



Royal Commission on the Pike River Coal Mine Tragedy
Te Komihana a te Karauna mōte Parekura Ana Waro o te Awa o Pike

UNDER

THE COMMISSIONS OF INQUIRY ACT 1908

IN THE MATTER OF

**THE ROYAL COMMISSION ON THE PIKE RIVER COAL
MINE TRAGEDY**

Before:

The Honourable Justice G K Panckhurst
Judge of the High Court of New Zealand
Commissioner D R Henry
Commissioner S L Bell
Commissioner for Mine Safety and Health, Queensland

Appearances:

K Beaton, S Mount and J Wilding as Counsel Assisting
J Haigh QC, B Boyd and B Smith for Douglas White
J Rapley for Neville Rockhouse
S Moore SC, K Anderson and K Lummis for the New Zealand Police
N Davidson QC, R Raymond and J Mills for the Families of the Deceased

S Shortall, A Rawlings, A Glenie, D MacKenzie, A Gordon for certain
managers, directors and officers of Pike River Coal Limited (in
receivership)
C Stevens and A Holloway for Solid Energy New Zealand
R Buchanan for Fire Service Commission and West Coast Rural Fire
Authority
K McDonald QC, C Mander, and A Boadita-Cormican for the Department
of Labour, Department of Conservation, Ministry of Economic
Development and Ministry for the Environment
G Nicholson and S Steed for McConnell Dowell Constructors
G Gallaway, J Forsey and E Whiteside for NZ Mines Rescue Service
B Latimour for Coal Services Pty Ltd
N Hampton QC and R Anderson for Amalgamated Engineering, Printing
and Manufacturing Union Inc

**TRANSCRIPT OF PHASE TWO HEARING
HELD ON 19 SEPTEMBER 2011 AT GREYMOUTH**

Level 14, Prime Property Tower, 86-90 Lambton Quay, Wellington
P O Box 5846, Lambton Quay, Wellington 6145
Email: pikeriver@royalcommission.govt.nz
Freephone (NZ only) 0800 080 092

**COMMISSION RESUMES ON MONDAY 19 SEPTEMBER 2011
AT 11.31 AM**

THE COMMISSION ADDRESSES COUNSEL

5 MR BUCHANAN CALLS

JAMES SAMUEL STUART-BLACK (AFFIRMED)

Q. Your name is James Samuel Stuart-Black?

A. It is.

Q. You've prepared a brief of evidence?

10 A. Yes, I have.

Q. Can you confirm its contents?

A. Yes, I can.

Q. You also recorded the first few days of your involvement in the incident
in an incident log which is summation reference NZFS0010. Can you
15 confirm the contents of that document?

A. I can.

Q. Could you start please by reading from paragraphs 2 and 3 of your
brief of evidence just to inform the Royal Commission of your
background?

20 1136

A. "I have a background in national and international emergency
management and disaster response. I hold a BA honours, international
disaster management from Coventry University in the United Kingdom,
and am a fellow of the Institute of Civil Protection and Emergency
25 Management of the United Kingdom. I joined the New Zealand Fire
Service in 2004. My responsibilities include the provision of
comprehensive, strategic and operational direction for emergency and
major event planning, crisis and consequence management, both
domestic and international, hazardous material response, technical
30 rescue, including urban search and rescue or USAR and operational
policy and standards. Besides my role at the New Zealand Fire Service
I am a team leader with the United Nations Disaster Assessment and

Co-ordination Team and an assessor for the United Nations International Search and Rescue Advisory Group.”

Q. And the role that you currently hold at the New Zealand Fire Service is the national manager special operations, that’s correct?

5 A. That's correct.

Q. Your brief also refers to the institutional statement prepared by the New Zealand Fire Service Commission, which explains the role of the fire service in respect of emergency management. Can I just ask you to read from 15 to 18 of your brief, which include a summary of the role of the fire service taken from that institutional statement?

10 A. Before describing my role in the events I wish to draw attention to the opening statement in paragraph A5 of the Fire Service Commission’s Institutional statement, NSFS0015/5-6. For convenience I repeat the statement below, footnotes and reference removed. “The fire services
15 have no role within the regulatory framework for health and safety governing coal mines. The role of the New Zealand Fire Service, as recognised by the Fire Service Act 1975, is to respond to fires in urban districts and to other emergencies where it might render effective protection to life and property. The role does not extend to managing
20 the particular risks associated with fire or other emergencies in underground coal mine, in respect of which it has no regulatory or statutory function, nor operational expertise or capacity. The New Zealand Fire Service maintains extensive rescue capability and has expertise in a number of disciplines, including emergency
25 management and fire engineering. Its whole operational framework is predicated on operational readiness, risk planning and dynamic risk assessment at the heart of which lies the concept of personal safety, or the safe person concept.

