash

1 slurry or mixture of clay and concrete with something,
2 this is a new idea to you, is it not?---It is.
3 It's not equivalent to rehabilitation, it's a medium to
4 long-term fire protection measure that's being
5 proposed, is it not?---Well, it's being proposed. 12.59PM
6 It's a new idea to you, you've known about it for about a
7 week, would that be right?---Yes, that's right.
8 At most, and immediately you've identified a number of
9 practical problems with its implementation, haven't
10 you?---That's right. 12.59PM
11 You would accept, would you not, that those practical
12 problems may be able to be worked through?---I agree,
13 yes.
14 For example, the practical problem that you've identified
15 about the application of some coating to the worked out 12.59PM
16 batters, reducing the breadth of the roads, would
17 depend very much on the thickness of the coating, would
18 it not?---It does, but even if you put a coating on
19 there, as I mentioned before, it limits our ability to
20 look at the coal structure itself. 12.59PM
21 Yes, which is a separate issue?---Which is a separate issue.
22 I'd like you to have a look at this photograph, please,
23 Mr Faithfull, this is a photograph that was provided to
24 us by Bob Barry who is one of the Incident Controllers,
25 it appears in his statement on page 7. One of the 01.00PM
26 issues that you mentioned was that, applying this
27 coating would involve people working at height. This
28 is a photograph taken during the firefight with
29 firefighters working at height, applying compressed air
30 foam to the batters. So we know that it can be done, 01.00PM
31 don't we?---Well, that's a foam product.

1 Yes, but we know that a substance can be applied to the
2 exposed coal batters in less than ideal circumstances,
3 do we not?---We know that that foam product can be
4 applied to those heights using that equipment, but I
5 don't know the other equipment that's being proposed 01.00PM
6 and the other option that are being proposed. Without
7 seeing it in practice and without having experience
8 with it, I'd question its practicality of being able to
9 do something similar to that.

10 But those are practicalities that could be considered and 01.01PM
11 could be assessed with the assistance of DSDBI and
12 WorkSafe, could they not?---They could be, but the one
13 issue that we still haven't covered off here is, we're
14 still unable to look at the batters.

15 Well, again, they're issues that need to be considered but 01.01PM
16 they ought not to be rejected out of hand, should they,
17 because the alternative maybe that we have to get the
18 firefighters back in to do this again under less than
19 ideal circumstances?---I'd hope that that is not going
20 to be the case and we will certainly be endeavouring 01.01PM
21 that that's not going to be the case.

22 Yes. Recent experience suggests that additional protection
23 measures over and above those in the Mine Fire Service
24 Policy and Code of Practice are required if we are to
25 prevent a recurrence of what happened in February. 01.01PM
26 Would you agree?---I think a thorough risk assessment
27 and understanding of the limitations needs to be
28 undertaken to identify any shortfalls and identify
29 opportunities for improvement.

30 But you would not reject out of hand the desirability of 01.02PM
31 attempting that task?---No, but I'd certainly like to

1 see the science and the practicalities behind it and
2 how they address my concerns.

3 Thank you, Mr Faithfull. I have no further questions. May
4 Mr Faithfull be excused?

5 CHAIRMAN: Yes. Thank you, Mr Faithfull.

01.02PM

6 <(THE WITNESS WITHDREW)

7 MS RICHARDS: We have recently received a great deal of very
8 detailed information from GDF Suez which, while it is
9 detailed and welcome, has upset the scheduling a
10 little. So, I anticipate that we will be asking the
11 Board to sit beyond 4.30 this afternoon so that we can
12 at least complete Mr Polmear's evidence and make some
13 inroads into Professor Cliff's evidence by the end of
14 the day and it may also be necessary for us to ask that
15 we start sitting early tomorrow so that we can complete
16 by the end of tomorrow.

01.02PM

01.03PM

17 CHAIRMAN: Yes.

18 LUNCHEON ADJOURNMENT

1 UPON RESUMING AT 2.05 P.M.:

2 MR ROZEN: Before I call the next witness, there is one
3 bundle of documents that have been provided to the
4 Inquiry by GDF Suez which I would seek to tender. It's
5 a bundle of documents entitled, "Safety assessment of 02.04PM
6 major mining hazards", and it comes in several stages,
7 several parts and includes an executive summary. I
8 understand from Ms Doyle that there is a further folder
9 of documents that may be sought to be attached to this
10 exhibit. I'm perhaps not expressing that as well as I 02.04PM
11 could, but that's my understanding. For the time being
12 if I could tender this bundle and copies have been
13 provided to the parties.

14
15 #EXHIBIT 89 - Bundle of GDF Suez documents entitled, "Safety 02.05PM
16 Assessment of Major Mining Hazards".

17 MR ROZEN: With that out of the way, I will call Mr Richard
18 Polmear to the witness box, please.

19 <RICHARD MATTHEW POLMEAR, sworn and examined:

20 MR ROZEN: Afternoon, Mr Polmear. Afternoon. 02.05PM

21 Can you confirm from the transcript, please, that your full
22 name is Richard Matthew Polmear?---It is.

23 Your work address is Brodribb Road, Hazelwood?---It is.

24 You're employed by Hazelwood Power Corporation, or GDF Suez
25 at it's been referred to in this Inquiry, as its Carbon 02.05PM
26 Efficiency and Improvement General Manager?---I am.

27 I'm guessing that's a title that didn't exist in 1982 when
28 you started working at this location?---You're dead
29 right.

30 Mr Polmear, for the purposes of the Inquiry have you made a 02.06PM
31 witness statement recently of 30 paragraphs plus

1 attachments?---I have.

2 Have you, before coming along this afternoon, had an

3 opportunity to read through that statement?---I have.

4 Are its contents true and correct?---To the best of my

5 knowledge, yes. 02.06PM

6 There's nothing you want to change?---No.

7 I tender the statement.

8

9 #EXHIBIT 90 - Statement of Richard Polmear.

10 02.06PM

11 MR ROZEN: A little bit about you, Mr Polmear, and your

12 position. You have in fact been employed at the

13 Hazelwood Mine for a considerable period of time, since

14 1982?---Correct.

15 That must make you one of the veterans at the location, I'm 02.06PM

16 guessing?---Correct.

17 Obviously you were there when the mine was operated by the

18 SECV and you've been there through the Generation

19 Victoria period and continued post

20 privatisation?---Correct. 02.07PM

21 During that period of 32 years you've had a number of roles

22 which you refer to in paragraph 4 of your statement,

23 including a recent period as the Mine Director,

24 2010-2012?---Correct.

25 Importantly, you've held two positions where you had a 02.07PM

26 responsibility for Fire Services at the mine; is that

27 right?---Correct.

28 As I read it, between 1990 and 1994, albeit in two different

29 positions, you had that responsibility?---That's

30 correct. 02.07PM

31 We have an organisation chart, you might have been in the

1 Inquiry room when Mr Faithfull found a younger version
2 of himself on a photo, I'll ask you to do the same if
3 we could please to get some idea of where you're
4 located in the hierarchy. If you use that ruler that's
5 just in front of you, Mr Polmear, and point at the
6 large screen, if you wouldn't mind?---I'm not sure that
7 I'm on it.

02.08PM

8 That's not the outcome I was looking for, Mr Polmear, it's
9 never a good sign?---Did I tell you, I'm retiring in
10 two weeks, so maybe this is a new one.

02.08PM

11 Okay, you might retire?---I report directly to the Asset
12 Manager, Mr Graham.

13 Not through anyone else, obviously enough; it's a direct
14 report?---Yes.

15 That'll do, thank you?---This might be published in two
16 weeks' time.

02.08PM

17 Very helpfully, I must say, for the Inquiry, Mr Polmear, you
18 have been able to fill a number of gaps and we're
19 grateful for that. Your statement sets out a good deal
20 of history going back even before the mine commenced,
21 before the commencement of coal mining. You refer us
22 to a plan which is behind Annexure 1, that might be a
23 useful place to start. If we orient that so that, if
24 we can turn it counter-clockwise 90 degrees. Now
25 north's at the top, isn't it, Mr Polmear?---Pretty
26 close.

02.09PM

02.09PM

27 This, as you tell us, is actually from a book, isn't it,
28 it's the proposed mine, January 1951?---That's correct.
29 Just to get an understanding of that, we're looking at the
30 eastern end of what we've all been referring to as the
31 northern batters?---Yes. The original workings of the

02.10PM

1 mine you will see have a curve in it which is the
2 only - not the only, but it's quite helpful in terms of
3 locating yourself. At that stage the mine was set up
4 to supply energy before - what we now know as Energy
5 Brix, and that was the northern batters of the east 02.10PM
6 field and the eastern batters of the east field.

7 We can see the conveyor there, can we, linking the eastern
8 batters with the Energy Brix?---Yes, this is Brix
9 conveyor. At that stage it was all rail transport, so
10 these loops show the rail corridors all the way along. 02.10PM

11 If we can just zoom back, reduce the size, then to the north
12 of the northern batters we can see the southern parts
13 of Morwell?---Yes. This area here.

14 We can in fact just see the railway line, can't we, at the
15 top there?---The Victorian railway line. These are the 02.11PM
16 linkages into the (indistinct).

17 You explain in your statement the development of the mine
18 through the 1950s and the 1960, we don't need to go
19 into it in any great detail other than to note that
20 during that time, once the power station to the south 02.11PM
21 of the mine came into operation, there was a
22 significant increase in the amount of coal that was
23 being mined in a given year?---The reason for putting
24 that statement and a couple of other statements in
25 there was to give an indication that the development of 02.11PM
26 Fire Service in that northeastern corner was actually -
27 it appears quite haphazard when you look at plans that
28 showed the outline there.

29 Why was that or why is that?---Three factors: One was the
30 development of the mine. So the mine was initially 02.12PM
31 going to be rail transport and bucket chain machines,

1 subsequently moved to bucket wheels and conveyors. A
2 developing mine always has to open up a reasonably
3 large area and then develop down the next level,
4 develop that out. So the point which is deepest is
5 changing all the time, which means that you've got 02.12PM
6 problems in pipe work to get the water out, things like
7 that; that's changing quite frequently, so you end up
8 with a lot of pipe work that sometimes might go in as a
9 discharge line and then be linked into a Fire Service
10 network and things like that, so it makes it quite 02.12PM
11 haphazard and also it predates corrosion protection
12 systems to a large degree.

13 That's a point you make at paragraph 12 of your statement,
14 is it not?---Yes. I'm jumping about a bit.

15 That's all right. You're making the point that the pipe 02.12PM
16 work installed in that early period was pipe work that
17 had little or no internal or external corrosion
18 protection?---Yes.

19 Subsequent pipe work was installed with such protection; is
20 that right?---That's correct. 02.13PM

21 As you explain, you've explained the reasons, but
22 essentially the pipe work over time rusts and becomes
23 in various degrees unusable?---The first step is, it
24 starts to leak, leakage is important because leakage
25 tends to get into the pre-existing jointing systems in 02.13PM
26 the coal. Coal doesn't weigh very much more than
27 water, so it doesn't have a lot of capacity to resist
28 water, and as a result of that, movement happens quite
29 rapidly with ingress of water. So leaking pipes create
30 ingress of water which create instability. 02.13PM

31 Just tell me if you've finished and I'll ask another

1 question?---Ask another question.

2 You say in paragraph 16 of your statement that that gradual
3 deterioration in the quality of the pipe work,
4 particularly in the area we are talking about, the
5 northern batters area, necessitated repairs, including 02.14PM
6 repairs by welding, and that in turn created a fire
7 risk from the welding work. Is that right?---That's
8 correct.

9 You say you can recall in 1992, this is paragraph 19 of your
10 statement, reviewing some records of fires that had 02.14PM
11 occurred in particularly the worked out areas of the
12 mine and noting that a number of those in fact resulted
13 from welding; is that right?---Particularly in that
14 area that we're talking about, the northern batters
15 area, predominantly were a result of the attempted 02.14PM
16 repairs to the pipes.

17 Without taking you to it now but I will in a moment, the
18 risk assessment report that you attach to your
19 statement includes as a schedule a list of fires that
20 had occurred, I think in the three years prior to when 02.15PM
21 it was prepared in 1992?---Yes.

22 Is that the list of fires that you're thinking of?---I had
23 access to the source documents at that point; that is a
24 summary.

25 That is a summary. You had the actual incident reports, if 02.15PM
26 that's the right description, I understand?---Yes.
27 Fire reports, I think we called them.

28 You make the point at paragraph 18 that this got to a point
29 where the pipes could no longer hold pressure, and so
30 your option was to remove them and use them as drainage 02.15PM
31 pipes where pressure is not an issue; is that

1 right?---For large diameter pipes, that's correct.
2 And the smaller diameter pipes couldn't be used as drainage
3 pipes; is that right?---That's correct.

4 In 1992, during the period when the 1984 Fire Protection
5 Policy was in place, that's the time that you - we 02.16PM
6 talked about earlier that you were responsible for fire
7 protection?---Yes.

8 You explain in your statement at paragraph 23 that, as a
9 result of these problems with the ageing pipe work, the
10 SEC through you sought a risk assessment to be done on 02.16PM
11 whether the SEC could be exempted from the requirements
12 in the Fire Protection Code which dealt with the
13 requirements for fire protection of worked out areas of
14 the mine; is that right?---That's right.

15 Just to we're talking about the same thing, you attach that 02.16PM
16 Fire Protection Code, the one that came into effect in
17 1984 and was in effect until it was replaced in 1994;
18 have I got the timing right?---Yes.

19 We find that behind Attachment 2 of your statement, perhaps
20 if we can go to that, and particularly page 3, it's 02.16PM
21 s.1.1.4, so that's the contents page. If we just keep
22 scrolling down, Introduction - page 1; page 2 - plan of
23 protection, and then the next page down the bottom,
24 that's the part of the then code that you are referring
25 to and for which the risk assessment was asked to 02.17PM
26 consider whether you could have an exemption from that
27 requirement?---From that and the following clause,
28 1.1.5.

29 If we go through those; 1.1.4 dealt with worked out batters
30 and 1.1.5 dealt with the worked out floor, the 02.18PM
31 horizontal area, if I can call it that. Going up to

1 the start of 1.1.4, we see there words that then recur
2 in subsequent iterations of this document, don't we,
3 "As a minimum requirement worked out batters are to be
4 protected as follows"?---Yes.

5 As you note in your statement what changes is the bit after 02.18PM
6 the "as follows", the rules change and the alternatives
7 change?---Yes.

8 Do you agree that throughout the entire period from 1984 to
9 the present day it's always expressed as a minimum
10 requirement, is it not?---I'd have to check that to 02.18PM
11 make sure that the other document is consistent with
12 that, but I suspect you're right.

13 I'll stand corrected, but we'll go to the other document in
14 a moment, if that's all right, Mr Polmear. We can see
15 that the first two provisions of this code deal with 02.18PM
16 benches and berms, so that's the more horizontal part
17 of the batters. Then the next part, second dot point
18 at the top of - the next page. We see the first
19 paragraph there deals with berms, the second is, "Fire
20 break zones extending down to full depth of batter 02.19PM
21 should be established such that the length of exposed
22 coal in any one batter is not greater than 500 metres."
23 Can you explain to us what the rationale behind that is
24 in terms of fire prevention? Is that to confine a fire
25 that occurs to one zone?---My understanding is that it 02.19PM
26 was a concept, and you'll see it in other areas of the
27 codes, where wetted areas, you're meant to create
28 paddocks so that a fire can only get so big. That's
29 the concept behind it.

30 We did see, I think it was either the evidence of 02.20PM
31 Mr Shanahan or Mr Mauger, colleagues of yours earlier

1 in the Inquiry, there was a photo that showed what was
2 effectively a waterfall running down the northern
3 batters, this is on 9 February this year, which seemed
4 to show that, I think it was east of the waterfall,
5 there was fire but west of the waterfall there wasn't.
6 I know this is not talking about waterfalls, but that
7 would seem to suggest that fire breaks in a general
8 sense can operate to confine fire to a particular area.
9 Are you familiar with the photo that I'm talking about
10 at all?---No, I'm not.

02.20PM

02.20PM

11 Were you at the mine on 9 February?---Not on the 9th, no.

12 I don't need to pursue that with you. If we go back to this
13 document we see the final main dot point,

14 "Alternatively, fixed spray breaks may be used but it
15 should be noted that water for these sprays has not
16 been included under the maximum demand conditions..."

02.20PM

17 and it goes on. What specifically was the Commission
18 seeking exemption from there? Was it the requirement
19 to put in fire break zones, was it the requirement to
20 put in water? What was the concern?---If we go back a
21 little bit. The Fire Protection Policy originally came
22 out of the out-workings of a 1977 fire at the Morwell
23 Open Cut and I believe it was first published in 1981.

02.21PM

24 At that stage there were no worked out batters at the
25 Hazelwood Mine, there was no Loy Yang Mine; the only
26 mine that had worked out batters was the Yallourn Mine.

02.21PM

27 The Yallourn Mine is characteristic - physically quite
28 different to the Hazelwood Mine; it's nowhere near as
29 deep and the batter profiles are generally much
30 flatter. The bench widths remained similar but because
31 it's not as deep, it gives an overall slope which is

02.21PM

1 flatter than the Hazelwood Mine.

2 The Hazelwood Mine is much steeper and deeper.
3 The overall slope, except for right in the northeastern
4 corner which was developed by trains, that circular
5 effect, the slopes are actually quite flat, so it's 02.22PM
6 quite easy to do the rehabilitation in the area, which
7 is why you've seen rehabilitation targeted for that
8 area. As you go further to the west, the overall slope
9 because 3:1 as my colleague was talking before, 3
10 horizontal, 1 vertical. The individual slopes are 1:1 02.22PM
11 and then when you take into account berms, the overall
12 slope from top to bottom is 3:1.

13 You're talking about the northern batters?---I'm talking
14 about the northern batters.

15 And you're talking about the 1:1 is vertical, is that 02.22PM
16 right?---No, no, no, 1 horizontal, 1 vertical is
17 45 degrees. That's the batter profile, the individual
18 batter profile. Then you have benches which are flat,
19 near enough. So that the batter is effectively made up
20 of a number of sections which are 1:1 flat, 1:1 flat, 02.23PM
21 1:1 flat. The overall slope from top to bottom is 1
22 vertical, 3 horizontal. For maintenance of clay berms,
23 the clay, if it's put down, it will grow grass, it will
24 grow trees, shrubs, whatever. If you wish to be able
25 to get onto that slope safely using plant, it needs to 02.23PM
26 be 3 horizontal, 1 vertical, pretty much.

27 So if you apply the proposal as proposed in this
28 document, which worked in concept at Yallourn, doesn't
29 work physically at Hazelwood because the overall slope
30 is 3:1, that would mean it would be one continuous 02.24PM
31 slope from top to bottom, which means you've lost all

1 access, you've lost any possible corridors for
2 easements and the like. So the only way that you can
3 cure that, which is what Mr Faithfull was saying
4 earlier, is the toe is the toe; you actually have to go
5 back further at the top to flatten it so that you've 02.24PM
6 got access on benches. If you do that, then you
7 actually have problems with the services that run at
8 the top of those, so at that critical point just round
9 the corner from where we've done rehab, it steepens up
10 from about 6:1 to 3:1 overall slope. If you apply this 02.24PM
11 rule at 500 metre intervals and you put the dirt in,
12 then you end up with paddocks, but paddocks which are
13 now inaccessible from top to bottom. So, if a fire
14 does get in there, you can't get in to fight it.

15 Sorry, it may be just me, Mr Polmear, why is it inaccessible 02.25PM
16 if you put in the fire breaks?---Because the material,
17 so we've got our bench and our 1:1 slope; for that
18 height you have to fill the entire bench width. There
19 is now no access along there, and if you do that from
20 top to bottom like it says, it's one continuous slope 02.25PM
21 from top to bottom with no ability to get into those
22 paddocked areas. So, if you have a fire or if you want
23 to do rehabilitation, you can't physically get in there
24 to do it.

25 Does that mean then that for practical purposes, whilst 02.25PM
26 these rules were in play, the alternative of fixed
27 spray breaks was really the only option that was
28 available at Hazelwood?---Yes.

29 And, therefore, it's from that obligation that the exemption
30 was being explored; both of them?---Both of them 02.25PM
31 really.

1 What about 1.1.5, you've told us, "Worked out floor of the
2 open cut" is this what you've referred to as
3 paddocking? Have I understood that correctly? 1.1.5
4 requires the worked out floor to be divided into
5 zones?---Look, 1.1.5, from my recollection, and it is 02.26PM
6 more than 20 years ago now, wasn't the major concern.
7 It was - - -?---1.1.4.

8 The Commission asked for a risk analysis to be done, a fire
9 risk analysis to be done in order that this issue could
10 be explored, whether an exemption from the requirements 02.26PM
11 for the Hazelwood Mine would be appropriate in terms of
12 continuing fire protection; is that right?---Yes.