1139

30 A. The fire services subscribe to the CIMS system. CIMS is designed to ensure a timely and co-ordinated response to emergencies such as arose at the Pike River Mine. The framework is set out in the manual, *The New Zealand Co-ordinated Incident Management System*. In their responses to the Pike River Mine incident, the fire services and their

personnel operated within the CIMS framework and the support, advice and assistance provided to police and other agencies involved in the response (including representatives of Pike River Coal Limited and Mines Rescue personnel) was provided within the CIMS organisational structure and consistently with the CIMS principles. The fire services also carried out fire prevention and fire suppression operations within the framework of the search, rescue and recovery operations. Under the CIMS structure each agency involved in an emergency incident is responsible for its own actions, but that does not diminish the collaborative nature of the CIMS environment. I also refer to paragraph B1 of the institutional statement New Zealand Fire Service 15/10, again with footnotes removed. It is important to understand that the New Zealand Fire Service is not only a fire-fighting service but has significant responsibilities and capabilities in respect of any emergency where lives or property or in imminent danger. The response of the New Zealand Fire Service to the Pike River Mine incident was not a response to a fire, at least not initially. As the incident unfolded and developed, the fire service's response was conscious, ongoing and deliberate response to a multi-faceted emergency where the need to rescue or recover the miners was the first priority, and the atmosphere and physical stability of the mine and its surroundings were of integral concern. The statements I have quoted are consistent with my personal approach to emergency preparedness and management, in particular the importance of operational readiness, and once an incident has arisen, the use of dynamic risk assessment based on the 'safe person' concept. That approach guided my own actions and the advice I was able to provide as a member of the technical experts group. I also confirm that my actions were at all times taken within the CIMS organisational structure, consistently with the CIMS principles and under the direct and active command of the national commander."

Q. And that's a reference to the national commander of the fire service?

A. That's correct.

1142

Q. You referred in that quote in paragraph (c) to the fire service maintaining extensive rescue capability and also the expertise and other disciplines including emergency management and fire engineering. That's the capacity in which both you and Dr Beever, whose name has been mentioned several times during the Commission's proceedings are involved, is that correct?

A. That's correct.

Q. Now, the evidence indicates that the fire service is really involved in, in this incident, at two levels, that's correct, really the presence at the mine and provision of support at the mine site and secondly, at the national level?

A. Yes, that's correct. At the mine itself, we had operational fire fighters as well as also command elements, and elements from the local rural fire authority and then at the national level was myself and also Dr Paula Beever.

Q. Can I just take you back to paragraphs 5 to 7 of your brief just to read out there the nature of your own involvement in this incident over the period of time that you were involved?

A. "I was first notified of the Pike River Mine incident at 1702 hours on Friday, 19th of November 2010. In the following hours I was tasked by the national commander of the New Zealand Fire service, Mike Hall, to take the role of liaison with Police National Headquarters in my capacity as the national manager of urban search and rescue and the duty officer of the national commander's group. A group of senior officers at the fire service headquarters which is immediately notified of significant incidents. Reference to that is in FIRESERVICE154/25 and 36."

Q. No need to do the references.

"I provided advice and assistance to police as they assumed lead agency responsibility under the co-ordinated instant management structure. As the incident developed in the first few days, my role broadened and became multi-dimensional. I remained in the role of representing the New Zealand Fire Service in the Wellington-based incident management operations lead by police. In that role I provided advice and support to police on the availability of resources and

equipment, the atmospheric conditions in the mine and the implications for rescue planning and the establishment of the decision-making structure for the operation. I kept the national commander, Mike Hall, informed of the developments in the operation and communicated his instructions to other fire service personnel who were involved in the incident. I also performed my own operational responsibility as the national manager of USAR which was on standby from the outset of the incident. Once the incident management structure was in place, I was appointed a member of the panel of advisors who became known as the police technical experts group. The group had the role of supporting the incident response co-ordinator, Assistant Commissioner Grant Nicholls on operational planning and risk assessment activities. I continued in that role until the 22nd of February 2011 when I was deployed to Urban Search and Rescue duties following the Christchurch earthquake.”

15 1145

Q. Now can we just go to the first notification you had, you were notified of the incident really in two capacities, is that correct?

A. That's correct.

Q. What were they?

20 A. Both as the on-call duty officer for the national commanders group, and also specifically as the manager for special operations.

Q. And the national commanders group, that's a group of senior fire service officers who are on-call on a 24/7 basis?

A. That's correct.

25 Q. And you were the duty officer, so you received the call, the notification because of the significance of the incident as it had been reported to the emergency services?