13 You have attached a copy of that risk assessment behind
14 Attachment 3 of your statement. I'd like to go to
15 that. You may or may not know, but the Inquiry has 02.27PM
16 been enquiring of your employer on a number of
17 occasions of any copies of any risk assessments that
18 have been done so we're very grateful that one has been
19 provided to us?---Can I just say that, at the time that
20 this was done, risk assessment, the concept of risk 02.27PM
21 assessment, was relatively new. I think at about 1990
22 I attended the inaugural APSMA training on risk
23 assessment, that was done, so this was actually pretty
24 much cutting-edge at that point.

25 Pioneering work. No longer a new concept though, you'd have 02.27PM
26 to concede?---No, (indistinct) now.

27 The solicitors for GDF Suez provided us with a draft copy of
28 this document under cover of a letter last week and
29 it's actually now included in exhibit 80. We don't
30 need to go to that, but it includes a covering letter 02.28PM
31 that was addressed to you, providing you with a draft

1 of the document, asking you to check it for accuracy
2 before it was finalised. I don't know if you can
3 remember that, but are you aware that a draft copy of
4 that report was provided to us?---I've seen it.

5 Are you able to tell us, I've had a quick look, there seem 02.28PM
6 to be some changes between the draft and the final
7 document that you've provided. Are you able to tell us
8 whether or not changes were made?---No, I'm not.

9 Can you tell us, though, that you read the draft and,
10 whatever changes you asked to be made, were you 02.28PM
11 satisfied they were made in the final version?---I
12 can't remember, to be honest. Having been given a
13 draft to comment on, I'm sure I would have read it and
14 I would have provided some comments. I was informed
15 that the draft and the final were very, very similar. 02.29PM

16 I'm sure they are. If we can go to the executive summary on
17 page (i) would be a good start, the third page of the
18 document. We see there that the author, who's a
19 gentleman that was employed by Richard Oliver
20 International - Richard Oliver then and now are risk 02.29PM
21 assessment consultants, if that's a fair description,
22 is it?---I don't know about now, but they were at that
23 point in time.

24 The author notes that the project aim was to assess the fire
25 risk of the worked out areas of the Morwell Open Cut, 02.29PM
26 MOC, and that of course is what we now know as the
27 Hazelwood Mine, we're talking about the same
28 thing?---Yes.

29 And to ascertain whether an exemption from the Latrobe
30 Valley Open Cuts Fire Protection Policy 1984, 02.30PM
31 specifically ss.1.1.4 and 1.1.5, would be appropriate

1 and justifiable. The conclusion that was ultimately
2 reached by the assessor was that such an exemption
3 would not be justifiable; do you agree with
4 that?---That's correct.

5 And an exemption was therefore not sought; is that
6 right?---That's correct.

7 As it turned out, some amendments were made to the document
8 when it was re-issued in 1994?---Yes.

9 That changed the requirements for fire protection in the
10 worked out batters?---That's correct.

11 Those amendments were more practical in terms of their
12 application in terms of the Hazelwood Mine; is that
13 right?---That's correct.

14 If we can go to the risk assessment, just so we understand
15 the scope of what was being done, there's a definition
16 of the worked out areas in 1.2.1, eastwards from the
17 number 4 groyne including the northeastern and eastern
18 batters. Perhaps if we could bring up a map of the
19 mine please. We can go with the gridded map if that's
20 available to us?---I attended the panel hearing one
21 other time and noted that the panel was struggling with
22 definitions of the northern batters, and James
23 Faithfull this morning started to talk about that. I
24 can give you a little bit of assistance in how the mine
25 is broken up.

26 We're happy for any assistance you can give us, Mr Polmear.

27 We've got a gridded map?---The grid doesn't help me
28 much.

29 It helps us, though, in terms of understanding what you are
30 saying to us?---James referred to it this morning as
31 being, the mine is known for the fields as it was

1 developed in. So the initial field was the east field
2 which comprises this area. The extent of the northern
3 area is the definition between the water on that side,
4 this is called No.4 groyne.

5 Just for the transcript, Mr Polmear, you're pointing to the 02.32PM
6 eastern most groyne?---Yes. We call that the
7 definition of the east field. Within the east field we
8 have the northern batters and the eastern batters. So
9 that is the east field northern batters between this
10 point and that point. Then the southwest field was 02.32PM
11 developed after that, so there was a pivoting operation
12 to go in here and it - basically at that point the mine
13 looked like - it didn't go quite that far, it was to
14 about here. So the mine looked like that, so that's
15 the southwest field northern batters. 02.32PM

16 So the southwest field?---Is that No.4 groyne across.
17 Where we see the 5 groynes, is that right?---No.4 groyne,
18 No.5, No.6, No.7, No.8, No.9.

19 An obvious question, why is that the southwest field when it
20 appears to be in the north part of the mine? It's 02.33PM
21 relative to where you've previously been?---So they
22 were heading in a westerly direction and this is called
23 the southeast field, the next one along.

24 Of course it is?---And then we start again and we call that
25 the west field. 02.33PM

26 That's certainly cleared things up for us?---I'm glad for
27 that. So we have the northern batters broken into the
28 southwest field northern batters and the east field
29 northern batters, and that's really the point of
30 differentiation is No.4 groyne, which is, where you see 02.33PM
31 that dark, that's the water; that eastern wall boundary

1 is No.4 groyne. There are three other groynes but
2 they're under the internal overburden dump.

3 For the purposes of the transcript, the No.4 groyne seems to
4 overlap with 07, I'm looking correctly at that? 07,
5 and then west of that we've got the northern batters 02.34PM
6 southwest field; is that right?---It's southwest field
7 northern batters.

8 Which extends to grid reference J6 or I6. Yes. East of
9 that point or running in a southeasterly direction
10 we've got the northern batters southeast field. Is 02.34PM
11 that right?---No.

12 I'm not helping. You tell us, Mr Polmear.

13 CHAIRMAN: On that map there are references made to
14 descriptions, you say that they're not appropriate.
15 For example, if you look closely, I think you'll find 02.34PM
16 that there's references to northwest batters, northern
17 batters and northeast batters, but you don't understand
18 them by that at all?---That's not how we call them.

19 MR ROZEN: Without spending too much time debating the
20 nomenclature, you have identified to us two parts of 02.35PM
21 the northern batters?---Yes.

22 If we go back to the description in the risk assessment of
23 the northern batters extending eastwards from No.4
24 groyne, that's the northern batters that extends pretty
25 well south of the township of Morwell, or southwest of 02.35PM
26 the township of Morwell?---This area through here?

27 Yes?---East field northern batters and, yes, the township of
28 Morwell is approximately north of that.

29 That was the area that was the subject of the assessment.

30 Then 1.3 seems to summarise the position that had been 02.35PM
31 put by the SEC which was, "With finite resources to be

1 allocated to fire protection of the whole open cut, MOC
2 considers it best to direct these resources to
3 protection of personnel and assets in operating areas
4 of the cut on the basis that these represented a
5 greater fire risk than the worked out areas of the 02.36PM
6 mine." That was the proposition that was being put and
7 that was the subject of assessment is that right?---It
8 is actually the basis of the Latrobe Valley Open Cut
9 Fire Protection Policy.

10 In the context of this assessment, that was the proposition 02.36PM
11 that was put up and essentially was being tested. Have
12 I got that right?---I can't be certain of that.

13 The next paragraph reads, "The fire risk of worked out areas
14 may perhaps be better mitigated by restricting access
15 to worked out areas and removing power poles from here, 02.36PM
16 maintaining several charged water lines and by
17 upgrading fire protection points for the cut as a
18 whole, for example more tanker filling points." That
19 looks, once again, like the proposal that is being put
20 up by the SEC that the risk assessors are being asked 02.37PM
21 to test essentially. Do you agree with that reading of
22 it?---No. They were clearly asked to look at whether
23 an exemption was appropriate. So, on that basis we
24 weren't proposing that there be necessarily more tanker
25 filling points. An exemption is an exemption; it 02.37PM
26 doesn't require any actions.

27 Except that it's apparent, isn't it, from reading this
28 document that what was being proposed by the SEC was
29 that, if an exemption was granted, there would be
30 alternative means of fire protection, such as more 02.37PM
31 tanker filling points? Isn't that what was being

1 proposed?---I don't recall it being proposed like that.
2 My recollection is that it was an exemption that was
3 being sought.

4 Anyway, the document I guess speaks for itself. If we turn
5 to the next page, there's a summary of the conclusions 02.38PM
6 reached by the assessors and the first thing they say
7 is, "The risk of fire in the worked out areas is not
8 minimal"?---Yes.

9 Because, and there are three dot points, "There are about 20
10 fires a year in these areas. If I can stop there, that 02.38PM
11 is consistent with the evidence you gave earlier about
12 what was happening at the time, that there was a
13 significant number of fires which you associated with
14 the welding activities?---Yes.

15 Second dot point, "On average their severity is similar to 02.38PM
16 those fires in working areas of the mine in terms of
17 usual extinction effort." And it's apparent if one
18 reads the entire document, that an assessment was made
19 of how long it had taken to put out such fires and what
20 sort of resources were being allocated?---Fire reports 02.38PM
21 used to require an assessment at the time of the effort
22 that was put into extinguishment. If you have people
23 there and they create the fire, then they tend to get
24 the fire out very quickly, so that's helpful.

25 Then the third dot point is the location of those fires and 02.39PM
26 their key vulnerabilities in terms of infrastructure
27 and so on was identified as being part of the reason
28 why such fires were obviously not desirable; is that
29 right?---Well, they were saying it wasn't minimal.

30 And that's part of the rationale for why it's not 02.39PM
31 minimal?---Yes.

1 Then there's a discussion of legal liability. Then there's
2 a discussion of the issue that was being asked to be
3 assessed, that is, policy exemption. The authors say,
4 "Exemption from ss.1.1.4 and 1.1.5 would increase fire
5 risk in the worked out areas and would increase SECV
6 and MOC liability in this regard. Presently this risk
7 is not minimal. An exemption is thus not appropriate."

02.39PM

8 They went on and said, "Moreover any such policy
9 exemption or modification should not proceed until
10 there has been a demonstrable reduction in fire risk."

02.39PM

11 If we go on and look under the head next heading,
12 "Improvement to fire protection", and I correct in
13 understanding that what was being conveyed by the
14 author of the document is that it's not appropriate to
15 consider an exemption now but if alternative or
16 additional means of fire protection were in place and
17 could be shown over a period of time to reduce fire
18 risk, it may be appropriate to reconsider the issue.
19 Is that right?---That's my understanding, yes.

02.40PM

20 They go on and talk about what needs to be done. If we go
21 to the next page, a number of recommendations were made
22 which I want to ask you about. The first of them under
23 the heading, "Fire protection systems" was, "We would
24 suggest the following recommendations based on this
25 study: Undertake a detailed engineering survey of the
26 fire water system and include assessment of the
27 northeast corner coal production area in this. This
28 survey should cover maintenance, design and pump
29 aspects of the fire water system." Are you able to
30 tell the Inquiry whether any such detailed engineering
31 survey was done, based on this recommendation?---I

02.40PM

02.40PM

02.40PM

1 can't be certain as to whether it was done at that
2 point. It will have been done at some point between
3 then and now, but I can't be certain as to whether it
4 was done in direct response to that.

5 Can we break it down? This was provided to you personally
6 in 1992?---Yes.

02.41PM

7 At least until 1994 you had responsibility for fire
8 protection at the mine?---Yes.

9 If it was done in that two-year period, would you have known
10 that it was being done? Presumably you would?---More
11 than likely I would, but not necessarily. My role was
12 the operation of the system, not the design.

02.41PM

13 But you would expect, wouldn't you, to have been consulted
14 if any study was being done?---Yes.

15 As you sit there no you don't know if such a study was done,
16 you'd have no - - -?---I'm not certain.

02.42PM

17 You're not certain, it may have been done. It would be of
18 assistance to the Inquiry if any such study was done,
19 so I do call for that and, if that's a document that
20 exists, then we would ask that it be provided to the
21 Inquiry.

02.42PM

22 There are further recommendations there which I
23 don't need to ask you about, but I do want to ask you
24 about a couple of aspects of the substance of the
25 report. Do you agree that the executive summary is an
26 accurate summary of the overall content of the
27 remainder of the report?---On my reading of it, yes.

02.42PM

28 Go to page 2 of the actual report. There's a heading,
29 "Methodology" there, do you see that?---Yes.

30 The authors of the report set out their methodology under
31 the heading, "Definition of risk and risk analysis." I

02.43PM

1 want to ask you about a couple of those. In a format
2 that I think anyone who has anything to do with risk
3 analysis these days would be very familiar with, they
4 consider the likelihood of occurrence, the exposure of
5 the SEC and the likely consequences, they're broadly 02.43PM
6 what they thought about. We see that under the
7 heading, "The consequences" which I want to ask you
8 about, they noted that, amongst the consequences of a
9 fire in the worked out areas, fifth dot point,
10 "Corporate image" and sixth dot point very importantly 02.43PM
11 for this Inquiry, "Other community impact outside the
12 mine. So there's clearly a recognition in 1992, if not
13 earlier, that fire in this area of the worked out area
14 could potentially impact on the community of Morwell;
15 that's what they're talking about there, is it not, Mr 02.43PM
16 Polmear, do you agree with that?---It could be read
17 that way.

18 If I could just take you to a map which is included in the
19 report, page 4. The legend there tells us that this
20 was a map produced which shows the fire incidents 02.44PM
21 between November 1989 and April 1992 and the locations
22 of the fires and their size are indicated by the little
23 graphics with fire in them; is that right?---That's my
24 understanding.

25 We see a concentration of fires in the area adjacent to the 02.44PM
26 Energy Brix location in what is the northeast part of
27 the mine as we're looking at that?---This would be the
28 eastern batters, in this area.

29 Then I see at a point west of that, along the northern
30 batters, there's reference to the "northern batters 02.45PM
31 fire spotting tower", do you see where that is?---Yes.

1 It's just to the right of the number "6"?---Yes.
2 What was the northern batters fire spotting tower?---Open
3 cuts are a little bit different to most other
4 businesses, in that - - -
5 That's one thing that I think we've understood, Mr 02.45PM
6 Polmear?---And one of the primary differences is that,
7 you can't mine yesterday's material today, so you have
8 to keep moving. As a result of that, your proximity to
9 infrastructure and observation points for the mining
10 and things are changing quite a lot. So things like 02.46PM
11 fixed infrastructure and things like that don't always
12 reconcile with the fact that you're moving.
13 I understand all that and I think I understand the point
14 you're making. My question's a simpler one, what was
15 the northern batters fire spotters tower. We know it's 02.46PM
16 no longer in use as a fire spotters tower but what was
17 its purpose?---It was a small building, a 3 metre by 3
18 metre building, that on days of high alert people were
19 stationed in there with a radio so they could radio
20 back it they observed any outbreak of fire. 02.46PM
21 They were members of the dedicated Fire Service back in the
22 day?---Yes.
23 That building is no longer in use for that purpose?---No.
24 Is that right?---Yes.
25 Do you know when it ceased to be used as a fire spotting 02.46PM
26 location?---No, I have no idea.
27 CHAIRMAN: Can I enquire whether on this other map, the grid
28 map, there's reference to a southwest lookout; is that
29 something comparable in today's terms?
30 MR ROZEN: Perhaps, Mr Chairman, if you could identify the 02.47PM
31 grid reference.

1 CHAIRMAN: The southwest lookout is just under the word
2 "southern batteries" which is on the west field?---No,
3 southwest lookout is a point where you can look over
4 the operation.
5 So there's not a building, it's a place where you stand and 02.47PM
6 look out?---Observe.
7 It's like the knuckle, it's known as a particular spot, but
8 it has no building there?---There's no building. It is
9 a defined area with a timber fence so that visitors can
10 be taken there to look over the operation. 02.47PM
11 MR ROZEN: That's where ever visitor gets taken, is it, Mr
12 Polmear to get a view?---I don't know if it's every
13 visitor.
14 A very cautious man, I can see. It offers a very good
15 vantage point?---Yes. 02.48PM
16 It was Mr Shanahan, I think, who told us that was a point at
17 which he had a meeting at one stage on 9 February
18 because it enabled them to look at the entire mine and
19 see where the fire was. Just before leaving the other
20 map, that one, I see there's a reference towards the 02.48PM
21 bottom of the picture just in the vicinity of the coal
22 production office there's the eastern batters fire
23 spotters tower, if you could point that out to
24 us?---This is the one.
25 And that served presumably the same purpose as the northern 02.48PM
26 batters albeit from a different vantage point?---Yes.
27 Once again, that's no longer in use, is that right?---So the
28 concern there is that if fire is dug up and comes up on
29 the conveying network, they would be able to observe it
30 because this was the mine outlet at that point. 02.48PM
31 Just one more matter I need to ask you about on the risk

1 assessment, this is at 3.6 on page 9 of the document.
2 Not surprisingly one of the issues that was considered
3 here was the potential legal liability that might
4 attach to the SEC and its officers in the event that
5 change changes were made to the fire protection systems 02.49PM
6 that were under consideration. The author of the
7 report, based it seems on a letter of legal advice
8 obtained from a law firm which is attached to the back
9 of the risk assessment, noted that, "Under s.43 of the
10 Country Fire Authority Act the SEC was bound to prevent 02.49PM
11 the occurrence of fires on and to minimise the danger
12 of the spread of fires on or from any land vested in it
13 or under its control or management."

14 The concern that's there expressed is that,
15 because of the strictness of that duty, any change to 02.50PM
16 fire protection arrangements might potentially increase
17 legal liability on the part of the SEC?---That's my
18 understanding of what it says.

19 It might be stretching your knowledge but it's correct to
20 say that that section of the Country Fire Authority Act 02.50PM
21 which is still in those terms only applies to public
22 authorities and local councils?---You're definitely
23 stretching my knowledge .

24 Perhaps take it from me that it does, so it doesn't apply to
25 the post privatisation mine?---(No audible answer). 02.50PM

26 You don't know. There is then a reputation of the
27 recommendations which I've already taken you to. I
28 want to ask you about the response to receipt of this
29 risk assessment, it was saying the sought for exemption
30 was not justified. Presumably no exception was sought; 02.50PM
31 is that right?---Yes, there was no further action.

1 We can go back to the position with the pipes, returning to
2 your statement at paragraph 26. You note that in 1994,
3 so some two years later, there was a change to the Code
4 of Practice. The SEC 1984 Code was replaced by
5 Generation Victoria's 1994 Fire Service Policy. Is 02.51PM
6 that right?---Yes.

7 Just before going to that, there was something I meant to
8 ask you: The risk assessment we looked at in 1992, to
9 your knowledge has there been a subsequent risk
10 assessment done in relation to fire protection in the 02.51PM
11 worked out areas of the mine?---My understanding is
12 that it forms a part of the major mining hazards
13 assessments.

14 So that's where we would need to look, is it, for any such
15 risk assessment?---Yes. 02.52PM

16 This one is clearly and specifically directed to that
17 particular risk?---Yes.

18 As the Inquiry understands it, there hasn't been a further
19 risk assessment that's specifically directed to that
20 risk since that time. My question is, are we right 02.52PM
21 about that or are you able to point us to any such
22 document?---My understanding is that, according to the
23 legislation, anything that represents a risk to more
24 than one life is considered a major mining hazard, and
25 as a result needs to be risk assessed formally. And 02.52PM
26 fire in the mine is considered to be a major mining
27 hazard, so it will have been risk assessed on that
28 basis.

29 That risk assessment is probably more broadly
30 based than this particular risk assessment which was 02.53PM
31 very specific, and I believe those risk assessment of

1 major mining hazards go back to about 2003 and were
2 conducted with the assistance of Quest who were a
3 specialist in risk assessments.

4 They're the documents to which the Inquiry's attention, I
5 think, has been drawn in the last 48 hours or so by the 02.53PM
6 legal team representing the operator?---Okay.

7 If I understand what you're talking about?---So that was the
8 first time that they were reviewed, they've been
9 subsequently reviewed, as I understand it, in 2009 with
10 the assistance of GHD and subsequently reviewed in 02.53PM
11 conjunction with WorkSafe in 2012 as I understand it.

12 If we're looking for a document with a similar title to this
13 in some time post 1992, we're not going to find it, is
14 that what you're saying to me; we've got to look at the
15 general risk assessments that have been done in 02.54PM
16 relation to mining hazards?---I'm not aware of anything
17 else other than those generalised one.

18 In relation to that, were you in the hearing room yesterday
19 when Mr Niest of WorkCover was giving evidence?---No.

20 He seemed to be saying that a mine fire in the worked out 02.54PM
21 areas of the mine did not meet the test of a major
22 mining hazard. He seemed to be telling us that that
23 was the assessment that had been made by GDF Suez. Can
24 you comment on that?---No.

25 MEMBER CATFORD: Could I just ask a couple of questions 02.54PM
26 going to the Oliver Report which was tab 3. On page 6,
27 just to understand this, in the period 1989-1992 there
28 seemed to be 11 fires per year in the worked out
29 batters, that's how I'm reading that. That's on the
30 top of page 6, 3.3.2. These fires were occurring 02.54PM
31 commonly. Then on the next page there's some trend

1 information about fire incidents across the whole of
2 the open cut which on a quick look at that is at least
3 over 200 fire incidents per year. Do you happen to
4 know what the current incident rate is in the worked
5 out batters?---I have no idea.

02.55PM

6 You have no idea. Presumably that information is available,
7 it was obviously being tracked back in those
8 days?---I'm the wrong person to ask, I'm afraid.

9 I'd be interested to find out what the total incident rate
10 is and what the incident rate is in the worked out

02.55PM

11 batters. What actually is the meaning of a fire
12 incident, just so I understand that?---It can be
13 virtually an ember; anything where there is any smoke.
14 Coal is quite distinctive, as I'm sure all the
15 residents of Morwell can attest to, in terms of its
16 burning, and you can often smell it before you can see
17 it.

02.56PM

18 So it is actually something that's caught alight, rather
19 than a risk of a fire occurring?---No, it is something
20 that's caught alight.

02.56PM

21 Thank you.

22 MR ROZEN: Mr Polmear, in response to a question from
23 Professor Catford you said you weren't the right person
24 to ask about the current incidents of fires in the
25 worked out batters, but who is the right person to
26 ask?---The person in charge of that area.

02.56PM

27 And can you give us a name?---I can give you a number, but
28 probably Rob Dugan.

29 I don't think anyone wants to bring Mr Dugan back, so I
30 would just make a call for any records that can be
31 provided to the Inquiry by GDF Suez in response to

02.56PM

1 Professor Catford's question about the current
2 incidents of fires.

3 MS DOYLE: We'll have to ask that that call be clarified.
4 We have provided reports with respect to every fire in
5 the mine under paragraph 1 of the summons. Is what is 02.57PM
6 being sought now something different from that?

7 MR ROZEN: Perhaps, Professor Catford, if you could explain
8 what you want, what you're after.

9 MEMBER CATFORD: I have not looked at that in detail. I
10 would be interested in a trend analysis looking at 02.57PM
11 incidents over a period of time in the way that this
12 table is presented. So, I'm not sure - if you provided
13 that, then I'm sure that would be satisfactory.

14 MS DOYLE: No, we haven't provided a trend analysis, we've
15 provided, as we were summonsed to do, every report 02.57PM
16 spanning the years that we were asked for. Those are
17 reports and reviews with respect to each individual
18 fire. I will now have to make enquiries whether there
19 is also something else which was not sought but is now
20 being sought, perhaps in the nature of an update of 02.58PM
21 this chart.

22 MEMBER CATFORD: Yes, that would be helpful.

23 MS DOYLE: I doubt it exists, I'm willing to ask of course,
24 and I will. If it doesn't exist, are we being asked to
25 create it? A trend analysis, that is? 02.58PM

26 MEMBER CATFORD: Perhaps we could confer and decide what
27 further advice.

28 MS DOYLE: And I will discuss that with Counsel Assisting.

29 MEMBER CATFORD: Obviously within the data set that's been
30 provide it would be very interesting to know how many 02.58PM
31 fire incidents there have been in the worked out

1 batters. Have you provided that?

2 MS DOYLE: We have provided every report with respect to

3 every fire in the worked out batters and the

4 operational parts of the mine, as we were requested to

5 do. 02.58PM

6 MEMBER PETERING: Perhaps, just to assist Professor Catford

7 in that conversation, risk assessments would take into

8 account incidents of fires, would they not?

9 MS DOYLE: I think this is dragging me into giving evidence

10 and I ought not do that, but I think they would, by 02.58PM

11 share dint of the nature of those documents as usually

12 constructed.

13 MR ROZEN: Can I deal with the matter this way, Professor

14 Catford, I will liaise with counsel for GDF Suez in

15 relation to the material that's been provided, I'm 02.59PM

16 fully aware of the material that's been provided in

17 response to paragraph 1 of the summons. It deals

18 expressly with major incidents for which reports were

19 prepared, we have that documentation. Whether it deals

20 with this sort of data, the equivalent of the data 02.59PM

21 that's set out in the risk assessment report, I'll seek

22 to clarify that with Ms Doyle and we'll see if we can

23 further it that way.

24 Back on the risk assessment, there was one other

25 matter I should have asked you about on the previous 02.59PM

26 page, if we could just go back to page 6 of this

27 document. So 3.3.2 examines the fire history, and

28 after setting out the numbers, if we go down to (iv),

29 it's noted there that piped water was the major means

30 of fire suppression. That's a reference to the 03.00PM

31 reticulated water system in the vicinity of the

1 northern batters, is it not?---Yes, that's true.

2 If we go back to your statement and we pick up the story
3 when the 1994 code came out, you attach that code and
4 you note that the content, and probably it would be
5 fair to say the emphasis of what was required in the 03.00PM
6 1994 code was a change from what had been there in it
7 1984. Is it that fair to say?---(No audible answer).

8 You're referring specifically, this is Attachment 4 to your
9 statement, Annexure 4, page 10, section 4.4. This is
10 where we first see a reference to tanker filling points 03.01PM
11 being located in particular places as an alternative
12 means of fire protection in the worked out areas of the
13 mine. Are you able to assist the Inquiry with
14 understanding the reasoning for the change from the
15 1984 document to 1994?---To some extent but not to the 03.01PM
16 full extent. Clearly the response that came back from
17 the review done by Richard Oliver left a
18 considerable degree of uncertainty as to how best to
19 proceed. You need to bear in mind that the SEC had,
20 less than 10 years prior to that, said that they wanted 03.02PM
21 to have 20 Loy Yangs built in the next 50 years and we
22 were planning on undertaking substantial wholesale
23 mining of the Latrobe Valley, which would leave lots of
24 areas of exposed, coal potentially at least. So I
25 guess they were somewhat mindful of, if you're going to 03.02PM
26 commit to having pipe work on everything all of the
27 time, that is going to be an enormous financial impost.
28 That would be the background to it, I suspect.

29 In terms of what actually transpired between the
30 Richard Oliver document and the document as signed off 03.02PM
31 by all of the mine managers in 1994, I'm afraid that

1 was above my pay grade.

2 In any event, what we see in the 1994 document in
3 section 4.4 is, third dot point - so one and two are
4 the same, benches and berms. Then the third dot point,
5 "Tanker filling points are to be provided such that a 03.03PM
6 tanker on any part of the worked out batters is within
7 five minutes travel of a tanker filling point. Fixed
8 sprays should be used in conjunction with the droppers
9 for the tanker filling points in order to provide
10 wetted breaks." Then we see as an alternative, the 03.03PM
11 fire breaks.

12 So the thing's being turned around. Rather than
13 the fire breaks being the primary means of protection
14 with an alternative provided in terms of water, you've
15 now got tanker filling points and their location as the 03.03PM
16 primary means with the alternative of fire
17 breaks?---Yes.

18 If we can go back to your statement then, it's in that
19 context in paragraph 27 of your statement that you say,
20 having regard to those changes - I'm reading from the 03.03PM
21 third line of paragraph 27 - "the removal of leaking
22 and degraded pipes from worked out batters which would
23 not hold pressure, and using those pipes for drainage,
24 continued." I want to ask you about that word
25 "continued". That would seem to suggest that even 03.04PM
26 before the 1994 code came into operation, that the
27 removal of those damaged corroded pipes that you talked
28 about had already commenced. Am I understanding your
29 evidence correctly?---Certainly in terms of the
30 isolations, there weren't any, there wasn't any 03.04PM
31 choices, and I was trying to think back to how the SEC

1 managed with drainage pipes, and I'm pretty sure it was
2 all ex-Fire Service pipes that was used for drainage.
3 You then go on and refer to a process of the removal of the
4 pipes. I want to get some understanding from you by
5 reference perhaps to the gridded map of the area that 03.04PM
6 you're talking about where the pipes were removed from,
7 the description you're giving here. Are you able
8 to - - -?---The area that I'm referring to is
9 principally the east field northern batters area.

10 Can you perhaps with the ruler just remind us of that 03.05PM
11 area?---This is the northern batters. From here
12 through to that No.4 groyne, that area through there.
13 So that was the first area we saw in the first map we looked
14 at, is that right, so the oldest pipe work?---The other
15 area that was old was this area in here obviously, but 03.05PM
16 the difference with this area here is that when the
17 mine was operating in this area, right back to digging
18 out of the southeast field, this was the mine outlet,
19 and Energy Brix - originally in here this was the
20 outlet for the mine, so everything that came out of the 03.05PM
21 mine came out through this eastern outlet. Then they
22 created, with the decision to build Hazelwood, they
23 created the southern outlet, this area here. So all
24 the coal came out the southern outlet.

25 In order to get supply of coal to Energy Brix, 03.06PM
26 they left conveyors inside the mine on coal benches
27 that actually supplied coal cross here, so it came from
28 that outlet inside. If you read the policy, this was
29 conveyors inside on coal, situated on coal, so that
30 required that there's a standard of protection required 03.06PM
31 through here. So the pipes in here had to be retained

1 as serviceable, so if that meant they had to be
2 replaced, they had to be replaced in order to meet the
3 policy. The issues that I'm talking about are
4 principally aligned to the east field northern batters.

5 The obvious question, Mr Polmear, is, when the pipes were 03.06PM
6 removed, and we understand the reason for their
7 removal, because of their rusted and corroded state,
8 why weren't they replaced?---They didn't need to be, in
9 accordance with the policy.

10 So your evidence is that the reason the pipe work wasn't 03.07PM
11 replaced was because it wasn't required under the
12 policy?---Mmm, operated consistent with the policy.
13 Bear in mind, the policy's been built up after a lot of
14 experience and this particular event that we're here
15 talking about, 9 February 2014, is only the fourth time 03.07PM
16 that fire has entered a mine in a pretty substantial
17 period of time. The Yallourn Mine's been in operation
18 for 90 years, Hazelwood Mine for 60 years, and the Loy
19 Yang Mine for 30 years. The combined mine history of
20 180 years of exposure, and this is the fourth occasion 03.07PM
21 on which this has happened, so that's an average
22 recurrence of about once every 45 years. The last time
23 it occurred was 1984 when this policy was revised. So
24 the SEC had had experience on three occasions where
25 fire had come into the pit, they set up the policy to 03.08PM
26 deal with that based on their experiences, and it has
27 not occurred since until 2014, so this is not something
28 that happens all that frequently.

29 I would suggest that it would be appropriate to go
30 back through, look at the Latrobe Valley Open Cut Fire 03.08PM
31 Protection Policy in light of this event and determine

1 the shortcomings.

2 That said, Mr Polmear, even accepting your statistical

3 analysis, if you go to the 1994 Code of Practice that

4 was being implemented at this time, this is

5 Attachment 4, and page 7 of the document, under the 03.08PM

6 heading "Detailed procedures and practices", the very

7 first thing that the authors say is, "General

8 Victoria's brown coal open cuts have suffered a number

9 of fires over the years, many of these have emanated

10 from external bushfires." Then there's a reference to 03.09PM

11 the 19 Royal Commission Report. That's a clear

12 recognition of the risk, is it not?---Absolutely.

13 Is the reason you gave that evidence a moment ago about the

14 infrequency of these events, is that meant to inform

15 the Inquiry that the decision not to replace the pipe 03.09PM

16 work was a, what, a justified decision?---No.

17 A justified gamble?---No, the decision - no, the point I was

18 trying to make was, that prior to this incident in 2009

19 all prior incidents of this nature had been under the

20 ownership of the SECV and they had built a policy that 03.10PM

21 they believed was consistent and suitable for dealing

22 with that threat.

23 Nonetheless, one of the things we know the Emergency

24 Services had to do in order to put the fire out

25 this year was reinstate the pipe work in some areas, 03.10PM

26 isn't it?---Can I suggest, and I believe the panel's

27 heard from quite a number of people, that the important

28 thing in fighting a fire is to get to it very early,

29 and that in this particular case the fire was pretty

30 much able to burn without firefighting efforts for 03.10PM

31 close to 27 hours. The first three hours of that were

1 resources - and I don't have - this is my view of life,
2 that's not necessarily everybody's view: The first
3 three hours, though most of the resources were
4 dedicated to an external threat, the Drifffield Fire
5 approaching - - -

03.11PM

6 Mr Polmear, I don't want to interrupt you, we know what
7 happened, we've heard a lot of evidence about what
8 happened on 9 February. My question is quite a
9 different one; the pipe work had to be reinstated as
10 part of the fire fight, did it not?---It did, because
11 the fire had extended - had been allowed to get to that
12 point, because there was no power for the water.

03.11PM

13 Can we bring up the map at exhibit 81 please and I'll ask
14 you to have a look at this. This is a map that's been
15 provided to the Inquiry depicting those new areas of
16 pipe work that were installed during the fire fight
17 in February and March of this year. Do you see the
18 blue lines of the new pipe work, so some of it is in
19 the centre of the mine on the floor, and then there is
20 considerable pipe work that's been installed on the
21 northern batters as you can see. If I understand the
22 evidence you've given, that corresponds in part with
23 the area where the pipe work was removed that we've
24 just been discussing, does it not?---Some of it does,
25 yes.

03.11PM

03.11PM

03.12PM

26 Perhaps on that map if I could ask you to, with the ruler,
27 point out the area where the pipe work was removed. I
28 think it was the area of the northern batters where
29 there's the blue pipe work and then an area to the east
30 of that; is that right?---I'm not sure what you're
31 referring to, I'm sorry.

03.12PM

1 A moment ago you identified for us the area of the northern
2 batters where the pipe work that had rusted was
3 removed?---In this general area.
4 Yes. Have you got any idea of the length of pipe work that
5 was removed during that period?---No, sorry. 03.12PM
6 We see from this map the length of new Fire Service pipe
7 that was installed was just under 10 kilometres of pipe
8 work and there was also in excess of 15 kilometres of
9 new drainage pipe installed?---15 kilometres of new
10 drainage pipe? 03.13PM
11 That's what it says. Does that not accord with what you
12 recall?---I don't know, I'm just surprised.
13 MEMBER PETERING: Mr Rozen, perhaps I could just ask Mr
14 Polmear a question. I think your answer to Mr Rozen's
15 question, Mr Polmear, was that you didn't replace the 03.13PM
16 pipes because the policy - "didn't need to because of
17 the policy" was your answer. So you're talking about,
18 you didn't need to because the 1994 policy said you
19 didn't have to?---That's correct.
20 Can you guide me to the part of the policy where 03.13PM
21 that - - -?---Well, it allows for the area to be
22 protected using tanker filling points.
23 MR ROZEN: Perhaps if we just go back to that, that's
24 Attachment 4 at 4.4, have I got the right part of it,
25 Mr Polmear?---Yes, the third dot point. 03.13PM
26 "Tanker filling points are to be provided such that a tanker
27 on any part of the worked out batters is within
28 5 minutes travel of a tanker filling point." I don't
29 know, I think it was explored with one witness, but are
30 you able to tell the Inquiry whether that was done in 03.14PM
31 that area?---Whether which was done?

1 Whether there was compliance with that requirement?---I
2 believe so.

3 When you say you believe so, was any testing done to ensure
4 that the tanker filling points were within five minutes
5 of travel? Do you know?---I don't know, but it's not 03.14PM
6 part of my duties to know that.

7 But you would assume, would you, that some assessment would
8 have been done so that there was compliance with at
9 least that?---Yes, I would have thought so.

10 If I understand your evidence correctly, what was being done 03.14PM
11 was considered to be in strict compliance with the
12 minimum requirements of the code; is that right?---Yes.

13 You remember I asked you earlier whether those prefacing
14 words "as a minimum requirement" appeared in later
15 versions?---Yes. 03.15PM

16 You'd agree with me that they do appear under 4.4?---They
17 do, yes.

18 It was to that minimum requirement that the SECV was setting
19 its sights? Do we understand you correctly?---That's
20 my understanding. 03.15PM

21 And then subsequent to that, post privatisation, there
22 continued to be an approach of - - -?---Compliance with
23 the policy.

24 Compliance with the minimum requirements of the
25 policy?---Yes. 03.15PM

26 Just in conclusion from your statement, Mr Polmear, you do
27 say that, in addition to pipe work that had been
28 removed because of its corroded status, there was also
29 some pipe work removed to facilitate the rehabilitation
30 of a particular area of the mine. Is that 03.15PM
31 right?---Yes, I actually said that on the very last

1 statement.

2 Paragraph 29?---Sorry, can we have the aerial photograph up
3 again?

4 Certainly, aerial photograph of the mine?---In 1998, up
5 until 1998, so from 1955 until 1998 all of the 03.16PM
6 overburden from the mine was dumped externally. To the
7 external overburden dump. In 1998 overburden was
8 placed in the worked out east field area, up to groyne
9 4 in two layers. An initial layer over the entire area
10 and then a subsequent layer. There were pipelines 03.16PM
11 through these areas that had to be removed, or at least
12 isolated. You can't have a charged Fire Service main
13 within an overburden dump because, if it does happen to
14 leak, then it will build up the water pressures in it,
15 potentially liquify and slide down the hill. There 03.17PM
16 would have been lines removed as a result of that
17 development.

18 Subsequently the building of the Hazelwood Ash
19 Retention Embankment would have caused further pipe
20 work to have been removed in these areas. As I said, 03.17PM
21 mines are living things, so the one space changes in
22 time and that's why you get a conflict with fixed
23 infrastructures like pipelines.

24 It's my experience that the pipelines that are
25 installed are quite expensive to install. Where you 03.17PM
26 make that investment, it's very unlikely that you'll
27 then make a further investment to come along and
28 unnecessarily pay money to remove things if they're
29 providing a function that you need. That's my
30 experience. 03.17PM

31 In conclusion, Mr Polmear, you say at paragraph 30 that,

1 other than for reasons that the pipe work had become
2 unserviceable and to enable the area that you've
3 identified to be rehabilitated, you know of no other
4 reason for pipe work being removed?---No.

5 Am I understanding correctly what you're saying?---Yes.

03.18PM

6 They're the questions that I have for Mr Polmear. Members
7 of the Board?

8 CHAIRMAN: I think at the end of one of your answers you
9 mentioned the fact that the loss of power at a critical
10 time meant that what hadn't in the past happened, had
11 not happened on this occasion, and that was a factor
12 that impinged upon your assessment of the situation.
13 Now, did I understand that correctly?---It's my belief
14 that the fire was able to escalate to a
15 substantial degree - - -

03.18PM

03.18PM

16 Substantially in that period when - - -?---In that period,
17 and then, in order to try and be able to put it out,
18 required a whole lot of - - -

19 The capacity of the tanker filling points had been, which
20 would have been able to be relied upon in the past, had
21 been exceeded so that that was no longer an option.
22 One thing so far as the power under this reference in
23 one of the documents to the recommendation that the
24 power poles be concrete, not wood, has that been the
25 case?---I'm not sure the document you're referring to.
26 If you're referring to the policy - - -

03.19PM

03.19PM

27 I think it was a Richard Oliver one, included - - -?---My
28 understanding is that that was referring to the
29 distribution system within the mine, so they're the
30 poles that supply power within the mine at 6,600 volts.
31 The lines that went down on the day were the 66,000

03.19PM

1 volt lines.

2 This is the AusNet?---The 66,000 volt lines that supply to

3 the substations that then supplied the distribution

4 system in the mine.

5 What were they made of?---Timber, which is why they went 03.20PM

6 down.

7 MEMBER CATFORD: Could I ask a question about early

8 detection of fires. We talked briefly about the

9 spotting towers or tower that might have existed in the

10 past. Are there new technologies that are useful here 03.20PM

11 to detect a fire just as it's beginning to

12 smoulder?---The human nose is very good.

13 Yes, but this is a huge mine this, isn't it?---It is.

14 I'm thinking, is there infrared technologies? I mean, if

15 someone's lost in the mountain the planes can pick them 03.20PM

16 up here from there using emissions of heat and so

17 on?---I suspect it would be better to ask somebody with

18 better background than myself on that question.