A. That's correct.

Q. So what did you do as the duty officer?

30 A. Initially, there's some internal phone calls to be done to our communications centre. The intent there is to ascertain the nature of the incident, what resources are being deployed and where there may be requirement for executive support from within the organisation. That led to an internal brief initially to the national commander given the

gravity of the incident which has been reported. Following that I also then contacted Mr Trevor Watts from the Mines Rescue Service.

Q. Can we just, before referring to the call to Mines Rescue, can we just talk quickly about your conversation with the national commander?

5 What did he say to you in his command responsibility during that conversation?

A. We covered off a few elements. First of all, obviously, he listened to the information which I relayed to him based on the facts that had been provided to myself. I asked a particular question around authority to
10 activate urban search and rescue, authority for that resides with the national commander.

Q. And did he give that authority?

A. He did, on the proviso of, if a request was made from either Mines Rescue or from the police, then the authority was there for us to
15 commit resources as required.

Q. So it was a standby authority on request from the Mines Rescue personnel?

A. Either Mines Rescue or the police, yeah.

Q. Did he also say anything about the potential for fire service crews to be
20 involved in any rescue operation and which might involve entry to the mine?

A. He issued a command directive that no member of the New Zealand Fire Service was authorised to enter into the mine.

Q. I'd like to just refer to Mr Hall's brief of evidence. He's not giving
25 evidence orally, but there is a statement in his brief of evidence explaining the nature of that instruction that was given. Can I just have that up on the screen please, that's NZFS0017/13?

WITNESS REFERRED TO NZFS0017/13

Q. And can we just focus on paragraph 44 please? I'll just read out
30 Mr Hall's rationale for that instruction. "I was fully aware of the jurisdictional issues and the fact discussed above that the New Zealand Fire Service has no role in relation to fire and other emergencies in coal mines, but I issued the order for the avoidance of any doubt. I know from my experience in Queensland, that coal mines are extremely

unstable and dangerous following an explosion. It would've been absolutely reckless for any rescuers to have entered the mine without a full understanding of the atmospheric conditions in the mine." Now, that conforms to what you recall from your conversation with him?

5 A. Yes, it does.

Q. We just take you back to your call that you then made to Mines Rescue. What time did you make that call?

A. I made that call at 17.12 hours on the Friday.

10 Q. And that was, so 10 minutes after your initial notification that you received of the incident?

A. That's correct. Initially I called the Mines Rescue general number with the view of getting hold of Mr Watts' direct number.

Q. And did you manage to speak to Mr Watts?

A. Yes, I did and that was the call at 17.12.

15 1150

Q. So why did you make that call?

20 A. Based on my experience of mining emergencies it seemed clear to me that in the event that it was deemed safe for anybody to enter the mine, I must stress the big issue of, "If it was deemed safe," then the people most likely to do that would be the Mines Rescue Service. And it seemed appropriate then to make an offer to Mr Watts that should he require any resources or support we were clearly on standby to assist as needed.

25 Q. Did you give him any indication as to the capability which the USAR facility had that might be of use?

A. Not in any particular detail. I just indicated the fact we had the three urban search and rescue teams plus the wider organisation of resources and the offer was literally for all and anything should it be required.

30 Q. Now you also made contact with some other officials in Wellington from the Department of Prime Minister and Cabinet and the police as well?

A. That's correct.

Q. And what support did the police request of you when you made contact at the national level?

A. They asked whether I could respond to Police National Headquarters. They were establishing an operations room and they wanted to have direct fire service liaison in that area.

5 Q. In your experience was that an unusual approach or a usual approach establishing an operations room at such an early stage after notification of an incident of this nature?

10 A. It is really specific to the incident type, obviously there's a lot of emergencies that happen day in/day out across the country where we just receive notification either by pager or by phone and we may not need to do anything further with that information. The particular situation on that Friday was one of big gaps in information but where information was coming through it was clear that this was a significant incident. And given what was known at that time about the potential for both New Zealand nationals and international workers to be affected by
15 this incident, in my mind it was entirely appropriate that an operations room was established in police headquarters.

Q. So you were driven in that view to an extent by the numbers of people who might be involved, missing people and the potential for international implications of that?

20 A. That's correct. And certainly initial reporting, wherein by that I refer to the New Zealand Fire Service received, suggested higher numbers than the numbers actually eventuated, so absolutely was an appropriate move.

25 Q. And what was the focus of activity of those involved in setting up the operations room when you got there, that was about 8 o'clock in the evening wasn't it that you located to the OPs room?