19 MR ROZEN: Mr Lapsley might possibly be able to answer that

20 question. 03.21PM

21 MEMBER CATFORD: I would have thought GDF Suez would be

22 aware of the technology. I agree you may not be the

23 right person. It would be interesting to find out, you

24 know, what is best practice in terms of early detection

25 of fires?---I know technology was used extensively in 03.21PM

26 the fire fight; I was the liaison officer with the CFA,

27 so I'm aware of the technologies that they were using

28 for identification of areas of concern, but I'm not

29 sure that they're necessarily sustainable for the

30 situation you're talking about, because they were 03.21PM

31 pretty much airborne devices, either on helicopters or

1 planes that were in use; that was really to determine
2 the areas of greatest need in the fire fight. But for
3 detection, when it's very, very small, I'm sorry, I
4 can't assist you.

5 It's a huge task if you're relying on the human nose or the
6 human eye in such a large expanse?---Yes.

7 Thank you.

8 MR ROZEN: If I can just add to that, it's particularly the
9 case, is it not, where you no longer have dedicated
10 fire spotters on higher fire danger days?---I would
11 have to disagree with you there. The way that we're
12 organised actually requires people to be pulled out of
13 their work to actually do those sorts of tasks on those
14 sorts of days, and on that day, I'm the wrong person to
15 ask, but I don't think your statement's correct.

16 No doubt I'll be corrected. They're the questions I have
17 for Mr Polmear, I understand Ms Doyle has at least a
18 question.

19 MS DOYLE: No, I have good news, the learned Members of the
20 Tribunal stole my re-examination questions, so I have
21 no further questions for Mr Polmear.

22 MR ROZEN: Good news for everyone except me, because that
23 means I don't get a break. Could Mr Polmear please be
24 excused?

25 <(THE WITNESS WITHDREW)

26 MR ROZEN: The next witness is Professor David Cliff, I call
27 Professor Cliff.

28 <DAVID IAN CLIFF, sworn and examined:

29 MR ROZEN: Good afternoon, Professor Cliff. You've been
30 waiting patiently to give your evidence here today.

31 Firstly, could you state for the transcript your full

1 name and professional address please?---My name is
2 David Ian Cliff. My professional address is the
3 Minerals Industry Safety and Health Centre and
4 Sustainable Minerals Institute at the University of
5 Queensland.

03.24PM

6 In your capacity as a professor you head up the Minerals
7 Industry Safety and Health Centre, is that correct?---I
8 do, I'm the Professor of Occupational Health and Safety
9 in Mining.

10 The centre is located in the Sustainable Minerals Institute
11 at the University of Queensland. Is that
12 correct?---That's correct.

03.25PM

13 For the purposes of this Inquiry, having been retained by
14 the solicitors to the Inquiry to provide us with an
15 expert report, have you in fact prepared a report
16 dated June 2014?---I have.

03.25PM

17 Have you attached to that report a curriculum vitae?---I
18 have.

19 I see, like a previous witness that we've heard from, the CV
20 exceeds in length the report itself?---Yes.

03.25PM

21 That seems to be the case. Perhaps I could ask you a little
22 bit about your background. Perhaps before I do that,
23 have you read through a copy of the report that you've
24 prepared for us before giving evidence today?---I have.

25 Is it the case, Professor Cliff, that this morning you made
26 a number of minor changes to the copy of the report
27 that had been distributed to the parties last week?---I
28 corrected a few typos, yes.

03.26PM

29 They're purely typographical errors?---That's correct.

30 For assistance of the parties, particularly my learned
31 friend, Ms Doyle, I've pointed out that the version of

03.26PM

1 the report that had been distributed is for present
2 purpose in substance no different to the final version
3 with those typos fixed. Perhaps I'll just ask you, are
4 the contents, with those changes being made, true and
5 correct?---They are.

03.26PM

6 Insofar as you express opinions in the report, are they
7 opinions that are honestly held by you?---They are.
8 I'll tender the report.

9
10 #EXHIBIT 91 - Report of Professor Cliff.

03.27PM

11
12 MR ROZEN: Professor Cliff, a little bit about your
13 background. If we can bring up your CV which we'll
14 find starting at page 17 of the report. I don't think
15 we need your phone details, but if we go to the next
16 page, please, page 18. As you've already told us, you
17 hold the current position, and you have since March
18 2011, of the Professor of Occupational Health and
19 Safety in the Minerals Industry and Director of the
20 Centre within the institute that you've talked about.
21 You then list a number of projects; they're projects
22 that had been engaged in by the institute or by you
23 personally or both?---They are through the university
24 I've been engaged to provide advice to people.

03.27PM

03.27PM

25 I want to ask you about a couple of those. The second dot
26 point there, you were retained as an expert advisor to
27 the New Zealand Police regarding recovery and re-entry
28 to the Pike River Coal Mine. That was of course in the
29 South Island of New Zealand?---Yes.

03.28PM

30 When was the Pike River Coal Mine disaster?--- November 19,
31 2010.

03.28PM

1 What was the role you played in relation to advising the
2 police?---I acted as an expert advisor to them in
3 analysis and interpretation of the state of the mine
4 after the first explosion, and in their efforts to
5 manage the recovery and re-entry of the mine to attempt
6 to recover the miners that were trapped in the mine.

03.28PM

7 That of course was an underground coal mine?---Yes, it was.
8 And it was black coal that they were mining there, is that
9 right?---It was a thick seam black coal, yes.

10 In the next dot point you then went on to be an expert
11 advisor to the Department of Labour regarding cause of
12 explosions at the Pike River Coal Mine. What was the
13 nature of that advice that you were providing to the
14 Department of Labour and what was the Department of
15 Labour's role in relation to the mine?---The Department
16 of Labour have the jurisdiction over the mining
17 industry in terms of health and safety. I was retained
18 as part of an expert panel to investigate the causes of
19 the explosion and whether or not charges would be laid
20 against the people involved.

03.29PM

03.29PM

03.29PM

21 Right, against the operator of the mine?---The operator of
22 the mine, yes.

23 Did you play a role in the Royal Commission that was held in
24 relation to the Pike River coal disaster?---I sent an
25 expert report to the Royal Commission, I wasn't called
26 for evidence. It wasn't disputed.

03.29PM

27 I'll return to your experience with the Department of Labour
28 in New Zealand because, like Victoria, they are a
29 workplace health and - General Workplace Health and
30 Safety Inspectorate that happen to have responsibility
31 in relation to mines as well. Is that the

03.30PM

1 position?---That's correct, yes.

2 So similar to the position in Victoria?---Very similar in

3 terms of size and the nature of the legislation, yes.

4 We'll come back to that in a moment. Towards the bottom of

5 that list of projects you note that you're a course 03.30PM

6 lecturer in relation to Occupational Health and Safety

7 Management Systems for Mining, and also you had some

8 guest lecturing roles as well. Is that right?---I do a

9 bit of lecturing, yes.

10 When you're not giving expert evidence. Prior to your 03.30PM

11 current position, you held the position of Associate

12 Professor in the Minerals Institute Safety and Health

13 Centre.

14 That's the same?---Same place.

15 Same place, one level down in the pecking order, and that 03.30PM

16 was a position you held for 10 years and you list the

17 activities that you were engaged in there. I should

18 have asked you, if we go back to the previous

19 page under the heading, "Education", your undergraduate

20 education was obtained at Monash University here in 03.31PM

21 Victoria and you obtained a Bachelor of Science with

22 Honours and First Class Honours in Chemistry.

23 Postgraduate you completed a PhD at Cambridge

24 University in England?---That's correct.

25 Your thesis title, "The laser magnetic resonance 03.31PM

26 spectroscopy of free radicals", I won't even begin to

27 ask you what that means, but it's in the field of

28 physiochemistry, I take it?---Yes.

29 You list other qualifications that you have there. If we go

30 back to the report itself on page 5, you draw the 03.31PM

31 Inquiry's attention to some particular research areas

1 that you state to be relevant to the opinions that you
2 express. The first is you draw the Inquiry's attention
3 to your research into the processes affecting coal
4 combustion, in particular your role as the co-author of
5 the textbook, "Spontaneous combustion in Australian
6 underground coal mines"?---And you go on to explain
7 that that's the source of much of the information that
8 you have used in your report, and in particular the
9 views you express about the nature of brown coal
10 combustion and so on which I'll take you to in a
11 moment.

03.32PM

03.32PM

12 You then refer to consultation to mines,
13 experiencing mine fires or explosions. Can you give us
14 a summary of the sort of consultative work you've done
15 for mines and for mine operators relevant to this
16 Inquiry?---I've provided advice to about 30-35
17 incidents at mines of varying levels of severity, in
18 terms of, it could be to assist in recovering the mine,
19 re-entering the mine, it could be insurance claims when
20 they've lost equipment due to fire underground or on
21 the surface. It would be providing advice to
22 Governments in terms of developing processes for
23 managing incidents. It would be providing education
24 and advice to inspectorate both here and overseas, in
25 particular areas in terms of fires and explosions in
26 coal mines and metal mines.

03.32PM

03.33PM

03.33PM

27 In terms of your roles with inspectorates, mining
28 inspectorates, do you provide training to mining
29 inspectors?---I have provided training to Mine
30 Inspectors on risk management, health and safety
31 management systems, principal hazard management as we

03.33PM

1 call it in Queensland or major hazard management, and
2 more defined areas such as mine re-entry after an
3 emergency and sealing underground mines in an
4 emergency.

5 The third dot point in that list you draw attention to, your 03.33PM
6 familiarity with the development and implementation of
7 Occupational Health and Safety Management Systems,
8 principal hazard management plans and the risk
9 assessment process. You've probably partly answered
10 the next question, that familiarity has been gained in 03.34PM
11 the course of the consultancy work you've done in
12 relation to mines; is that right?---In part, but also I
13 offer postgraduate education through our university in
14 mining, and in particular we have subjects that deal
15 with occupational health and safety in management 03.34PM
16 systems in mining, risk management in mining, both
17 qualitative and quantitative, and hazard management
18 plans as well as occupational hygiene and other related
19 areas.

20 Finally you draw attention to your research experience in 03.34PM
21 the management of emergencies in the mining industry.
22 You've referred earlier to the Pike River disaster in
23 New Zealand. Are there other particular emergencies in
24 the mining industry that you would draw our attention
25 to that you have had exposure to that are relevant to 03.34PM
26 what we're looking at?---In terms of real emergencies,
27 I've dealt with Moura No 2 in 1994, an evacuation of a
28 number of mines in Australia, eight in the last
29 15 years. I've also undertaken research to improve the
30 management emergencies through the application of the 03.35PM
31 AIMMS system which we call MEMS in Queensland, that's

1 the Australian Incident Management System which is used
2 by most Emergency Services to manage emergencies. I've
3 participated in the research groups and the working
4 parties to tailor that for application in the mining
5 industry in Queensland and in New South Wales.

03.35PM

6 Just whilst you're on that topic, is there a specific
7 version of AIIMS, that's A-I-I-M-S I think, am I right
8 there?---I think there might be one or two.

9 Is there a tailored version of that used in relation to
10 mining incidents in Queensland?---There's a tailored
11 version called MEMS used in Queensland, the Mine
12 Emergency Management System. There's also just been
13 released in New South Wales, a very similar AIIMS based
14 system available through the Coal Services Mines Risk
15 Service Unit.

03.35PM

03.36PM

16 I've been asked to slow down, Professor Cliff, and I think
17 that might possibly also apply to you, so we can both
18 consider ourselves to be ticked off. I'll lead the
19 way. In relation to open cut brown coal mines, prior
20 to being engaged on this task, have you had much
21 exposure to open cut brown coal mines in your working
22 life?---My first research work in Australia was with
23 the CSIR in Sydney, where I spent three years burning
24 brown coal in various stages in the laboratory, trying
25 modify its combustion processes to minimise pollution
26 effects, so I spent three years studying brown coal
27 combustion.

03.36PM

03.36PM

28 What about the operation of open cut brown coal mines as
29 such?---I've had very little exposure to Victorian
30 brown coal mines.

03.36PM

31 I want to ask you a little bit about the task that you're

1 engaged to perform for the Inquiry, if we can go back
2 to page 2 of your report, please. You received a
3 letter and had a number of phone calls with staff at
4 the Inquiry, and ultimately your attention was drawn to
5 the second and third of the terms of reference in the 03.37PM
6 terms of reference that established the Inquiry and you
7 were asked to assist the Inquiry in relation to those.
8 I don't want to read those out, but do you agree that
9 essentially the second term of reference requires the
10 Inquiry to examine the adequacy and effectiveness of 03.37PM
11 measures taken by the operator of the mine, and the
12 third term of reference is concerned with the adequacy
13 and effectiveness of the role played by the relevant
14 regulatory regimes in respect of the mine?---Yes.

15 Both focused on the prevention of fire in the mine?---Yes. 03.37PM

16 That was the task that you were asked to assist us with. In
17 the letter that you received, there were 10 matters
18 that were set out that you were asked to address, and
19 you've listed them on pages 2 and 3 of your report. If
20 we go down to the bottom of the page I've noticed that 03.38PM
21 I think the word "draft "in that first line should be
22 deleted, should it not, from this final report?---Yes,
23 I apologise.

24 Just delete that word there. The information that you were
25 provided with, you received a large number of documents 03.38PM
26 from the Inquiry's solicitor?---I received the
27 documents listed in item 5, plus a few more by email
28 and then a large chunk last night, yes.

29 It's been a dynamic process, has it not, the receipt of
30 documents and we are very grateful, Professor Cliff, 03.39PM
31 for your forbearance in that regard in that you have

1 been prepared to read documents off at a very short
2 notice.

3 For the assistance of the parties in the Inquiry,
4 a list has been prepared of the documents that were
5 provided to you and it's divided into two sections, 03.39PM
6 those that you reviewed and those that you were unable
7 to review. I just ask you to have a look at this
8 document, please, and copies are provided to the
9 parties.

10 I think I'm right, aren't I Professor Cliff, 03.39PM
11 there's a document that you've previously looked at
12 today to assure yourself these are the documents that
13 you were provided with and divided into the ones you
14 reviewed and ones you didn't; is that correct?---I
15 don't know; having received the ones at the bottom of 03.39PM
16 the page, the last three, I'm not sure, I couldn't find
17 any record of those three. But the ones that are
18 listed as being reviewed by me, I'm happy with those,
19 yes.

20 I would ask that that be added to the exhibit please, to 03.40PM
21 exhibit 91.

22
23 #EXHIBIT 91 - (Addition) List of documents provided to
24 Professor Cliff.

25 MR ROZEN: In addition to reviewing those documents, which 03.40PM
26 include the transcript of yesterday's proceedings and
27 of course you've sat in on the hearing today, you also
28 went on a tour of the mine?---Yes, I did.

29 From memory, Professor Cliff, are you able to recall how
30 long the mine tour took?---I would have thought it was 03.40PM
31 a big hour basically, maybe an hour and a half.

1 After successfully completing the induction, you went on the
2 tour and you were driven around the mine, were you not,
3 and you were able to view the mine from the vantage
4 point that was identified by the previous
5 witness?---Yes, I was.

03.40PM

6 Then you also entered the mine as such and were able to view
7 the northern batters and other areas?---We saw the
8 northern batters certainly, yes.

9 In addition to the material provided to you and what you saw
10 at the mine, you've also obviously conducted your own
11 research in relation to relevant areas that have
12 enabled you to prepare the report?---That's correct.

03.41PM

13 With all that in mind, can we go to the first substantive
14 topic which is on page 5 of your report under the
15 heading, "Brown coal fires." You were asked to
16 describe the characteristics of brown coal fires with
17 particular reference to the type of coal mine that the
18 Hazelwood open cut mine. You've partly answered the
19 first question which is, what enables you to express
20 these opinions, and you've told us you spent three
21 years burning brown coal.

03.41PM

03.41PM

22 The brown coal that we find in the Latrobe Valley,
23 can you briefly describe to the Inquiry any particular
24 features of the brown coal here in the valley compared
25 to elsewhere?---Brown coal is what we call a low rank
26 coal which means it's geologically quite young. That
27 means in general it is a very reactive coal by
28 comparison to the black coals you'd find in Queensland
29 and New South Wales.

03.42PM

30 It has also other properties such as, it has much
31 higher in oxygen content, it is much more porous when

03.42PM

1 dry, the inherent moisture content is huge by
2 comparison. For example, I think typically it's about
3 60 per cent as mined. In Queensland it would be 10,
4 11 per cent if you're lucky. Seams are thicker. I
5 think, if you could find a 100 metre thick black coal
6 seam in Queensland we'd all be happy, including Clive
7 Palmer, but we normally mine 3-6 metre seams of black
8 coal.

03.42PM

9 Brown coal is much younger geologies, much more
10 reactive, it's more porous, it's larger, it's therefore
11 much more prone to spontaneous combustion, which is the
12 self-heating of the coal. If you catalyse it, because
13 it is younger, once it dries out it's almost like
14 touchpaper.

03.42PM

15 You note that brown coal is particularly reactive and you
16 list a number of factors which will determine the rate
17 of the reaction of brown coal with oxygen in air. I
18 won't take you through all of those, but you summarise
19 it in the third dot point on page 6 of your report
20 where you note in the paragraph starting, "In essence,
21 under the meteorological conditions that exist at the
22 time of the fire", that's 9 February this year you're
23 talking about, "the abandoned batters that caught fire
24 at Hazelwood Mine exhibit a number of the conditions
25 that make it likely for the coal to ignite easily and
26 for the fire to spread." You identify, "Thick seams of
27 coal, some of which was fragmented with cracks and
28 fissures, loose piles of coal et cetera; high vertical
29 face of coal that would allow heat transfer under
30 convection into more coal."

03.43PM

03.43PM

03.43PM

03.44PM

31 Can you just expand on that second dot

1 point?---45 degrees rather than vertical, but height
2 rises. So, if a fire is ignited at the base of a coal
3 seam, it will naturally work up the face of the coal
4 seam because that's where the heat's going. That then
5 induces a convective current, so air naturally moves up 03.44PM
6 the face of the coal which of course also fans the
7 coal, and makes the fire get worse because the fire
8 will propagate.

9 Hot dry wind which evaporates the moisture and heats the
10 coal I think is self-explanatory, then finally the wind 03.44PM
11 will provide a plentiful supply of oxygen and a vector
12 for heat transfer along the batters, and the evidence
13 from the Bureau of Meteorology is that through the
14 course of certainly the afternoon of 9 February the
15 fire was fanned by very strong winds, predominantly 03.44PM
16 from the west and the southwest. So that would have
17 the effect that you have there described?---Yes.

18 The next question you were asked was to describe the most
19 effective ways in which such fires can be suppressed,
20 and you were asked to take into account the four 03.45PM
21 factors that are listed there. You explain in some
22 detail what is required to suppress a brown coal fire
23 burning in the batters that you've referred to. You
24 note that you can either remove the fuel or remove the
25 heat or isolate the air supply from the coal and stop 03.45PM
26 the chemical oxidation reactions from occurring or some
27 combination of those.

28 You then talk about the difficulties associated
29 with removing the fuel, and then in the second-last
30 paragraph on page 6 you say, "Removing the heat 03.45PM
31 requires the application of huge quantities of water as

1 was undertaken to fight the fire. Adding surfactants
2 to the water such as are used in foams increases the
3 wetting capacity of the water and helps get the water
4 into the pores of the coal." Can you just explain what
5 you're referring to? We've heard some evidence of foam 03.46PM
6 and there's some photos which I think you've seen in
7 evidence today of the application of foam to the
8 batters, but what is it that you are referring to there
9 that foam does?---normally the foam, we call it a
10 surfactant, it's an agent that bonds to a surface. If 03.46PM
11 you're applying water to vertical or near vertical
12 surface it will run away very quickly, it has very
13 little adhesion properties. So you need something
14 which will cause it to bind to a surface. Foam
15 surfactants are very good at doing that. They also 03.46PM
16 form a thicker blanket to isolate air from the surface
17 of the coal, so that's why we use foams to do those
18 sorts of things and you see the effect of a high
19 expansion foam I think in that case, or may even be a
20 low expansion foam to stick to that surface. It also 03.46PM
21 stops the erosion effect of the water probably too.

22 You then go on and describe other difficulties, and the
23 Inquiry's heard a great deal of evidence of the
24 difficulties faced by firefighters in putting a fire
25 out and the duration of the fire fight itself speaks to 03.47PM
26 those difficulties. You conclude immediately above the
27 heading, "Regulation of mines" on the following page,
28 page 7, you say, "The emphasis with coal mine fires is
29 on prevention rather than mitigation for all of the
30 reasons outlined above." Probably speaks for itself, 03.47PM
31 but do you want to expand on that?---Sorry,

1 firefighting is always very difficult. The prevention
2 by proper design is - the hierarchy of control is
3 always, where possible, the way to go because, as we've
4 seen every time we have a fire in a mine that I've been
5 involved in, it's always difficult, extremely expensive 03.47PM
6 and hazardous to reach. In some ways an open cut fire
7 is the easiest fire because you can see it and get some
8 access to it, but once it takes hold, because coal has
9 such a huge heat capacity, putting it out is very
10 difficult. 03.48PM

11 If I can turn then to the fourth matter that you were asked
12 to provide advice about. You were asked to provide
13 views on the adequacy of the Victorian regulatory
14 framework for fire prevention and suppression compared
15 to practices elsewhere in Australia and overseas. You 03.48PM
16 commence your discussion of that topic at the top of
17 page 8 where you say, "Like all regulatory frameworks
18 in Eastern Australia, the emphasis is on the management
19 of risk through safety management systems and major or
20 principal hazard management plans." Are you referring 03.48PM
21 there to regulatory frameworks, obviously enough in
22 Queensland, New South Wales and Victoria? Am I
23 right?---In Queensland and New South Wales of course
24 there's specific mine safety legislation, and they,
25 like the Victorian legislation, have emphasis on 03.49PM
26 Occupational Health and Safety Management Systems and
27 the reduction of those risks as much as is reasonably
28 practicable or achievable.