30 A. Sorry, I'll just turn to my log to just check on the times. The focus really at that stage within police headquarters was one of fact-finding, trying to ascertain as much information as is possible as to the nature of the incident, how the event was developing, possible implications in terms of response or resource requirements.

Q. And would it be fair to say that the focus of the response at that stage was on a potential rescue?

A. It was very much on a, let's understand what's going on, let's make sure that those individuals involved who may have a role and possibly entering the mine have the resources that are needed, and let's start looking at what the implications are of this instance. So it was looking not just down one single avenue, it was really a fact-finding and how could this event potentially pan out.

Q. And what were the sort of range of scenarios that were being seen at that stage?

A. Clearly, and I've spoken a short moment ago about the lack of information, this could've been a very short and very simple rescue operation and we were clearly aware that might be the case, or ultimately this could've developed, which unfortunately it did, into a protracted incident and so there were a range of options. There was no one situation put on the table, it's a case of open mind, let's find out what's going on and let's make sure we can resource appropriately.

Q. From your experience of these sorts of incidents which have the potential to unfold into a major incident, what's the appropriate practice in terms of reaction, overreaction, do you over resource something at this early stage or is it prudent to let it build up as it goes along?

A. From a fire service point of view and anecdotally with my observations from colleagues in the other emergency services, our typical response is to push far more resource in a far heavy response than is probably needed, with the assumption that we can always then de-escalate if required because time is so critical particularly in rescue operations. What we don't want to do is find we put just the bare minimum of resources forward and then suddenly we're not in a position to respond to a changed environment. So there was an intent to really push options forward.

Q. With the ability to pull back if the incident doesn't escalate to the extent that might have been expected?

A. Absolutely, and that's routine business sort of practice.

Q. We heard evidence last week about the view which the fire service people on the ground at the mine site formed fairly earlier on about the prospect of fatalities. That was communicated to you at an early stage?

5 A. Certainly, within fire service discussions our appreciation was that in all likelihood, you know, fatalities were – we knew we were going to be dealing with a massive fatality situation, yes.

Q. And what did that require then in terms of the planning and the response at that early stage?

10 A. The risky incidents are complex emergency responses generally are complex in nature. You've got to be considering at all times how an event may develop, how it may unfold. Having an appreciation that there may be mass fatalities is one source of information which will assist in developing specific response plans. In no way does that become the sole focus because there were such significant gaps in the
15 information space. It was a case of let's keep an open mind, but let's not ignore the fact that we could be dealing with this massive fatality situation.

Q. You'd been involved in incidents of this kind previously hadn't you, where large numbers of fatalities were in prospect and, of course, the
20 Commission is aware that you were involved after that as well in the Christchurch scenario. From your professional perspective as an emergency manager response specialist, what's the range of thinking that you need to apply in dealing with that potential fatality situation?

25 A. I think it's – the potential fatality situation is just one factor. When you're leading a response to an incident and we've heard statements about parallel contingency planning, which I think's become a bit of a buzz statement. When you run any incident, part of your planning intelligence process is to consider all and every possibility of an incident, is to then develop operational response plans that consider whether you may be
30 dealing with a situation which is very quickly resolved through to a situation which may end up in a massive fatality situation or something else and then develop a range of response options based on all potential outcomes. It's a challenging space.

Q. Could be a lonely position to be involved in, being the decision-maker about some of those things as well?

5 A. I would say that without doubt and, yeah, we've heard from our colleagues in Australia as well as we have from colleagues here in New Zealand from a, and I'm sure they'd agree with this, and from a very much personal experience, being in a position where you have to make ultimate and quite often difficult decisions is extremely lonely because you're having to weigh up both what at times can be an incomplete information picture, and so you're having to make a
10 judgement call based on all available information at a point in time. You're juggling and managing where your moral responsibilities may be for those people who have been impacted by a disaster, you're having to juggle what may be media or political interests. It is an extremely challenging place. It's not a place that you enter into lightly in terms of a
15 response role.

1200

Q. You heard evidence last week from Assistant Commissioner Nicholls about the range of factors that went into the formation of what he described as his genuine and honest belief that there was a prospect of
20 survival, have you got any comment on that evidence from your professional perspective?

A. Clearly, Assistant Commissioner Nicholls was citing his assessment of things. Certainly what he spoke to is, I believe, correct and would be true of anyone in that position. I mentioned a moment ago in, you know,
25 from a fire service point of view, we were of the opinion that we were dealing with a massive fatality situation right from the outset of this incident.

Q. And that was also the view, we've heard, that was formed by the Mines Rescue people at the scene, is that correct?

30 A. We've since heard in comment from last week that that's right. But, I'll just come back to my comments of a few moments ago, if you are the response co-ordinator or an incident controller, whatever terms we wish to use in describing an individual who has an ultimate layer of responsibility, you've got to constantly weigh up the information and if

there are indicators or doubts that it may, in some way, challenge, in this sense, the mass fatality notion it may offer a glimmer of hope and opportunity that I personally would say that you have a moral and probably professional responsibility to act on that and if there are
5 glimmers of hope, you commit resources accordingly, and I can certainly say both ahead of Pike River, having personally been in that place and in particularly with the more recent quake in Christchurch, we were constantly juggling, as Assistant Commission Nicholls and others were on this issue of, where do you draw the line and it's difficult.

10 Q. Thank you for that. On that first evening you had some involvement in the analysis and consideration of the initial gas sampling results, that's set out in your brief of evidence and that's been pretty well canvassed by Mr Brady in his evidence last week, so I'm not going to take you through that, I think, in the interest of time. Other counsel may wish to
15 ask you some questions about the gas sampling approach. Let's just move onto the end of that evening. According to your log you left the operations room at 2330 hours, 11.30 pm, on that first evening. What was your impression, at that stage, about the police approach to the incident at that stage, you've covered that in paragraph 32 of your brief
20 haven't you?

A. Yes I have.

Q. Maybe you could read that paragraph?

A. "I left the operations room and went home at 2330 hours. Although the
25 nature and scale of the incident was still far from clear, at that stage, it was clear to me that the police understood the gravity of the situation and were aware of the need for timely and solid decisions with calm hands. The operation was being scaled up quickly with the establishment of an operations room and the deployment of resources and logistics. I had a sense of tempo and energy in the operations room
30 which was consistent with what I would expect from my own experience in crisis management."

Q. And where did the Mines Rescue specialists sit within that scenario at that time, at the end of that evening. It's quite important to reflect on that, given some of the evidence we've heard in the last week about the

role of the Mines Rescue people within the overall ambit of this developing operation?

5 A. In part, in answering this, I can only go on information that was reported to me from fire service personnel deployed to the scene and comments from Mr Watts when he and I spoke on the phone, earlier in that evening. My understanding is that the Mines Rescue personnel an advanced party were committed to the Pike River Mine location. A location given the potential for an event that could have been very quickly addressed had the environment been stable, had there been an understanding of the atmosphere and all the other issues we've heard of, it was entirely appropriate, I believe, that Mines Rescue were forward at that incident site.

1205

15 Q. So it was possible at that stage that a rescue could've been effected and everyone might've been able to go home?

20 A. I would couch my answer with the clear position which is in accord with evidence we've heard last week. We know that the atmosphere wasn't safe and therefore was not appropriate to enter, because there were big gaps in the knowledge. If we assume to the contrary that, you know, that is let us assume that the atmosphere was understood and that it was deemed safe to enter, then possibly, who knows? There could've been an early rescue, and so it's entirely right and proper that the rescue, what I'd call the technical rescue capability is actually at the incident site where it can render assistance.

25 Q. But you've talked also about the potential, the much wider potential for the incident to become prolonged and complex with mass fatalities in prospect at that stage, so what was your view at that time about the potential for the Mines Rescue or the company to be able to take an active role in the incident as opposed to police being in the lead role as had been established?

30

A. I draw quite a distinction between what I'll refer to as tactical operations, so that incidents happening right at the incident site where if it was deemed safe, a rescue function may take place and that is a function that clearly, Mines Rescue Service, that's their skill and forte. What was

apparent very early on to my mind with the emergency was that this was big, had a national and an international dimension, was going to require significant resources, significant co-ordination and a role such as that requires the experience of a big organisation that's trained and disciplined in co-ordinating responses. So to me that's a police role, given this context and it's not a role in terms of that over-arch in co-ordination that could have been undertaken or indeed should've been undertaken by either the mining company or the rescue team down there.

5

10 Q. Thank you for that. Let's just move to the next day, the Saturday, the first full day after the incident had occurred. I just want to ask you about one element of that which was the evidence which emerged from the gas sampling during the course of the afternoon that there appeared to be a fire in the mine. Now, we've heard evidence last week from Assistant Commissioner Nicholls that the occurrence of that, that information ought to have been passed on to the families, so we don't – that concession has been made, so we don't need to dwell on that, but when that evidence emerged, that was fire, that was your business, what was the fire services, or what was – sorry, what was the police response to that in relation to the fire service?

15

20

A. I can only speak from in Wellington, I can't speak in terms of locally.

Q. From your own perspective, yes.

25

A. Certainly there was concern in hearing this information that was being reported, accepting the fact, as we heard last week, there could be differing opinions, that the challenge when you are co-ordinating a complex incident is to balance all the information that's coming through to you. My assessment is one that the police were very concerned with the report of the potential fire within the mine and were certainly seeking more information and they were adding that information into their planning considerations.