29 If I just stop you there, we talked briefly about Queensland
30 and New South Wales. As I understand your evidence, 03.49PM
31 there is legislation in those jurisdictions that deals

1 expressly with occupational health and safety in
2 mines?---There's a separate Act and legislation in
3 Queensland and it applies only to mines. The general
4 OHS Act does not apply to mines. In New South Wales
5 the OHS Act and Regulations apply to mines but there's
6 an additional Act for coal mines health and safety and
7 regulation, and an initial act for metalliferous mines
8 and regulation that adds to the OHS Act.

03.49PM

9 As you're aware, in Victoria we have an Act, the
10 Occupational Health and Safety Act that applies to all
11 workplaces including mines. We have regulations that
12 apply to all workplaces including mines, and then we
13 have a dedicated part of those regulations that apply
14 specifically to mines?---Yes, I understand.

03.50PM

15 If I understand what you're saying in this part of your
16 report, you're saying despite the different regulatory
17 or legislative arrangements in Queensland and
18 New South Wales compared to Victoria, in all three of
19 the jurisdictions the regulatory approach is based on
20 the management of risk through safety management
21 systems or similarly worded concepts?---Yes, I believe
22 they are, yes.

03.50PM

23 You say that in each jurisdiction the development and
24 revision of those plans should be based upon a risk
25 assessment process or what's called a safety assessment
26 in the Victorian Regulations?---That's probably not
27 quite true. Upon reflection, looking at the Victorian
28 Regulation, the safety assessment is a subset of the
29 overall risk assessment process, it relates only to
30 what is called a major mining hazard in Victoria.

03.50PM

03.51PM

31 Is that concept of a major mining hazard, which we heard a

1 deal of evidence about yesterday and we understand to
2 be a mining hazard that, I think I'm correct in saying,
3 will probably result in more than one fatality - that's
4 not an exact reference, but should do for our
5 purposes - is that found in the regulatory arrangements 03.51PM
6 in Queensland or New South Wales?---No, it's not.
7 There is no statement about safety assessment or
8 multiple fatality. The legislation in those States
9 refers to assessment of the risk on the basis of the
10 consequence and the likelihood, and severity - 03.51PM
11 consequence in terms of severity. So it overtly talks
12 about range of risk, levels of risk and consequence.

13 Is that a difference of significance? From your examination
14 of the material in this case and what you heard about
15 in the evidence yesterday, does the existence of this 03.51PM
16 concept of a major mining hazard have any significant
17 effect on the way the mining industry is regulated in
18 Victoria compared to what happens in our northern
19 neighbours?---I would say that, from the experience of
20 obtaining information about the management of the 03.52PM
21 safety at the mine and the documents that have been put
22 together, the only safety assessments or risk
23 assessments I've seen relate to major mining hazards
24 which relate to only one consequence, which is the
25 potential for multiple fatalities. When you look at 03.52PM
26 the risk assessments done for principal mining hazards
27 as we call them in Queensland, they allow for
28 explicitly a range of consequences in their risk
29 assessments, not just the potential for multiple
30 fatality. 03.52PM

31 We see in the evidence, and I think you're aware of this,

1 Professor Cliff, that as far as the regulatory approach
2 of the regulator here, the WorkCover Authority is
3 concerned, this verification audit that it carries out
4 on an annual basis are directed solely to major mining
5 hazards, that's the focus of its regulatory attention. 03.53PM

6 So perhaps it's not surprising, if you accept that
7 that's the case, that the focus of the people that are
8 being regulated, the mine operators, seems to be very
9 much focused on those major mining hazards as

10 well?---I'm not sure, because if I read the new 03.53PM
11 Victorian regulation correctly, the OHS management
12 system requires the management of mining hazards, and a
13 mine fire is a mining hazard, not a major mining
14 hazard, and it requires the risk to be managed. My
15 understanding from the induction at GDF Suez is that 03.53PM
16 GDF Suez is accredited to Australian Standard 4801,
17 which is an occupational health and safety health
18 management system, and it also requires risk management
19 to be undertaken through a risk assessment process.

20 So I understand I would have expected, if the 03.53PM
21 company is managing risk rather than complying with the
22 legislation - if I'm an academic for a minute here - we
23 promote management of health and safety in Australia,
24 not compliance, then management of health and safety
25 would require risk management and risk assessment to be 03.54PM
26 undertaken in addition to the safety assessment.

27 So, despite the safety assessments only attaching to major
28 mining hazards, it's clear that in relation to mere
29 mining hazards, if I can call them that, there is still
30 a requirement in the legislation both here and 03.54PM

31 Interstate to engage in a risk management approach; is

1 that right?---That would be my understanding. If you
2 follow the Australian Standard or MDG 1010, that's Mine
3 Design Guideline 1010 from New South Wales - - -

4 Sorry, I'll just get you to slow down there?---Sorry, Mine
5 Design Guideline 1010 for New South Wales.

03.54PM

6 What was the acronym?---MDG, mine design guideline, which is
7 risk management in mines issued by the New South Wales
8 Department of - I think it's called Industry and
9 Innovation nowadays but it may have changed again.

10 They require an overall assessment process prior to
11 development of plans, major hazard management plans, so
12 for mine fires as required under the legislation they
13 would undertake that process. It's a staged process,
14 you start out with a broad-brush risk assessment, then
15 you define more detailed defined risks based upon
16 scenarios and event mapping through a fault tree or an
17 event tree system.

03.54PM

03.55PM

18 I want to ask you about your references to "reasonably
19 practicable" and "reasonably achievable", the two
20 phrases that you refer to. You note that in Victoria
21 there is a requirement to reduce risk so far as is
22 practicable, we've heard a deal of evidence about that
23 yesterday. You then go on in this paragraph four lines
24 from the end of the paragraph to say, "Other
25 jurisdictions do vary in wording, for example the
26 Queensland mining OHS legislation refers to reducing
27 the risk to within acceptable limits, as well as
28 reasonably achievable. This places an overt emphasis
29 on community standards of acceptability as well as
30 achievability."

03.55PM

03.55PM

03.56PM

31 Are you saying that the level of allowable, if I

1 can use a neutral term, allowable risk in the
2 Queensland legislation is lower than is allowed by
3 reference to the reasonably practicable test in
4 Victoria? Is there a difference between those two
5 standards and, if so, what is it?--I'm not a lawyer, I 03.56PM
6 fully admit to that, but there is a direct statement in
7 the Queensland legislation that says that risks must be
8 reduced to acceptable limits, which implies that
9 there's a standard of acceptability which must be
10 adhered to. There is no such statement directly in the 03.56PM
11 Victorian legislation, although I believe maybe people
12 would imply that comes under the "reasonably
13 achievable", but it doesn't say that as such. So, it
14 could be interpreted that there is no benchmark as
15 such, it's a pay-off all the time about what you can do 03.56PM
16 against the level that you can achieve.

17 The Victorian legislation, as I think you know, requires a
18 consideration of likelihood of a hazard causing harm
19 and the extent, the consequence of the harm as well as
20 the cost of implementing control measures, and seems to 03.57PM
21 involve a type of balancing exercise looking at those
22 things so that, if you've got a relatively minor risk
23 but it's exceedingly expensive to address it, then it
24 wouldn't be reasonably practicable to do so. An
25 example that's been given here by a witness from 03.57PM
26 WorkCover was the question of rehabilitating the coal
27 batters as a way of - worked out coal batters as a way
28 of addressing fire risk but, because of the expense
29 associated with it, it probably won't be reasonably
30 practicable under the test in Victoria to do it. 03.57PM

31 Is cost a consideration under the Queensland

1 legislation of what's acceptable and reasonably
2 achievable?---There's no overt statement about costs in
3 the Queensland or New South Wales legislation. The
4 only consideration of cost comes in incremental change
5 once you reach an acceptable level of risk, because the 03.58PM
6 whole aim of the exercise is not to achieve a minimum
7 standard, but to achieve best practice standard, and
8 the limits on reasonability then may include costs once
9 you've got to an acceptable standard.

10 You go on in the next paragraph of your report to make 03.58PM
11 reference to s.5.3.23 of the Victorian Safety
12 Regulations, and we examined that in some detail
13 yesterday, I think you would have seen that in the
14 transcript of yesterday's hearing. You note the
15 particular parts of that that you consider to be 03.58PM
16 important. I want to ask you about one of those.
17 You've got a series of five dot points and then we go
18 into two dot points and then we go to a further series
19 of indented dot points. It's the fifth of those, the
20 one, "Describe all measures considered for the control 03.59PM
21 of risk associated with major mining hazards and
22 describe the reasons for adopting or rejecting the
23 control measures considered." Is that a concept that
24 you're familiar with as part of risk assessment, the
25 outcome, the document that's produced as a result of 03.59PM
26 the process identifies possible control measures and
27 then discusses which are implemented and which are not
28 and why?---That is the process I'm used to following,
29 yes.

30 What's the advantage of that from a safety promotion point 03.59PM
31 of view and particularly in relation to what we're

1 looking at, fire prevention?---There are a number of
2 advantages. If you document the process for the
3 decision-making, you are able to review that process at
4 a later date, it is exposed - able to be exposed to
5 external scrutiny. So for example an Inspector can 03.59PM
6 assess the situation to see whether you're
7 decision-making was relevant or valid. Should the
8 circumstances change where the assumptions you're
9 making make a decision change, you are able to go back
10 as a flag to the risk assessment process and modify the 03.59PM
11 decision-making process and test for adequacy.

12 You go on to refer to the documentation provided by GDF Suez
13 and you say it doesn't demonstrate compliance with
14 conditions, and as a consequence it is not possible to
15 evaluate the assessment process for adequacy. Just so 04.00PM
16 that we understand what you're referring to there,
17 could exhibit 66, and particularly the document behind
18 tab 10, this is the bow-tie diagram that evidence was
19 given about yesterday which was behind tab 26 of the
20 GDF Suez folders. A bit hard to see?---I'll take your 04.00PM
21 word for it.

22 We'll do better than that, we'll provide you with a hard
23 copy that's colour. Still not the easiest thing to
24 read but easier than that I think?---I am familiar with
25 the content of this diagram. 04.01PM

26 This is what's been referred to as a bow-tie diagram. You
27 have a bit to say about that in your report, about
28 whether or not it meets that description. What is a
29 bow-tie diagram professor?---This is not really what I
30 would call a bow-tie. A normal bow-tie diagram has an 04.01PM
31 event, an unwanted event in the middle, the knot in the

1 bow-tie. On the left-hand side you have the causes, on
2 the right-hand side you have all the consequences, and
3 between the causes and the event, you have the
4 preventative controls; between the unwanted event and
5 the consequences you have the mitigated controls. Now,
6 controls are actions, barriers, that prevent or
7 mitigate the event. So they're not things like a piece
8 of paper or a plan, they are firefighting system, they
9 are automatic controls, they are evacuation, they are
10 self-contained self-rescuers, so they are things you
11 can identify as being able to control something. So
12 when I see a document like this, it summarises the
13 systems and processes the mine has on site maybe to
14 manage these issues, but it gives me no detail about
15 how they're actually going to work or in fact how
16 they're going to mitigate the end consequence because
17 there is no actual consequence listed on this diagram.
18 Of course, being a major mining hazard, the only
19 consequence being considered is multiple fatality, so
20 one has to presume that's the consequence they're
21 dealing with.

04.01PM

04.02PM

04.02PM

04.02PM

22 Can I ask you, by reference to this, perhaps hypothetically,
23 can we construct at least an outline what a bow-tie
24 diagram addressing the risk of a fire in the worked out
25 batters of the Hazelwood coal mine would look like?

04.03PM

26 Would you have on the left-hand side a series of
27 possible causes of such a fire? Is that right?---In my
28 experience, in dealing with bow-ties when I do them,
29 when I'm involved in doing them, they would be very
30 incident-specific. You would first of all go from an
31 event tree or something, or a series of events to cause

04.03PM

1 an incident, you'd look at the causes and the linked
2 causes. So, for example, take the event of 9 February,
3 if we assume that it was a bushfire as the ignition
4 point, spreading to the mine, causing the fire in the
5 batter area, that would be the chain on the left-hand
6 side of the unwanted event which is the fire on the
7 batters. It would then split into the consequences, so
8 you'd have things such as multiple fatalities, injury,
9 damage to plant, loss of asset, loss of production,
10 harm to local the community. They would all be the
11 consequences on the right-hand side. Then you would
12 put, okay, how can we prevent bushfire spreading to
13 mine, how can we, once the coal ignited it, stop it
14 spreading, so between those two things you'd identify
15 functions or barriers. For example, you would have
16 things like the fire breaks or the 50 metre fire break
17 from a scrub fire, probably not much good. The
18 capping, water fire, fire tankers, that sort of stuff,
19 would be various controls you put in that thing. So
20 your bow-tie would actually be quite specific to a
21 scenario generally or a group of scenarios, rather than
22 for example in this diagram where a bushfire is rolled
23 into one.

04.03PM

04.03PM

04.04PM

04.04PM

24 Just for completeness, if you go to the second page, looking
25 down the left-hand side of the document, hard to read
26 on the screen, but the second mustard coloured box on
27 the left-hand side, second from the top, where it's got
28 bushfire in the middle of it, do you see that?---I'll
29 take your word for it.

04.04PM

30 I think you'll have to. Above it in red it says, "Assessed
31 risk level equals high", and then there's a series of

04.05PM

1 boxes which, as I understand it, refer to a series of
2 specific control mechanisms which are then attached to
3 this document. You're aware of the attachments that
4 I'm referring to?---Yes.

5 Then moving along the right-hand side, you get to a dark 04.05PM
6 blue box and it says inside that, I'll ask you to
7 accept this, "Assessed risk level equals as low as
8 reasonably" - it says "practical" but I assume it means
9 "practicable". Does that not conform to a proper risk
10 assessment as you have experienced it in relation to 04.05PM
11 the mining industry?---If it's a bow-tie we would not
12 normally put risk rank on a bow-tie. If you're doing a
13 risk assessment you would use something like a WRAC -
14 sorry, workplace risk assessment and control diagram or
15 chart to tabulate those sorts of things because on 04.06PM
16 those diagrams you rank the risk with and without
17 controls and you can then assess the relative risk with
18 additional controls in place. To me, this diagram
19 serves a purpose, but it's not a true bow-tie, and it's
20 certainly not a true WRAC diagram. 04.06PM

21 Without getting hung up, I don't want us to get hung up on
22 the titles, whether it's a true bow-tie or not. Your
23 point, as I understand it, is a broader one, that if
24 that's the document that is said to be the safety
25 assessment of the major mining hazard of mine fires, 04.06PM
26 then it doesn't meet the requirements as you've set
27 them out of the regulation?---In attempting to
28 understand the development and assignment of controls
29 and the management of risk, I was not able to follow
30 from that diagram and the documentation how they were 04.07PM
31 developed, and to identify the reasons for adopting or

1 rejecting the risk controls that were adopted in that
2 process.

3 Last night, just when you thought you were going to get an
4 early night, before giving evidence you were provided
5 with a further bundle of documents by the Inquiry's
6 solicitors?---Yes.

04.07PM

7 Which had been provided by our friends at GDF Suez
8 yesterday, they're the documents that are - - -

9 MS DOYLE: Sorry to interrupt, Mr Rozen, but I have to
10 correct that. These are documents that were provided
11 in May. If they were not provided to Professor Cliff,
12 that's another question, but this constant criticism of
13 the position of GDF Suez is reaching the position of
14 unfairness that I need to comment on and correct. I
15 would ask the tribunal to note that.

04.07PM

16 MR ROZEN: I stand corrected. They were provided in
17 response to the summons, but they certainly have not
18 been specifically referred to in response to the
19 letters that we have requested documents in relation to
20 the safety management system, but I understand
21 corrected.

04.08PM

22 The documents that were provided to you last night, which
23 are now exhibit 89 in these proceedings, and I think a
24 bundle's being provided to you, have you had an
25 opportunity to look at those?---I have.

04.08PM

26 Do they alter your view about whether or not the safety
27 assessment represented in the bow-tie diagram and its
28 attachment, and if you take into account these
29 documents as well, do they alter the view that you've
30 expressed in your report about whether or not what is
31 said to be the safety assessment of major mining hazard

04.08PM

1 fires meets the requirements of the regulation?---I
2 think, in terms of the safety assessment process for
3 major mining hazards, I think they provide a basis for
4 that, yes.

5 Do they address the issue of a fire in the worked out
6 batters of the mine?---No, because they only refer to
7 multiple fatality under the major mining hazard
8 feature. So, if for example - I won't bore you with
9 the spreadsheets and the numbers, but they talk about
10 things like potential loss of life and they do
11 spreadsheet-based mathematical ranking systems and
12 calculations solely based on the potential for loss of
13 life of employees. Now, that only refers therefore to
14 that one outcome, not to any other outcome and,
15 therefore, managing the level of risk due to a mine
16 fire is not fully addressed by this sort of assessment.

17 If we can go back to your report at page 8, please, in the
18 second-last paragraph on that page, you say there,
19 "It's not possible to specify every detail of this
20 safety assessment process in legislation but it relies
21 upon the effective implementation of the processes by
22 the mining company." You refer there to the
23 certification of GDF Suez under the standard that you
24 have just referred to, and then you say, "The role of
25 the Regulator is to provide oversight of this process,
26 not to drive or manage the process for the company."
27 Can you explain what you mean by that please?---The
28 fundamental basis of Australian Occupational Health and
29 Safety legislation is a process-based legislation; it
30 is not prescriptive, it is not - well there are some
31 rules, but there are very few rules, so it is not

possible for a Regulator to oversight every detail and
oversee every detail. What a Regulator normally does
in my experience is to oversight the process and ensure
that adequate process is in place. So they can look at
a risk assessment process to make sure that it was
followed according to legislation. They can't be
expected to understand every hazard at every mine site
because that might only be once a month or whenever, or
once every couple of months. The primary
responsibility and the aim is on management and people
who should manage are the company.

04.10PM

04.11PM

You then go on and refer to prescriptive legislation and the
deficiencies that you identify there in prescriptive
legislation I think are well-known and underlie the
move to performance based approach to management of
health and safety risks, do they not?---Prescriptive
legislation is in relation to the minimum standard, and
every time there's a new disaster, if you take America
for example, they bring out more rules and they prevent
that disaster from happening, sort of, but if you look
at the comparison of the safety statistics in America,
mining in America is about 5 to 10 times more hazardous
than mining in Australia, and there is a bunch of
traffic police who actually issue tickets and fines and
don't do anything to encourage good behaviour and
improvement.

04.11PM

04.11PM

04.11PM

I think you've been in the hearing room today when Mr
Polmear was giving evidence about the explanation for
the removal of the pipe work in the northern batters
area and its non-replacement. As I understood the
have, it was said to be, well, that was all that was

04.12PM

1 required by the code that he referred to. Is that an
2 example of a prescriptive code where minimum compliance
3 with the code was the justification for a particular
4 action? Is that an example of what you're talking
5 about?---Compliance with the code is no thinking, you 04.12PM
6 just follow a recipe. It doesn't evaluate the risk or
7 the effectiveness of anything, it's just, do as you're
8 told. So following a code is appropriate to the safety
9 culture at the time probably.