30

Q. And did they ask the fire service for some specific assistance at that stage?

A. We were approached to see what particular knowledge or experience we had within the New Zealand Fire Service, of –

Q. Perhaps I can refer you to paragraph 49 of your brief at this stage?

A. Would you like me to read that out?

Q. Yes, maybe you could read that out?

A. “At 1950 hours I discussed the situation with Assistant Commissioner
5 Nicholls who told me that the Department of Labour needed advice in
the areas of atmospheric monitoring, ventilation, gas analysis and fires
underground. Given the lack of underground fire suppression expertise
in New Zealand” – and I just mention that’s coming from a fire service
in-house point of view – “We agreed that an international search would
10 have to be made for appropriate experts. I offered the assistance from
the New Zealand Fire Service to review CV’s of suitable individuals.
Refer to Fire Service Log 10/7.

1210

A. I arranged for Dr Paula Beever, the New Zealand Fire Service’s national
15 director, fire risk management to take on this role. As noted in the
New Zealand Fire Service institutional statement Dr Beever is an expert
in fire science and is a fire engineer by training profession. She is an
expert in the science of combustion, including the spontaneous
combustion of coal seams.”

20 Q. So you were in the situation where, as you said from the quotation from
the institutional statement before, the fire service doesn’t have an
expertise in relation to fire fighting in mines, correct?

A. That’s correct.

Q. But you offered that assistance in respect of sourcing other expertise?

25 A. That’s correct. And that’s really in keeping with the way agencies work
to support one another following any significant emergency.

Q. Can I just take you forward now and to after the first 24 hours, just
perhaps across the period from the Sunday through to the beginning of
Wednesday the 24th, which is of course we all know was the significant
30 day, which we’ll come to. What was your perspective on how the
operation, as you saw it from the Wellington end, developed after that
first 24 hour period?

A. The operation was clearly one that I would refer to really as it was trying
to establish a permissive and an enabling environment to ensure that

whatever was needed to support an entry into the mine should it be safe to do so. So whatever was needed it was about making sure it was there. There was a focus on ensuring that accurate information was being captured and understood and that information serving multiple purposes from informing families, informing planning and decision-making activities and clearly pushing more widely into the media space. It was about developing operational rhythms in terms of so there was good consistent flows to each working day around information reporting, the format in which the way information was being reported, and a real focus on putting rigour and structure around what understandably was initially a fraught and frantic first period of time.

5
10
15
Q. Now you had a couple of discussions which I'd like to refer to in your incident log. Can we look first at document summation reference NZFS0010/13 please, and can you highlight the section just near the top of the page, 1745. So that refers to a discussion that you had with Assistant Commissioner Nicholls about decision-making. Can you just take the Commission through that please?

A. In terms of reading or?

20
Q. Just read it out or just summarise briefly what was involved in the discussion?

A. In summary, the conversation I had with Assistant Commissioner Nicholls was about making sure that the decisions were taken were robust decisions that were based on fact or based on evidence with the potential, and at that stage clearly you can't predict how an event is going to unfold, but that should some of the more difficult decisions be required, potentially also including the sealing of the mine, then there was a really robust process to make sure that all the agencies with expertise were involved and engaged and had a voice. We certainly spoke to, and my log captures that, we spoke about the issue of making sure that not only internal peer review, and by internal I mean within New Zealand, where appropriate we should be looking to peer review from other people to again support some of those more complex and potentially finite decisions.

1215

Q. Can I take you then to the second relevant conversation that you had, which was the following morning, on Monday the 22nd of November. Ms Basher can I have page 15 of the same document please, and the reference we want to talk about there is the meeting that took place at 10.40 am on that day, and can we perhaps highlight the last two bullet points in that entry down towards the bottom of the page? So this was a discussion with Department of Labour and police representatives at the operations room, that's correct?

A. That's correct.

Q. Can you just take us through what was involved in the discussion from the perspective of the critical decision points that are referred to there in your comment in the first bullet point?

A. We heard a comment from Assistant Commissioner Nicholls last week around where decision-making authority should reside and he spoke to the issue of either sealing the mine or terminating the rescue effort. The conversation we were having in headquarters, and I posed a suggestion really was that decisions or wilful actions that materially affected the environment within the mine were ones that needed to go through due diligence and scrutiny, so something, for example, which may either introduce a sudden surge of fresh air into the mine through a wilful action or in some other form could change that mine, either resulting in explosion or some other change of conditions.

Q. So wilful actions, if I could just interrupt there. Wilful action means a deliberate step taken as part of the decision process?

A. Sir, it's a conscious, deliberate intervention that's going to somehow change the space within that mine or commit people into that working environment.

Q. And then in the second bullet point there, there's a reference to the need to create a permissive operating environment for the PIC/PFC to operate. Can you explain what you meant by that?

A. Yeah, and this is based on from personal experience of running incidents and it's a conversation which was certainly not new to Assistant Commissioner Nicholls and, you know, there was a degree of comfort in our conversation. What I was seeking to really table in the

meeting was a need to ensure that, for example, immediate decisions where there may be an immediate opportunity to do something would be unhindered if, for example, you know let us take the situation that maybe there were signs of people walking from the portal having come
5 down the drift. What we didn't want is for rescuers on the scene to be hindered in doing an immediate action of assisting those people come out, but in saying that we needed to make sure that operational plans when they were developed were inclusive of the people with the right kind of knowledge and understanding.

10 Q. Now during this period you were still considering the need for contingency planning around potential recovery as opposed to rescue? That's correct?

A. That's correct, yeah.

15 Q. You had a discussion with Assistant Commissioner Nicholls about this later in the day on that same day. Can we just go to page 16 of the log please Ms Basher, and just highlight the paragraph at the bottom of the section headed "14" under it. So this refers to an offline discussion, meaning one outside any formal discussion processes?

20 A. That's correct sir. Rather than being in a meeting with a wider audience, this is a just direct conversation to myself and AC Nicholls.

Q. And so can you just either read out that section or just summarise the nature of the conversation that you had there and just confirm as well again for the Commission the meaning of the abbreviation K41?

25 A. Perhaps I'll just read and then make some comment. "It's an offline conversation between myself and AC Nicholls. I flagged the need for behind-the-scene planning and discussion including Crown Law regarding the decision point at which time all reasonable and practicable efforts for the rescue of missing persons is deemed as reached and all are at K41, and K41 is a code term used within the fire service for
30 anyone who's deceased. AC Nicholls confirmed that initial conversations had taken place with Crown Law.

1220

A. The purpose of the conversation was really flagging to Assistant Commissioner Nicholls, something which clearly he was aware of, but

for completion I felt it was my responsibility to table the issue with him and say, "Look, yes we're optimistic, yes we're hopeful because there is this competing information, there are still information gaps, but clearly we need to be within our planning space considering, you know, how far
5 down the line you go before you make a decision," and I'm not going to walk into the whole conversation around survivability and expert opinion that came through in discussion last week, but in any operation, unless you get to the point where people do come out, you know, if you don't have the information, if all the indicators are pointed to the negatives,
10 somewhere you need to make a decision to either change your focus of the operation or terminate an operation or whatever, and you need to be thinking of that right early up.

Q. But at that point, on that day, which was the Monday, that hadn't been reached?

15 A. It had not and, you know, again I'd mention the fact that from a fire service point of view and we've heard comment from people speaking on behalf of Mines Rescue were in accord, you know, we believe that people would've been killed in that initial blast, notwithstanding that, again, as I spoke to police rightly had a moral
20 responsibility to consider all options, there were gaps in the information and we're still very much focused on effecting a rescue, but it was clear that they also had, within their planning and decision space, the potential that this could result in mass fatalities and they required different options.

25 Q. Now, we're moving to the Wednesday the 24th which was the key day, as I've said. By the morning of that day, how had the decision framework that we've been talking about developed to a point where it took some shape?

A. If I understand the question correctly, a decision process had been
30 established that sought to, effectively, establish the thresholds of where certain decisions would be made.

Q. And was that based on the use of plans and risk assessments by that stage?

- A. Very much so. Effectively in rescue situations, I suggest that there's two options. You have the immediate response which is, you know, there's a sudden opportunity to do something, it's still planned, it's a calculated move, or you get into a deliberate response with deliberate plans, and
- 5 so one of the areas that've been discussed is that clearly we were moving into that deliberate space and as such, decisions would need to be underpinned by having an understanding of what the operational plans were and risk assessments in terms of weighing up what the resultant, untreated risks may be for any particular course of action.
- 10 Q. And this was the point at which the experts group, that you referred to, took its shape and was formed?
- A. That's correct.
- Q. And were you invited to be a member of that group?
- A. Yes I was.
- 15 Q. And can you just tell the Commission quickly about the other members of the group and how the group was composed in the way that it was?
- A. I can go a certain way in that in terms of clearly it was a police decision in terms of who the invitation was extended to. The fire service was asked to provide appropriate individuals and it was deemed that I was
- 20 one given my experience in the rescue and emergency management space and Dr Paula Beever, of whom I've spoken to, and also the fire service institutional statement provides more.
- Q. And there were two other members of the group?
- A. That's correct. So there was Dr Geraint Emrys from Department of
- 25 Labour, I didn't know Geraint ahead of time, but as I came to understand is a medical practitioner with particular expertise in industrial occupational health and safety.
- Q. And the fourth member?
- A. Dr John St George from University of Auckland from their built
- 30 environment department.
- Q. And is he someone who had some knowledge of mining matters?
- A. Again, he's not somebody I'd had previous contact with. As I understand it, both from his own introduction and commentary from police, that he had particular mining experience and had in fact also

been, at some point, down on the Pike River Mine site previous to the incident.