10 Can you contrast that approach with what you would see as a 04.12PM
11 preferable or desirable approach to the management of
12 that risk, the risk of fire in that worked out area of
13 the mine?---It's a question of degree, but having done
14 the risk assessment process thoroughly, you would
15 develop your own guidelines and, based upon other 04.13PM
16 people's experience as well, so there would be a lot
17 more industry, company-based plans, which they already
18 have, but it would cover the detail within the company
19 plans rather than to some legislation or pseudo
20 legislation. 04.13PM

21 On page 9 you make reference to enforcement policies, and
22 you contrast the enforcement policy in place in
23 Victoria as set out in the published document,
24 "WorkSafe compliance and enforcement policy" with the
25 Mines Inspectorate Compliance Policy in Queensland. I 04.13PM
26 want to understand from you the differences as you see
27 it between the approach reflected in the two
28 documents?---I think if I can focus on the enforcement
29 period perhaps is the best way of looking at it. In
30 Queensland and in New South Wales - - - 04.13PM

31 Perhaps if we could have that on the screen?---The point at

1 issue here is that in the Mines Inspectorate in
2 Queensland and New South Wales and their departmental
3 websites you'll see a much more overt emphasis on
4 support, coercion, advice and encouragement, and also
5 when that doesn't work, there is a gradation of
6 corrective actions the Inspectors can enforce, and
7 those corrective actions are directly correlated with
8 the level of risk that is evinced by the incident or
9 event that they are seeking to correct. So, if it's a
10 very minor - events such as perhaps a fire extinguisher
11 is out of "test by" date, that may well be just a
12 recommendation in the mine record book, so please fix
13 that, no more than that.

04.14PM

04.14PM

14 If it's something a bit more serious, in
15 Queensland you would have a Sub-Standard Conditional
16 Practice Notice issued which is to be fixed by a
17 certain date.

04.14PM

18 That's an SCP?---SCP. If the level of risk is more severe,
19 then the Queensland Inspectorate would issue a
20 directive, and there are seven distinct directives that
21 are targeted towards specifically levels of risk.
22 Where the level of risk is immediate to life, then the
23 directive is to shut the part of that pit until the
24 risk gets fixed. There are also directives related to
25 improving the safety and health management system, to
26 undertaking specific engineering tests to demonstrate
27 you have a required level of safety, to require
28 adequate training or competency of individuals. There
29 are a couple more I forget them off the top of my head.

04.15PM

04.15PM

30 The reason I promote those is because they are
31 directly correlatable to the risk appreciated, what the

04.15PM

1 Inspector sees, and they are close out dates and they
2 are escalatable - that's a terrible word, I apologise
3 for that - but if they don't get complied by a due
4 date.

5 By comparison, if I look at the enforcement policy 04.15PM
6 from WorkSafe Victoria, they talk about either their
7 Improvement Notice or their Prohibition Notice, and
8 that comes straight out of the (indistinct) legislation
9 which is really set up for small business, not for
10 major entities. My personal belief is that that 04.16PM
11 protocol is not as suitable as dealing with major
12 mines.

13 Why is that? What is it about major mines that sets them
14 apart in your view?---Major mines, like major hazards
15 facilities, is complexity, and also the need to have 04.16PM
16 the variety of issues to deal with, and it's relating
17 the response to the level of risk more overtly.

18 Underneath the pyramid you make reference to ongoing debate
19 in Australia about whether a general mining
20 inspectorate is the best place to locate the regulatory 04.16PM
21 function in relation to occupational health and safety
22 or whether you're better to have mining occupational
23 health and safety dealt with in a general Occupation
24 Health and Safety Inspectorate. You make the point
25 about training and background of Inspectors and you say 04.17PM
26 that in the major mining states, which I take it to be
27 Queensland, New South Wales and Western Australia, the
28 Inspectors tend to be ex-mine managers with extensive
29 mining experience, and you contrast that with the
30 situation in Victoria, whilst recognising that there 04.17PM
31 are mining engineers in what you refer to as the major

1 hazards group, but I think it's been referred to as the
2 Earth Resources Unit in the evidence before the
3 Inquiry. What's the significance of the background of
4 Inspectors in relation to the mining industry? What's
5 the point you're making there?---There are two issues. 04.17PM
6 The most important issue is the capacity of a
7 Government Inspector to provide advice that will be
8 listened to by the industry. To do that you must be a
9 peer, you must have the same background or experience
10 or better to be able to provide that advice. If you 04.17PM
11 are simply a trained Inspector with very limited
12 exposure to the mining industry, my experience is that
13 mining industry people don't take them seriously, and
14 so you end up with them being policemen issuing fines
15 and tickets for infringements, rather than promoting 04.18PM
16 better health and safety performance. So, because our
17 Inspectors in Queensland, Western Australia and New
18 South Wales are ex-mine managers, they have the
19 rapport, they have the knowledge and understanding to
20 explain things and address things in a manner which is 04.18PM
21 compatible with and understood by and accepted by the
22 mining industry.

23 The second issue is, should they be in the OHS
24 Department or a separate department, and that often
25 comes down to more a bureaucratic argument over pay 04.18PM
26 scales and access to specialisation, and they tried
27 moving them in WA out of the Mines Department into
28 those separate departments of community and employment
29 and something else, and planning, and they moved them
30 back into the Mines Department because the industry of 04.18PM
31 the workers - and the Government found they were not as

1 effective that way.

2 Do I understand you to be saying that in Western Australia
3 they went through a similar process to what occurred
4 here in 2008 of the Regulator of health and safety in
5 mines moving from the Mines Department into a general 04.19PM
6 OHS regulatory department or agency, but that was not a
7 successful exercise and they've gone back into the
8 Mines Department; is that right?---That's my
9 understanding. The argument about the combining is
10 that, in modern mines, many occupations are the same as 04.19PM
11 any industry, welding is welding and scaffolding is
12 scaffolding, and painting is painting, and so the
13 argument is, well, any OHS Inspector can inspect those
14 functions and attitudes adequately, and so if we can
15 pull resources which are tight, especially in the 04.19PM
16 States where there are relatively few mines and
17 therefore inherently there are very few mining
18 dedicated Inspectors, you actually can broaden the
19 resource available. That didn't work out that way in
20 WA when they tried that, it didn't seem to function 04.19PM
21 effectively.

22 You draw on your experience in New Zealand at the top of
23 page 10 of your report, and you refer to the Pike River
24 mine disaster as highlighting issues that confront an
25 OHS inspectorate that has a small mining industry to 04.20PM
26 manage, that's probably an appropriate description of
27 the Victorian scenario. What were the issues that were
28 highlighted in the Pike River case?---In New Zealand
29 there were actually only two Inspectors of mines for
30 New Zealand, and in New Zealand there were at that 04.20PM
31 stage five underground coal mines. Underground coal

1 mines are peculiar places, require very specialist
2 knowledge to manage and to inspect adequately. It is
3 very difficult for one man who has to do quarries, open
4 cut mines and also underground mines to have that broad
5 understanding and the level of detail required to
6 assess the adequacy of the systems and management
7 processes, and so it's manifestly impossible for that
8 one person to do that role and keep up-to-date,
9 especially when they are a very small department.

04.20PM

10 There were problems with funding and flexibility and
11 training and rate of pay scales, but if they're any
12 good at their job they go back into the industry
13 because the industry will pay them a lot more than
14 being an Mine Inspector.

04.21PM

15 A lot of the recommendations that came out of the
16 Pike River Royal Commission deal with the resourcing of
17 the Inspectors and specialisation and the training.
18 Now for example they've set up a relationship with the
19 major mining States in Australia to benefit from the
20 expertise that exists in those states and to do
21 exchanges with them and to call on their expertise as
22 required to enhance their capacity to inspect the mines
23 in New Zealand.

04.21PM

24 As I understand what you say in your report you say that
25 ultimately whilst location might be significant, it's
26 the effectiveness of the Inspectorate that's really the
27 issue rather than the bureaucratic location of a
28 Regulator?---Absolutely. It's the capacity of that
29 Inspectorate to assess and provide meaningful advice on
30 the risks in the mines.

04.21PM

04.22PM

31 The final point you make in that section of your report at

1 the end of the first paragraph on page 10 is that you
2 seem to be reminding the Inquiry that, whilst focus on
3 the Regulator is obviously important, the primary
4 responsibility for the management of risks rests with
5 the operator, in this case GDF Suez, not the

04.22PM

6 Inspectorate?---I've been through a number of these
7 sort of Inquiries, now No.3 or 4, and I'm always
8 underwhelmed by the fact that the Government gets
9 beaten around the head because they caused the
10 disaster. Now, I don't think that's appropriate. They
11 have a role in the thing, but they're only there,
12 Inspectors are there one or two days a month, they
13 don't have primary carriage of the responsibility for
14 health and safety at a mine site, in my view.

04.22PM

15 In the next paragraph on page 10 you talk about risk

04.22PM

16 assessments, and after referring to a number of
17 guidance documents concerning the conduct of risk
18 assessments and risk management in the mining industry,
19 you say this in the middle of that paragraph, "A risk
20 assessment is only as good as the information used as
21 input and the expertise of the personnel involved in
22 the risk assessment." Could you expand on that please,
23 professor?---There's the real danger when do you risk
24 assessments to indulge in group think. To make a risk
25 assessment meaningful you must have access to an
26 adequate knowledge base of what can happen, what has
27 happened, and be able to critically assess real
28 scenarios rather than focus on some things that all the
29 group knows about is very limited. So they weren't
30 here 5 years ago, so we don't know what happened more
31 than 5 years ago; or they're only all open cut mining

04.23PM

04.23PM

04.23PM

1 and they're mining underground or something or they
2 don't have the background to understand that. Also,
3 they don't have the knowledge for example of specialist
4 control techniques that may be applicable or they may
5 not have seen because they've not being exposed to them 04.24PM
6 in their mine.

7 I'm not putting down brown coal mines, but it's
8 like open cut versus underground. Brown coal is
9 different to black coal, so therefore they don't look
10 at what black coal does maybe and vice versa. I'm not 04.24PM
11 saying this happens necessarily, but there's a danger
12 that there is an inadequate canvassing of information
13 and an adequate rigour in the risk assessment process
14 and that you tend to - there is a capacity for risks to
15 be minimised rather than adequately assessed. 04.24PM

16 If we could move on then to your assessment of the GDF Suez
17 documents, if I could call them that, that were
18 provided to you. You deal with this issue at questions
19 5, 6 and 7 in a group starting on page 11 where you set
20 out an extract from the 1984 Latrobe Valley Open Cuts 04.24PM
21 Fire Protection Policy, that's a document that the
22 previous witness, Mr Polmear, was referring to and you
23 would have noted that. You've set out ss.1.1.4 and
24 1.1.5 of that document. If we could go over to page 12
25 of your report about a quarter of the way down the 04.25PM
26 page, so immediately after the italics ends, you say,
27 "This then sets the baseline from which future plans
28 would be developed. Any variations to these controls
29 should be documented in the appropriate risk
30 assessments." What do you mean by the baseline from 04.25PM
31 which future plans would be developed?---This document

1 appears to be what was the accepted standard at that
2 time for the management of the mine fire risks, so I
3 would of expected normally, based on my experience in
4 the mining industry, that as plans are then modified as
5 they go forward - updated, reviewed or changed - that 04.25PM
6 they would be modified from that baseline, from that
7 point. So that, if they decide not to do something,
8 they say we're not going to do this because we're going
9 to do this instead or because it's no longer necessary,
10 so it's an explicable chain of events and chain of 04.25PM
11 consequences and changes to any plans or operations.

12 To take a specific example, the evidence that was given
13 about the removal of the corroded pipe work that Mr
14 Polmear gave evidence about, what would you expect to
15 see accompanying a decision like that, the removal of 04.26PM
16 fire protection pipe work in a particular part of the
17 mine?---What I would have looked for, an exploration or
18 demonstration that the removal of those pipes doesn't
19 contribute to any reduction in the level of safety and
20 the effectiveness of the controls. Why they can do 04.26PM
21 that without compromising the safety or other outcomes,
22 consequences of that mine because of mine fire.

23 Is it sufficient from your point of view to say, well, we
24 did it, we didn't have to have them there under the
25 code, so that's why they weren't there?---No. To me, 04.26PM
26 there's no science behind that, there's no risk
27 evaluation analysis behind that. To say we don't do it
28 because we don't have to is not a management technique.

29 You then go on and deal with a document that I've already
30 asked you about and I don't want to go over that ground 04.27PM
31 again; that is, the Major Mining Hazard 7 Mine Fire

document. You say there that it doesn't provide any detail of the process of risk assessment undertaken. You've already talked to us about that. Halfway through that same paragraph, starting with "Fundamental issue", you say, "Fire in the abandoned areas is not treated as" - I think that should be "a specific hazard". I assume you say it should be, that's something you would expect to see identified expressly; is that right?---In my experience in dealing with mine fire risk assessments and mine fire management plans in other States, they are location dependent and scenario-specific. I would suggest that from the reports of mine fires that have been provided to me, that a fire in an abandoned area is a particular type of mine fire that needs to be managed. In an abandoned area, yes, needs to be managed.

04.27PM

04.28PM

04.28PM

We know from the evidence before the Inquiry that in 2005 and in 2008 there were significant fires, not on this scale, but certainly significant fires in the worked out areas of the Hazelwood Coal Mine. From the point of view of best practice health and safety management, how should information like that be fed into a risk assessment process? What would you like to see done with that sort of information by an operator of a mine such as this?---As I allude to in I think the last paragraph on page 12, I would have used the fact that the circumstances of those fires and, say, how could these fires recur or occur, and given the overt recognition of adverse weather conditions, and also the concern of the flying embers, that would be a scenario that can cause a fire in the abandoned areas.

04.28PM

04.28PM

04.29PM

1 Therefore the question would be asked, are we
2 controlling that risk adequately in the current period
3 of time or, if not, how do we improve that level of
4 control? I could not find that analysis.

5 If I turn then to page 13 of your report, there's a heading, 04.29PM
6 "Previous fires at the mine." The three final
7 questions that you were asked are set out there, (8),
8 (9) and (10). You were asked specifically to examine
9 four reports that were prepared by consultants to the
10 operator of the Hazelwood Mine relating to fires 04.30PM
11 in December 2005, October 2006, September 2008
12 and January 2012. You state in the middle of page 13,
13 "These reports represent competent assessments of what
14 happened, what went wrong and what could be improved to
15 prevent or mitigate these incidents should they occur 04.30PM
16 in the future. There is very limited consideration of
17 the implications of these incidents for other types of
18 fires or the potential for fire in general. This is
19 particularly true for the controls that were found to
20 be ineffective." 04.30PM

21 What are you referring to there? What's lacking
22 that you refer to as being a limited consideration of
23 implications for other fires?---In my view the analysis
24 is very much based upon what happened at the actual
25 incident. So what the initiating was, how it 04.30PM
26 propagated in this circumstance. The question was not
27 then asked, well, okay, what about if this happened in
28 a slightly different area, what are the implications of
29 the spread of the fire. In a number of those examples
30 the fire spread in the coal seam very rapidly. Now, 04.31PM
31 okay, the initiation may have been a hot bearing on a

1 conveyor belt or something like that, but that means,
2 what happens if you had a different sort of ignition
3 source, could that cause fire elsewhere, what are the
4 implications for that? Also, when the controls are
5 found to be ineffective due to power failure or low
6 water pressure and those sorts of things that are
7 reported in those incidents, those did not seem to be
8 to me to be being addressed. Okay, what does that mean
9 going forward? What are the risks of that happening
10 again under similar scenarios in the future?

04.31PM

04.31PM

11 You note in the five dot points towards the bottom of
12 page 13 that there are a number of features of the
13 reports which reveal previous incidents that are
14 relevant to this Inquiry and you make a note of several
15 of those. Then towards the bottom of the page you make
16 specific reference to the report into the September
17 2008 fire that there's been some evidence led. You
18 note that, "Report highlights the issue of rapid
19 escalation of the fire due to IPRH [or mine operator
20 personnel] being unable to mount an effective initial
21 response as the non-operational areas have very
22 difficult access and there were insufficient
23 firefighting facilities available." You are aware,
24 aren't you, professor, that the fire that this Inquiry
25 is examining has similar features to those two that
26 were identified for the 2008 fire?---Yes, that's the
27 point I was trying to make.

04.31PM

04.32PM

04.32PM

28 I understand that?---It has happened before, it is
29 recognised, what was done to prevent that happening
30 again?

04.32PM

31 Precisely. You then go on to make references to further

1 aspects of that report, and then finally you note
2 Recommendation 6 of the various recommendations made in
3 the report at the top of page 14 that, "A risk
4 assessment should be undertaken on the non-operational
5 areas to determine if further prevention work is 04.33PM
6 required. The risk assessment should include a
7 cost-benefit analysis." You note that you have not
8 seen such a document. I take it, that was something
9 you were expecting to see in the documentation that had
10 been provided?---I would have liked - I would have 04.33PM
11 expected to see the document because, if a
12 recommendation is made, I would have thought the
13 recommendation would be followed through and therefore
14 I could see - I was hoping that would explain to me why
15 the pipe work wasn't put back in the non-operational 04.33PM
16 areas when all the other changes were made to show that
17 they had assessed the risk and decided the level of
18 risk was acceptable for a fire in a non-operational
19 area.

20 It's the case, isn't it, that often or sometimes an 04.33PM
21 organisation that gets a report like this doesn't
22 necessarily implement all of the recommendations? Do
23 you agree with that?---Yes.

24 Best practice though would be, presumably, that if you're
25 not going to implement a recommendation like that, that 04.33PM
26 there would be some record of the thinking, if you
27 like, of why it was not implemented, what other
28 alternative arrangements were made and the like?---I'd
29 expect so, yes.

30 I should indicate to the Inquiry at this point that we have 04.34PM
31 received a further statement from Mr Prezioso of GDF

1 Suez and he does address this issue and it's
2 anticipated that we will call Mr Prezioso tomorrow.

3 You then go on and make reference to two other
4 fires, and I don't need to take you to those. Then
5 there's a heading, "Discussion". I just want to ask 04.34PM
6 you briefly about this. This is a general discussion
7 about the issues that you have been considering in the
8 report; is that right?---Yes, focusing on the incidents
9 in the past and the implications given the current
10 incident. 04.34PM

11 You make the point in the first paragraph, the concluding
12 sentence, that, "The focus seems to be on preventing
13 the incident being investigated rather than on any
14 broader implications." I think that was the point you
15 were just making, was it not, about the reports in 04.35PM
16 general?---They're very tactical in their outcome, yes.

17 At the bottom of the page you make a reference to
18 "catastrophic risk assessments" and you go on in the
19 remainder of your report to say a few things about
20 that. Is that a term of art, "catastrophic risk 04.35PM
21 assessments", what does that mean?---It is. We use
22 that generally to separate things that have the
23 potential for significant harm like multiple fatality
24 or very large economic or health effects from limited
25 events. For example, a lot of this major mining 04.35PM
26 hazards stuff is actually not catastrophic because it
27 involves one person or two people, and they are
28 frequent events that can occur that may have
29 significant harm on one occasion.

30 A catastrophe is a major fire, explosion, 04.36PM
31 inundation, high wall failure, those sorts of things.

1 They are by their nature very rare, and therefore there
2 is a challenge in making effective assessment because
3 people tend to say, when you do the assessment, they
4 always tend to underestimate the likelihood and they
5 always tend to underestimate the consequence.

04.36PM

6 The classic semi-quantitative risk assessment, 5:5
7 matrix, which I'm sure you've been through multiple
8 times, people don't like putting the highest
9 consequence No.5 there because it always means they've
10 got to do something about it. Also they tend to say
11 things like, "It hasn't happened here, we don't know
12 about it", so it's the lowest likelihood because
13 catastrophic events by their nature occur very rarely.

04.36PM

14 In Brisbane, for example, we've had two 1 in
15 100-year floods in the last three years. They are
16 catastrophic events, they are extremely rare, and if
17 you ask someone to do a risk assessment and say they
18 are 1 in 100 years, you know, we had two in the last
19 three. So that's the thing about catastrophic events,
20 you can't - it is very fraught to use simple statistics
21 to predict them, which is why dealing with catastrophic
22 events using some of the stuff that Quest did in these
23 reports is of limited value because prioritising and
24 putting numbers against them is the challenge. It is
25 better to simplify the ranking scales and to do it that
26 way.

04.36PM

04.37PM

04.37PM

27 It is also necessary, because of the complexity of
28 catastrophic events, they're often a chain of events
29 and it can be quite a complicated chain of events to be
30 able to identify that chain of events and the
31 consequences. I think you've had the Swiss cheese

04.37PM

1 model as well, so a catastrophic event often may
2 require a large number of pieces of cheese to line up,
3 whereas other events may only have one or two. The
4 difficulty is that people don't recognise those slices,
5 and they can line up, then they wouldn't consider them
6 a risk.

04.38PM

7 Ms Petering's a big fan of the Swiss cheese model, I know a
8 little bit about it but there might be a few people in
9 the room that are struggling with the cheese metaphor.
10 Can you just perhaps explain that for the lay listener,
11 professor?---There's two dimensions to the concept. In
12 the simplest form, if you have an unwanted energy
13 release and again, a target, then you have barriers
14 between the energy and the target and these are
15 controls.

04.38PM

04.38PM

16 Now, no control is perfect, so they relate
17 effectively the control to a piece of Swiss cheese with
18 a hole in it, so the energy can pass through the hole
19 if it lines up. But then it hits the next piece of
20 cheese and, if that piece of cheese is a solid part
21 there, that doesn't go through. But then if it also
22 happens to line up, it goes through that. So you have
23 a number of these pieces of cheese in a line and if
24 they all line up, then the catastrophe or the event
25 occurs. That's why it stands to reason it's called a
26 Swiss cheese model.

04.38PM

04.38PM

27 It has more to that however than that in that it
28 also talks about - I'm sorry, I feel like I'm doing an
29 undergraduate lecture, I apologise.

30 And I feel like an undergraduate, professor?---Each pieces
31 of cheese is characterised by a different type of

04.39PM

1 control. For example, you have the individual involved
2 in the incident as one piece of cheese and one category
3 of cheese, you have the environmental factors as a
4 second piece of cheese, You have organisational factors
5 as a third, and then you have regulatory and external
6 factors as a fourth set of cheese, and so they all
7 contain the different categories of control in that
8 model, that's what James Reason talks about.

04.39PM

9 Can we leave cheese for a moment and come back to coal mines
10 and just apply that here. If I understand you, the
11 initiating stigma, the facts as we know them, assuming
12 that embers entered the mine, that's the initiating
13 event, and then we've got a series of possible, what
14 was your expression?---Controls.

04.39PM

15 Controls which would prevent that becoming?---A fire.

04.39PM

16 A fire and the disaster that we know ultimately occurred.

17 One might be the availability of the CFA to attend and
18 help put the fire out, for example?---Yes.

19 But if, because of circumstances they are engaged in other
20 activities, then that control wouldn't work and that's

04.40PM

21 the first hole that we go through?---That's the
22 mitigating control, so it's actually on the other side

23 of the bow-tie. It's probably the latter one. The
24 prevention of it actually becoming an event would be -

25 I don't want to sort of stir the pot too late in the
26 day - but covering the coal in material so it can't
27 actually be ignited, or the fact that that (indistinct)
28 wasn't actually there in the first place so it couldn't
29 be set fire. Hierarchy of control, prevention is
30 better, absolutely better. Or the fact that the coal
31 is wetted down so it couldn't be ignited.

04.40PM

04.40PM

1 Then, okay, there's the ignition but then the fire
2 couldn't propagate, so you'd look at controls such as
3 the paddocking that you talked about, where you have
4 the physical barriers along the batter so that it
5 actually stops it propagating along the face of the 04.41PM
6 coal, so that's another barrier to propagation to
7 exacerbation.

8 Then you have the firefighting, the various types
9 of firefighting control and mitigation techniques
10 involved there as well. Each of those is a control, 04.41PM
11 each of those is less than perfect, so each would have
12 a hole, sometimes that hole could be in different sizes
13 and so - yes.

14 I understand.

15 MEMBER PETERING: I enjoyed that Mr Rozen, thank you. 04.41PM

16 MR ROZEN: That's the word "assisting" in "Counsel
17 Assisting".

18 Page 15 of your report Professor Cliff, three lines down you
19 say, "There's no doubt that re-profiling of the
20 abandoned areas and capping would be extremely 04.41PM
21 expensive and take significant resources and time. It
22 is however the only way of ensuring that such events
23 cannot occur."

24 Do I understand you there to be referring to
25 what's being discussed today in the evidence earlier as 04.41PM
26 a complete rehabilitation of the batters, or are you
27 talking about something else when you talk about
28 capping?---Permanent rehabilitation is the ultimate
29 solution, which has to be done anyway so there is - I
30 suppose rather than doing it multiple times. But it is 04.42PM
31 quite common, for example, another areas where we have

1 stockpiles or waste heaps which have the potential for
2 spontaneous combustion to be capped temporarily.

3 Again, cost and availability of materials comes into
4 play there. But fundamentally, if the coal can't be
5 exposed to air, it can't burn; it's as simple as that.

04.42PM

6 We've had some evidence, and I think you heard it being
7 discussed with Mr Faithfull this morning of perhaps,
8 short of rehabilitation, being able to apply something,
9 some fire retardant material to the batters so as to
10 reduce or remove the risk of them igniting in the event
11 of a fire. Are you able to assist the Inquiry at all
12 with any research you might have done in relation to
13 such matters?---I have been present at mine fires both
14 underground and surface where we have used a range of
15 materials, much more limited geographically in their
16 spread.

04.42PM

04.43PM

17 We've use fly ash slurries, we've use foams, gels,
18 we've used organic surfactant materials, polymers, to
19 bind the surface. Bituminous tar is used quite
20 routinely on coal stockpiles for example to provide a
21 seal on the surface to reduce the effective surface
22 areas to prevent air ingress.

04.43PM

23 They're all theoretically possible, they all have
24 practical difficulties in achieving them, in
25 limitations to do them. They all cost money, they take
26 time, they need resources, they have to be applied and
27 maybe re-applied to be effective.

04.43PM

28 There was a comment made about, we want to watch
29 the surface of the batters to watch them in case they
30 break.

04.44PM

31 Mr Faithfull raised that concern, that if we covered the

1 surfaces we couldn't observe any potential batter
2 stability issues?---I merely observe that there are a
3 number of other techniques for monitoring the stability
4 of high walls that we use throughout coals mines in
5 Australia, so that may not necessarily be a barrier to 04.44PM
6 using a sealant of some sort to reduce the oxidation
7 potential of coal in an abandoned areas.

8 What specifically are you referring to as in
9 techniques?---There's a number of techniques we use
10 routinely in Queensland and New South Wales; there's 04.44PM
11 ground-penetrating radar, there's 3-dimensional latest
12 scanning systems that measure the stability of the high
13 wall and then they do it on a periodic basis so you can
14 see how much it's moved, with very good resolution.
15 There's also other techniques using various optical and 04.44PM
16 instrumental techniques to measure the sonic movements
17 you're talking about.

18 It's fair to say, isn't it professor, that a properly
19 conducted risk assessment into the issue would explore
20 the pros and cons of the various possibilities in line 04.44PM
21 with that regulation that we looked at about
22 identifying control measures?---That would be something
23 you would do; if you identify the potential control,
24 you then look at its effectiveness and also part of the
25 finish would be, can you apply it and what do you lose 04.45PM
26 in applying that technology.

27 Finally professor, I have to ask you about black swans,
28 you're final paragraph. We've had reference to
29 elephants and canaries and now we can add black swans
30 to that list of animals. 04.45PM

31 What are you talking about when you say, "The key

1 to effective catastrophic risk management is to be
2 looking for the black swans"?---The whole point about
3 risk management and risk assessment is not looking
4 backwards but looking forward and predicting what's
5 going to happen in the future. The classic analogy
6 that risk management people use is the black swan.

04.45PM

7 The black swan is something that was unique to
8 Western Australia, so when the English settlers first
9 arrived in Western Australia they saw swans that were
10 black. They, by definition, believed swans to be white
11 therefore they didn't believe they were swans. So, if
12 you don't recognise something or aren't prepared to
13 recognise something as a problem, then you won't. So
14 we have to be prepared for the unexpected, in other
15 words a swan which is black, not white.

04.46PM

16 With risk assessment, it is not about actual
17 events but it's looking at the series of circumstances
18 of precursors or combination of events that can cause
19 issues. Generically, and nothing to do with the
20 current incident, the thrust of risk management now is
21 moving towards, not failure of systems but systems that
22 don't fail to operate normally but behave in unexpected
23 ways and cause accidents and incidents because we
24 didn't expect them to work in a certain way.

04.46PM

25 That concludes the questions I have for Professor Cliff. I
26 note the time, do Members of the Board have any
27 questions at this time?

04.46PM

28 MEMBER PETERING: On this page, No.15 Professor Cliff, and
29 thank you for your evidence today, you were talking
30 about the costs. So, profiling the abandoned areas and
31 capping would be extremely expensive and take

04.46PM

1 significant resource and time. I appreciate it's
2 difficult because, how long is a piece of string, and I
3 know that you have been to the mine. Is there a range
4 of, I guess, understanding of what the parameters are
5 in rehabilitation or re-profiling abandoned areas and 04.47PM
6 capping, or is it too hard to predict? Is there a per
7 hectare rate?---There's a number of factors, a number
8 of these factors were discussed today. You need to
9 have a suitable material to cap with, ideally a clay.
10 Are we talking about a clay, because if it's not porous 04.47PM
11 it's very dense and it doesn't allow air to pass
12 through it.

13 You need to have a suitable source or a suitable
14 material and you'd need - now, we talk about 1 metre
15 thick, but if you look at a lot of the research that 04.47PM
16 the CSIRO's carried out for things like stockpiles and
17 abandoned areas, they talk about 5 metres thick.

18 If you're talking about the northern batters which
19 are what, 2 kilometres long, so 100 metres high, you're
20 talking about an area roughly 300,000, 400,000 04.47PM
21 square metres at least to cap, you're talking about
22 a million tonnes of rock of suitable material that
23 won't run and flow away and expand and all those
24 things, so that's very expensive, you've got to find
25 ways of doing that. 04.48PM

26 With the haul trucks I saw at the mine site,
27 that's an awful lot of haul truck trips. Maybe
28 conveyor belts can do that, but so you are looking at
29 finding materials, you've got to compact it, you've
30 then got to get the vegetation to grow to bind it after 04.48PM
31 time. That's all a very expensive operation to do.

1 One thing is that they do have some material in
2 the pit, they do dump in the pit, which moving any
3 distances is a real expense. But it is very complex,
4 it's not a trivial exercise to do.

5 Thank you. You spoke about the best practice in undertaking
6 risk assessments and looking for black swans. With a
7 view to looking forward about, how can we prevent
8 things like this happening, how does an organisation
9 undertake a thorough risk assessment? Is it sort of
10 bringing people in that aren't necessarily in the
11 industry?

04.48PM

04.49PM

12 You were saying before about perhaps even looking
13 at things that they do in the black coal. How does a
14 company undertake a thorough risk assessment examining
15 things that they may not have thought about?---The key
16 to a risk assessment is an adequate cross-section of
17 expertise. Brown coal is peculiar to Victoria in its
18 own way, so GDF Suez probably internally within their
19 own company have a lot of internal expertise, but there
20 is expertise beyond that. So, for example, the nature
21 of propagation of fires, control of fires, firefighting
22 technology minimisation, I would expect them to use
23 external expertise as well like they do in other
24 States. Also tapping into the current knowledge base
25 on technology and control of fires and minimisation.

04.49PM

04.49PM

04.49PM

26 There is a world of research funded by the
27 Australian Coal Association about black coal,
28 absolutely, it talks about coal fires, a lot of stuff
29 on coal fires. Talks about a lot of the retardants and
30 gels and sealants and capping.

04.50PM

31 There's an awful lot of research for example

1 funded by funded by ACARP on stockpile fire prevention,
2 spontaneous - waste management, capping materials to
3 use for that detection.

4 You talked about detecting open cut fires: Well,
5 there is a number of techniques, even video cameras, 04.50PM
6 thermal infrared, all research done that is available
7 for that sort of thing if you look around.

8 Perhaps just lastly, I guess is it your expert opinion that
9 the risk of the fire in the worked out batters of the
10 mine was not adequately recognised?---I think, all 04.50PM
11 things being considered, I would say, yes, it wasn't
12 adequately recognised.

13 It was not adequately recognised?---No.

14 Thank you.

15 MEMBER CATFORD: I have one question which is not so much 04.50PM
16 about the technical aspects but the role of executive
17 management in keeping their finger on the pulse of
18 issues with regards to safety and fire risk.

19 What is your advice to us about what is best
20 practice for the CEO of relevant companies or the very 04.51PM
21 top of the management system to monitor/track the
22 prevention and mitigation scenarios that we've
23 discussed, particularly with regard to fire risk? I'm
24 thinking here, are there appropriate KPIs or executive
25 dash boards? You know, what's the best practice that 04.51PM
26 you've observed within the mining industry to monitor
27 the effectiveness of control strategies like this?---I
28 think the answer relates much less to tactical issues,
29 like controls and this sort of thing, and much more to
30 the demonstration/creation of an environment and an 04.51PM
31 atmosphere at the mine where the management of health

1 and safety and the mitigation of risks is positively
2 encouraged and supported overtly and not even
3 accidentally undermined.

4 The example I can classically give would be
5 something like - I don't wish to insult the Senior 04.52PM
6 Management at GDF Suez at all - but it's possible in
7 any mining company, for example, for there to be a
8 policy about health and safety signed by the CEO on the
9 wall. And yet, when I go underground the last thing I
10 want to see when I go underground is how many tonnes 04.52PM
11 have been produced that shift. So the message the
12 workforce get is, okay, that's on the wall, but the
13 thing that's in my face at the time is production.

14 So the management team have to be very careful not
15 to send mixed messages and to ensure that they do 04.52PM
16 encourage and demonstrate by example that in fact, if
17 people want to take three days to do a risk assessment
18 rather than one, it's going to cost a lot more money
19 for example, but that's okay because that's appropriate
20 and that that's the support they give. 04.52PM

21 There's been a lot of argument for example in the
22 Ritter Report in WA that came out in the early 2000s
23 after five fatalities in Northwest Australia in the
24 mining industry up there, where there was a clear
25 identification that there was a conflict of safety 04.53PM
26 culture between the messages leaving the top, which is
27 zero harm was our top priority, and it was truly
28 believed, and by the time it got down through middle
29 management the production message had overshadowed
30 that. 04.53PM

31 There is a danger that people will interpret what

1 people say, and so they say, we can't do it because
2 it's going to cost too much money, it's going to take
3 too long and it's not productive.

4 We are in times now where money is very tight
5 everywhere and so there's a tendency to cut corners and 04.53PM
6 things, and that may not be the intention of the senior
7 executives, but they have to be particularly careful
8 now to make sure that people realise that that's not
9 their intention.

10 MR ROZEN: I'm conscious of the time. Ms Doyle tells me 04.53PM
11 she's got 20-30 minutes of questions for Professor
12 Cliff. I know Professor Cliff's probably keen to get
13 away, I'm not quite sure? No, apparently there's
14 flexibility there. I'm in your hands.

15 CHAIRMAN: I think there's some further witnesses that have 04.54PM
16 to be heard tomorrow and, if it hadn't been for those,
17 and this seems to go over until tomorrow, I think, in
18 the circumstances, it may be better to just keep going.
19 Although, we may take a short break. We'll press on.

20 MR ROZEN: No short break? 04.54PM

21 CHAIRMAN: No.

22 <CROSS-EXAMINED BY MS DOYLE:

23 Professor Cliff, when Mr Rozen was asking you about your
24 experience in New Zealand and New South Wales and
25 Queensland you made the point that you had some 04.54PM
26 experience in relation to combustion with respect to
27 brown coal, but I think if I heard your answer, you
28 said that that was limited to three years lab work at
29 the CSIRO. Was that right?---That's correct.

30 You said that your exposure to Victorian open cut brown coal 04.54PM
31 mines was limited?---Yes.

1 Can I take it from that then, that you haven't been involved
2 in working on a safety assessment process with respect
3 to an open cut brown coal mine?---That's correct.

4 I take it also that you have not been involved in preparing
5 or working on rehabilitation plans for an open cut
6 brown coal mine?---No, I have not.

7 I want to take you to the opinion you express on page 8 of
8 your report; if you can go to that?---Yes.

9 At the time you wrote this report you expressed a particular
10 view about compliance by GDF Suez with the conditions
11 in Regulation 5.3.23. I want to unpick that a little
12 in light of what's happened since.

13 Professor Cliff, when you wrote this opinion here,
14 the only document that you had regard to was the only
15 one that you understood that you had access to at the
16 time, it's a document that in some of the materials is
17 referred to as "tab 26" but it is the bow-tie diagram
18 that you were taken to by Mr Rozen. Is that
19 right?---Yes.

20 The second thing that underpinned the opinion as you
21 expressed it then was, if I understood your evidence
22 correctly, at the time you wrote this you had not fully
23 appreciated that in Victoria the requirement under this
24 regulation, to perform a safety assessment regime, is
25 limited to major mining hazards as opposed to all
26 mining hazards. Is that right?---Yes, I suppose you
27 could say, yes.

28 Because as I understood your answers, what you were looking
29 for was the application of the safety assessment regime
30 to the broader suite of mining hazards a you know them
31 because of your experience in Queensland and

1 New South Wales, but on reflection in Victoria this
2 requirement is confined to major mining hazards as
3 defined?---The safety assessment process is, yes. The
risk assessment process I don't believe is.

5 No, that's right, but I'm asking you about that?---Yes.

04.57PM

6 Because the opinion you express here is tied back to
7 Regulation 5.3.23, that's why I'm asking you in that
8 way?---Yes.

9 I just want to ask you about the next element. You had a
10 look at the document, the bow-tie document in order to
11 express the view here, and you said to Mr Rozen that
12 you don't think that the document you were given is the
13 same as the sort of bow-tie documents that you have
14 seen in other places or that you would like to see as
15 best practice?---That's correct.

04.57PM

16 Of course, Professor Cliff, a bow-tie assessment is not a
17 legislative or regulatory requirement, we don't find
18 that language in the Act or the regs, do we?---No,
19 correct.

20 It's simply a mode that has become adopted and has by then
21 become common practice in the mining industry, a mode
22 of meeting requirements with respect to safety
23 assessments and risk assessment. You accept
24 that?---Yes, I do.

04.57PM

25 When you looked at that bow-tie diagram that you were given
26 you took the view that it didn't address all of the
27 things that you were used to seeing in respect of
28 safety assessments that you've seen performed
29 Interstate?---And that bow-tie did not meet the dot
30 points in the regulation from my understanding.

04.58PM

31 Since you wrote this report and expressed the opinion on

1 page 8, you've been provided with a larger suite of
2 documents?---Yes.

3 Among those documents, I think it might assist Professor
4 Cliff if he has the list that I've been given most
5 recently today titled, "Documents reviewed by David 04.58PM
6 Cliff"?---Yes.

7 And that has a list of 1-26, Mr Rozen took you to earlier
8 today?---That's correct.

9 Document 16 on that list is described in many different ways
10 in different lists, but I take document 16 to be the 04.58PM
11 bow-tie document that we've just been talking
12 about?---Yes.

13 That's the only one you had when you expressed this view.
14 Since you expressed this view you've been given
15 documents 17, 18, 19, 20 and 21 in that list?---That's 04.59PM
16 correct, yes.

17 Mr Rozen asked you whether, in light of those, you had
18 revisited your view, and you expressed the view that,
19 in light of those, you now take the view that - and I
20 didn't pick up exactly what you said - but you said 04.59PM
21 that they went towards a safety assessment, I think was
22 your terminology?---As at 2004 these documents would
23 indicate a safety assessment process, yes.

24 It looks as though you still haven't been given a 2009
25 document that addresses the same matters. I can't see 04.59PM
26 it on the list, it may be an error in descriptions, but
27 have you been given a document called, "Report for
28 major mining hazards assessment, December 2009",
29 undertaken by consultants GHD?---I'm not aware of that
30 document, no. 05.00PM

31 Could I ask that exhibit 68, that the first page of that be

1 brought up on the screen for Professor Cliff to
2 confirm. Just so that you can have a look at it, I
3 take it you have not seen this document?---No, I have
4 no recollection of that document at all, no.

5 Then perhaps I need to explain it briefly to you without 05.00PM
6 going to the detail of its contents. It is a review
7 conducted in December 2009 which, in its early pages,
8 says that it builds on the 2003/2004 reports that you
9 have now seen, and says that those who are
10 participating in the workshop that led to the 05.00PM
11 generation of this report were going to look at the
12 existing risks identified as at 2003/2004 and see
13 whether any of those should be re-assessed and see
14 whether any new ones should now be identified and
15 referred to. 05.01PM

16 I'm asking you to assume a lot because you haven't
17 seen it but, Professor Cliff, is that an appropriate
18 way for someone reviewing their safety assessment to go
19 about that process, build on existing work and renew
20 and review?---Yes, in principle, yes, absolutely. 05.01PM

21 I want to ask also whether you've seen a document called,
22 "Safety management system manual"?---Yes, this morning,
23 yes.

24 Can we bring up the first page of exhibit 89. It may not
25 have made it to the uploads as yet. 05.01PM

26 MR ROZEN: It's not on the system apparently.

27 THE WITNESS: I've got it here.

28 MS DOYLE: So you only saw that this morning, is that right,
29 Professor Cliff?---Yes.

30 This Safety Management System Manual, we can't expect you to 05.02PM
31 have become completely familiar with it, is

1 crossed-referenced to a number of other documents; one
2 of them is called, "Major mining hazard procedure." It
3 has a template which talks about the process of review
4 that persons who undertake the assessment will
5 undertake or engage in.

05.02PM

6 It says within it that, "When scenarios are
7 determined, the controls for preventing a major mining
8 hazard need to be reviewed, existing controls need to
9 be reviewed. If a control is determined to be no
10 longer valid the reasons shall be documented and it
11 shall be removed from the scenario. If a new control
12 is determined, it shall be documented."

05.02PM

13 I'm asking you to absorb a lot on the run, but if
14 it you accept that the current safety management system
15 manual as it applies at GDF Suez calls on those who are
16 performing safety assessments to do what I've just read
17 out - namely, identify controls, if they're not a valid
18 document, if there's a new document why you're adopting
19 it - does that meet your satisfaction in terms of the
20 criteria that you identified as important under 5.3.23,
21 for a safety assessment?---For a safety assessment,
22 yes; I'm happy, I'd accept that.

05.03PM

23 In light of the things that have happened since you wrote
24 this report, new documentation being made available to
25 you, and you gaining a new appreciation of the
26 differences in the Victorian approach, do you accept
27 that the opinion you express there has been superseded,
28 it has been demonstrated to not reveal the entire
29 picture?---It is fair to say that the safety assessment
30 process meets the criteria. I think what is also
31 missed however, though, is the development of a safety

05.03PM

05.03PM

05.04PM

1 management system under the legislation relates to
2 mining hazards as well as major mining hazards. I've
3 got no evidence of the risk assessments that would
4 underpin them.

5 Yes, I understand that. I take it, Professor Cliff, that 05.04PM
6 your real criticism is about the regulatory regime
7 because you would advocate that Victoria should move
8 towards the New South Wales or Queensland model -
9 namely, we should expand the requirement of safety
10 assessments from major mining hazards to more mining 05.04PM
11 hazards, perhaps all mining hazards; is that the view
12 you adopt?---What I'm not clear about is why that's not
13 done now because I would though that under the
14 legislation of Victoria that requirement is already
15 there, and also if GDF Suez is accredited to AS 4801, 05.04PM
16 that would also have been done because they're
17 accredited to AS 4801.

18 I understand that Professor Cliff, but you have signed a
19 report which says that GDF Suez has not complied with a
20 particular regulation, and I'm suggesting to you that 05.05PM
21 you now understand that is not the case. You've got
22 other criticisms but you now understand that is not the
23 case?---Yes, I'm happy to accept that, yes.

24 I want to ask you about the views you express at page 6 of
25 your report, we need to go back a couple of pages. It 05.05PM
26 really just starts at the bottom of this page 6. Right
27 at the bottom you talk about, "Isolating air supply
28 from coal", this is right at the bottom of page 6, "can
29 only be achieved by covering the coal with an
30 impervious layer, fly ash, clay or overburden." Over 05.05PM
31 the page it says, "Generally this requires the

1 application of a layer several metres thick."

2 First of all I just want to understand the
3 timeframe you're talking about there. Is this a method
4 of firefighting that you're describing or mitigation to
5 avoid the risk of fire well before a fire breaks
6 out?---It's most effective in prevention, to prevent
7 the fire, from air getting to the coal. You would only
8 smother a fire with a solid material if there is an
9 absence of water because you retain the heat, so when
10 you dig it out again, and if you're going to dig it out
11 again the fire will come back.

05.06PM

05.06PM

12 So this is a fire mitigation proposal that you are making
13 out that would be done ahead of a fire season for
14 example?---It is best applied in advance of a fire.
15 But in a circumstance where there is an active fire,
16 you would use it to smother the fire. It would not be
17 as effective.

05.06PM

18 Have you done any research or studies on use of fly ash or a
19 fly ash mixed with clay and overburden on their
20 application to batters of an open cut coal mine?---To
21 an open cut coal mine, I have not personally done, no.
22 But ACARP research projects do relate to those sorts of
23 things to stockpiles, which would be very closely
24 analogous to the exposed batters, and also to spoil
25 heaps which are probably not as relevant; a variety of
26 capping and sealing materials have been done.

05.06PM

05.07PM

27 Are you proposing this with respect to batters in their
28 current profile or in batters which have been laid
29 back?---There's no doubt that (indistinct) angle
30 proposed, the easier it would be to apply various types
31 of material, because of the run on the material, but

05.07PM

1 there have been a number of examples of successful
2 application to vertical and near vertical faces of
3 coal.

4 You've been on a tour of this mine, are you aware of some
5 particular type of machinery that's available to apply, 05.07PM
6 say, a fly ash cement mix to batters as high as those
7 you've seen in this mine?---I think that could be done.
8 I saw - - -

9 With what machinery?---Fly ash slurries are very similar in
10 consistency, for example, to the foams the Fire Brigade 05.08PM
11 were using. I've pumped fly ash slurries 8 kilometres
12 through a 4 inch pipe with a similar pump, so yes, it
13 can be done quite easily.

14 You're suggesting it could be laid over hundreds of metres
15 of exposed coalface prior to being laid back?---It 05.08PM
16 could be, you'd have to do a risk assessment of other
17 issues - - -

18 That's it, isn't it; you'd have to do a risk
19 assessment?---Yes, absolutely.

20 I asked you about whether you're aware of any studies or any 05.08PM
21 practice in relation to applying the material, but are
22 you aware of any studies in relation to the impact of
23 doing so on batter stability?---In general, applying
24 materials like that, yes, I am, because they actually
25 increase the stability of those batters - sorry, I'm 05.08PM
26 not familiar with the word "batter" very much - but
27 certainly coalfaces, and in fact in underground mines,
28 shotcrete and other materials and cementations are
29 actively used to stabilise such faces.

30 In underground mines?---Yes, and high walls of open cut 05.09PM
31 mines.

1 Have you conducted any analysis of whether application of
2 that material would make it more difficult to detect
3 hot spots or movement in batters?---They are applied to
4 open cut mines in Queensland where they still monitor
5 the movement of the high wall.

05.09PM

6 Those mines you've just referred to in Queensland
7 they're?---Open cut.

8 Yes, but are they black coal or brown coal?---They're black
9 coal.

10 Have you undertaken any assessment of the impact of the
11 application of that material on batters which have
12 within them horizontal bores for use in relation to
13 drainage in a situation where there's a need to take
14 account of the pressure in the aquifer?---No, I
15 haven't.

05.09PM

16 I want to take you page 11 where you talk about fire
17 policies. When I read page 11, Professor Cliff, and
18 lined it up with the list of documents you were given
19 it seems to me you haven't been given the 1994 SECV
20 Code. Is that right?---I don't think so. I'll have to
21 check.

05.10PM

22 I'll walk you through the document and let you now how I
23 came to that conclusion; you can tell me if it's not
24 right. At page 11 you say in the document, "Latrobe
25 Valley Open Cuts cuts - fire protection
26 policy, November 1984" - so there we know what we're
27 looking at, the 1984 policy. You then set out two
28 passages from it, 1.1.4 and 1.1.5. I just wanted to
29 understand, I don't know if this has been changed in
30 your reviewed report - no, it hasn't. If we can take
31 that up a little bit higher there's a passage that

05.10PM

05.10PM

1 starts, "This report draws". Under 1.1.5, if we keep
2 moving, where it says, "This report draws upon", it's
3 just a little confusing because it's still in italics.
4 That's where you ceased to quote from the policy and
5 these are your words again?--Sorry, it could well be.
6 Yes, because it's not in the quotes, you're quite
7 right.

05.11PM

8 Then we move over to page 12, and in the text about a third
9 of the way down it says, "This then sets the baseline
10 from which..." Mr Rozen took you to that, but what we
11 need to understand then is that the baseline you're
12 talking about at that point in your report is the 1994
13 policy; yes?---Correct, yes.

05.11PM

14 Do you understand that that was itself replaced by a 1994
15 policy developed at that time by the operators of brown
16 coal mines in Victoria prior to privatisation?---I
17 think it was mentioned today during the hearing as
18 Generation Victoria or something.

05.11PM

19 Professor Cliff, you've looked at the 1984 SECV policy and
20 the 2013 GDF Suez policy, but one bridge you're missing
21 is the intervening document, the 1994 document. Is
22 that right?---That's correct.

05.12PM

23 So, you haven't had the opportunity to see the progression
24 of the conditions in 1984 to 1994 to 2013?---The
25 conditions?

05.12PM

26 The conditions set out in that code or the prescriptions set
27 out in that code?---No.

28 Can I take you then to page 13. In the paragraph second
29 from the top where you refer to, "Doc ID, Mine Fire
30 Service Policy Code of Practice." As I understand it
31 you're now talking about the GDF Suez 2013 Code of

05.13PM

1 Practice, because the numbers seem to match,
2 section 3.4?---Yes, I use the document identification
3 number from it.

4 You say, "The measures contained some of those recommended
5 in the SECV document discussed above, except the 05.13PM
6 re-profiling options, and covering with overburden."
7 Pausing there, what you're comparing the GDF Suez 2013
8 document to is the 1984 version. Do you accept
9 that?---Yes, I accept that.

10 Insofar as you refer to "except re-profiling and covering 05.13PM
11 with overburden", those aren't things that are in the
12 requirements of the 1984 code, those are things that
13 are attached in the discussion paper towards the back
14 of the code. Do you appreciate that?---I'll take your
15 word for that. 05.14PM

16 It's not that the 1984 code says that those options of
17 re-profiling and covering with overburden are part of
18 the Fire Protection Policy on their own, is it?---My
19 understanding, they were recommended in the document.

20 I want to take you to the same page, the question on page 13 05.14PM
21 about past reviews of fires. You refer there to the
22 reviews you were given and some of your views about
23 those. Over on page 14 your attention was directed
24 to a particular recommendation emanating from a 2008
25 review. You say that you haven't seen a risk 05.14PM
26 assessment emanating from that. Mr Rozen mentioned,
27 when you were asked questions earlier, a statement of
28 Mr Prezioso that obviously you haven't seen. I take it
29 from the list of documents you also haven't seen a
30 letter from the solicitors from GDF Suez setting out in 05.15PM
31 numbered paragraph form matters that have occurred

1 since that 2008 recommendation was made?---No, I have
2 not.

3 So, you haven't had the opportunity to consider that and
4 line it up against the recommendation?---No, I have
5 not.

05.15PM

6 You were asked towards the end of your evidence about best
7 practice with respect to engagement by CEOs. I don't
8 think this is a document you've seen, you weren't given
9 this statement - you were given the statement of
10 Mr Dugan. Do you recall that statement? You may not
11 have had a chance to have a look at all the attachments
12 to it?---I got the statement but I didn't get any
13 attachments.

05.16PM

14 Annexure 13 to Mr Dugan's statement is a document titled,
15 "Fire and flood management systems, weekly status." I
16 think in the terminology used in the mine it's known as
17 the RAG report. It's a document that goes to senior
18 management in the mine on a weekly basis. Is that
19 something that you would identify as good practice in
20 terms of keeping senior level of management informed of
21 that particular risk, fire and flood management?---It
22 depends on the purposes of the document. I'm not quite
23 sure what you're getting at.

05.16PM

05.16PM

24 I take it you'd agree, rather than documents that report on
25 management of risks being kept to a risk management
26 team, for them to all talk about and action, that it's
27 better practice that those documents be sent up the
28 chain to senior management on a regular basis in
29 advance of problems developing?---Yes, I would.

05.17PM

30 On page 14 when you start the discussion about catastrophic
31 risk assessment and over the page to the black swan

05.17PM

1 point, you talk about what you assumed the risks were
2 that people at GDF Suez had not acknowledged or not
3 taken into account. You are aware, aren't you, from
4 one of the documents you were given, this is the
5 document called, "Guidelines for season-specific fire
6 preparedness and mitigation." You are aware, aren't
7 you, that within that document there's a reference to
8 the risk posed by flying embers?---Yes.

05.18PM

9 I can bring up the particular passage. Exhibit 66, if we're
10 able to get hold of that, tab 2. That was one of the
11 documents you were supplied with?---Yes.

05.18PM

12 At clause or section 6.7 of that document, I just wanted to
13 remind you about the text there. Section 6.7 refers to
14 flying embers and the phenomenon that they can come
15 from wildfire in remote grasslands, travel for
16 kilometres, land on combustible materials. During
17 times when bushfire were in the immediate area a
18 heightened awareness is required to detect the landing
19 of them and put the spot fires out." That policy was
20 in place as at February 2014. That shows an
21 acknowledgment in the risk assessment process, albeit
22 not a full-blown safety assessment, an acknowledgment
23 of the risk posed by external bushfire threats, doesn't
24 it?---In part. What is missing, I believe, is where it
25 could land and what happens when it lands.

05.19PM

05.19PM

05.19PM

26 Yes, but it says that one should put out spot fires; it
27 doesn't say one shouldn't bother if they're in a
28 particular part of the mine or not in another part of
29 the mine?---No, that's correct, but it doesn't also
30 assess where the high risk areas are.

05.20PM

31 I understand that. The reference in your statement towards

1 the end about black swans, as you've explained it, it
2 is preparing for the unexpected or the rare event.
3 We've heard a lot of evidence in particular from the
4 representatives of WorkSafe about weighing that
5 consideration against the cost and sometimes the
6 disproportionate costs of controls or mitigating steps.
7 Professor Cliff, when this fire was still burning,
8 I believe, you gave a press interview to ABC Science in
9 which you were asked for your opinion about some of the
10 scientific aspects in terms of combustion and burning
11 of brown coal. Do you recall that?---Not off the top
12 of my head, but I may have may have done, yes.

05.20PM

05.20PM

13 You're quoted by the ABC as saying, "The current fires are
14 caused by exceptional circumstances. They have mined
15 brown coal in Victoria for over 100 years and it's
16 generally done very safely. It's only under these
17 extreme conditions when huge bushfires are raging close
18 to the coal that the usual safety controls won't work."
19 Do you recall making that comment?---I could have said
20 that, yes.

05.21PM

05.21PM

21 You say, you could have said it, it's presumably a view you
22 hold?---Yes, it is.

23 I have no further questions for Professor Cliff.

24 MR ROZEN: No-one else has any questions and I have no
25 re-examination for Professor Cliff, so if he can be
26 excused. I understand Ms Richards wants to raise a
27 matter briefly before we adjourn for the evening.

05.21PM

28 <(THE WITNESS WITHDREW)

29 MS RICHARDS: There are two matters that I'd like to raise
30 before we finally adjourn this evening. The first is
31 an outline of our final day of evidence tomorrow. We

05.21PM

1 do have a lot to get through so I do propose that we
2 start at 9.30 with a view to using that extra half an
3 hour in the morning.

4 CHAIRMAN: Yes, start at 9.30.

5 MS RICHARDS: We have Rod Incoll who has been here all day
6 in the hope of being reached, but we will start
7 tomorrow morning with him. We received a statement of
8 Mr Prezioso yesterday evening, and it is necessary to
9 ask him to answer a few questions, but I will be very
10 brief with him tomorrow.

05.22PM

05.22PM

11 Then Mr Graham, the asset manager of Hazelwood has
12 made himself available to give evidence tomorrow,
13 although we have no statement from him, and Mr Lapsley
14 will be returning as the final witness.

15 I do anticipate we will get through that evidence
16 tomorrow, but it may be a longish day.

05.22PM

17 CHAIRMAN: So there was a question of Mr Lapsley?

18 MS RICHARDS: Yes, Mr Lapsley will be the final witness.

19 CHAIRMAN: He will be the final witness, okay.

20 MS RICHARDS: The other matter that I want to address is the
21 course of events that has perhaps led to some
22 expressions of vexation by myself and Mr Rozen about
23 the way in which information has been provided and
24 concern expressed by Ms Doyle that there was some
25 unfairness.

05.23PM

05.23PM

26 I thought it would be worthwhile at this stage
27 just to set out the series of events and what
28 information was requested and what information was
29 provided so that there is no suggestion that anyone's
30 been unfair to anyone else.

05.23PM

31 In the early stages of the Inquiry on 24 April the

1 secretariat wrote to the solicitors for GDF Suez asking
2 for some certain background information. A very
3 helpful letter was provided dated 2 May that set out a
4 whole range of background information and provided
5 three folders of documents.

05.23PM

6 In relation to occupational health and safety the
7 letter said, "Major mine fire has been assessed by the
8 mine as a major mining hazard under the OHS Regulations
9 as an incident with the potential to cause or which
10 poses the significant risk of causing more than one
11 death. Pursuant to Regulation 5.3.23 of the OHS
12 Regulations the mine has conducted a comprehensive and
13 systematic safety assessment of major mine fire as a
14 major mining hazard", and there was a reference to
15 tab 26.

05.24PM

05.24PM

16 The documents behind tab 26 in the folders that
17 were provided were what we now have been referring to
18 as the bow-tie diagram and the various control
19 measures, a thick bundle of control measures that sit
20 behind that bow-tie diagram.

05.24PM

21 Also on 24 April a summons was served on GDF Suez
22 requesting production, or requiring production of
23 various documents, including a series of documents that
24 are required by Part 5.3 of the relevant OHS
25 Regulations that apply to mines. Those are set out in
26 paragraphs 10-14 of the summons which I tendered this
27 morning as exhibit 77.

05.25PM

28 Documents were produced in answer to the summons
29 on 9 May with, again, a very thorough explanatory
30 letter that accompanied those documents. In relation
31 to items 10-14 of the summons, documents were produced

05.25PM

1 which included the draft GHD report of 2009 and the
2 2004 reports that have been tendered today and also
3 some minutes from 2012 without any context being given,
4 as one would expect, when documents are produced in
5 answer to a summons.

05.25PM

6 Also on 9 May the secretariat requested from GDF
7 Suez a statement from Mr Graham, the Asset Manager,
8 covering a whole range of issues to do with mitigation
9 and prevention. That letter is Annexure 2 to
10 Mr Faithfull's statement that was tendered this
11 morning. One of the things that was requested, in
12 addition to some information about the Fire Service
13 Policy and Code of Practice and its variation
14 iterations, was to identify Hazelwood's other principal
15 plans and policies for mitigating the risk of fire and
16 responding to fires within the mine. We expected that
17 that response, the response to that request, would
18 include reference to relevant occupational health and
19 safety policies.

05.26PM

05.26PM

20 Mr Graham has not provided a statement to the
21 Inquiry. We have received statements from a range of
22 other witnesses - Mr Dugan, Mr Harkins, Mr Faithfull,
23 Mr Polmear and just last night Mr Prezioso, each of
24 whom addresses some of the aspects of that letter that
25 we sent on 9 May, although we would say not all of
26 them.

05.26PM

05.27PM

27 The only reference to occupational health and
28 safety policies and procedures was in Mr Harkins'
29 second statement at paragraphs 33-36, which is in very
30 general terms and does not annex or refer to any
31 documents; certainly didn't refer to the draft GHD

05.27PM

1 report from 2009 nor does it refer to the 2004
2 documents that some reliance has been placed on this
3 week. Nor was there any attempt to put any of those
4 documents into context or explain how the bow-tie
5 diagram that we were initially provided with had come
6 into being.

05.27PM

7 In light of the absence of any witness evidence
8 about the health and safety policies that regulate mine
9 fire, Counsel Assisting proceeded on the basis of the
10 advice in the initial letter of 2 May, that the bow-tie
11 diagram and the accompanying control measures represent
12 a comprehensive and systematic safety assessment of
13 major mine fire as a major mining hazard.

05.27PM

14 It's been put by GDF Suez in the course of this
15 week that there is more to the story, and it's entitled
16 to put that, but that is the way the information has
17 come to light.

05.28PM

18 I'm sorry to do that at the very end of a long day
19 by I am stung by the suggestion that there's been any
20 unfairness in that.

05.28PM

21 CHAIRMAN: Does Ms Doyle want to say anything further?

22 MS DOYLE: No. My reaction in relation to unfairness was a
23 suggestion to Professor Cliff while he was in the box
24 that there had been a recent production of documents
25 that he'd been deprived of. The witness has quite
26 properly accepted that that is not the way that he
27 understood it as the recipient and he's diligently
28 looked at the additional information. That has cured
29 the latent unfairness to my client.

05.28PM

30 Ms Richards' description today I think underscores
31 another factor, which is that people at the mine have

05.29PM

1 been working full-time on the fire and now full-time on
2 this Inquiry. You will have seen them coming and going
3 with bundles of documents, they have worked assiduously
4 to respond to all of the summonses.

5 If there was a misunderstanding in the way in 05.29PM
6 which eight volumes of materials were produced and, as
7 it turns out, one part of the System Management Manual
8 was omitted, we of course apologise, but we think it's
9 perfectly explicable in the fast moving Inquiry that
10 the staff have been responding to. 05.29PM

11 CHAIRMAN: Yes, I think it's appropriate that both of you
12 have spoken on the record as to those matters, but I
13 don't think at this stage it's necessary to take it any
14 further. We'll adjourn until 9.30 tomorrow morning.

15 ADJOURNED UNTIL FRIDAY, 13 JUNE 2014 05.30PM