1225

5 Q. You head some evidence last week about the need for some professors to be involved in such group. Have you got a comment on that?

10 A. I think from my days in university my professors would've been offended to hear me being considered as a professor. I think the notion behind professors – and I can't speak for police, my interpretation of that statement is about making sure police had a panel of people with relevant expertise to assist them in reviewing things such as risk assessments and the operational plans.

Q. And would you describe your own role and perhaps that of Dr Beever as well as perhaps an academic role, or an academically focussed role in that respect?

15 A. Certainly we both have academic qualifications and we both have published papers in peer review journals and so on. I'm a uniformed operational member of staff on an on-call basis doing an operational role. Dr Paula Beever is head of our fire risk management and also the engineering side of things, is very much focussed on operational activities, both day-in/day-out but also for more sustained operations and activities.

20 Q. So now the role of the experts group in relation to that decision process that you've described with the planning and the risk assessments, what was the role of that group as you understood it at that point?

25 A. Quality assurance essentially, so to, as a group we were not there to tease out or pull apart an operational plan, so if an operational plan was developed down at the incident site by experts in conducting the, what I'd call the technical process of mine entry or dealing with the GAG, we were not there to pick apart what they were saying, as experts our role was to review the risk assessment processes really as a form of due diligence to find where there may be omissions or issues and particularly to ensure that those parties who should've been involved in the process was evidenced in the actual material that was being produced.

30

Q. And was there a risk assessment that was placed before you on that day, on Wednesday the 24th?

A. Yes, there was, yes.

Q. And what was that risk assessment in relation to?

5 A. That was a risk assessment relating to the potential entry of Mines Rescue into the mine.

Q. So that was the culmination of the planning for a rescue attempt at that time?

A. Yes, that's correct. Excuse me I'm just getting my log.

10 Q. Now there was a telephone conference call of the members of the expert group during the morning of the 24th?

A. Yes, there was.

Q. Okay, and the outcome of the conference call, was that recorded by Dr Beever in an email to Assistant Commissioner Nicholls following the meeting?

15

A. It was both – certainly I can speak for Paula and myself, but also anecdotally for others involved in the group, we would often, if not, certainly Paula and I, we would follow-up on a telephone conference or even if we were face-to-face in the meeting with an email.

20 Q. And Dr Beever, where was she on that occasion, the occasion of that meeting?

A. She was here in Greymouth.

Q. Can I have document summation reference NZFS0011 please?

WITNESS REFERRED TO NZFS0011

25 Q. So this is the email from Dr Beever to Assistant Commissioner Nicholls following the telephone conference call?

A. That's correct.

Q. So, could you just take the Commission please through the key elements of the discussion as summarised there by her?

30 A. So the idea following this particular telephone conference we were asked for some additional comments. Really what Paula's doing here is just stressing the issues around the robust process and by that you can take that to mean an inclusive process, but around the whole quality assurance about any plans for going into the mine. We're very clear

about the need for risk assessments from Mines Rescue teams, in terms of as experts in conducting mines rescue, and then the email goes on to other issues, where quite rightly and as we've heard from experts last week, Dr Beever's talking about the fact we need to have the evidence around stable conditions and an understanding of zones or pockets within the mine where there may be differentials in the gas conditions.

5

1230

Q. So the time of that email is 3.56 pm, but that refers to a conference call which had finished sometime before that, correct?

10

A. Yeah, that's correct.

Q. And can I just refer you now to paragraph 55 of your brief. And perhaps you might just want to read the summary in paragraphs 55 to 57 of your brief of evidence?

15

A. At 1300 hours Assistant Commissioner Nicholls, Dr Beever and I had a further telephone conversation. Dr Beever was still in Greymouth. My record of the conversation is later recorded on page 30 of the Urban Search and Rescue Incident log –

Q. Now Ms Basher can I just ask you to bring up reference NZFS0010/30 please, and can you just highlight the reference near the top, 1300. And Mr Stuart-Black could you just please read out the contents of that email?

20

A. "1300 hours, this is a call to Dr Paula Beever, summary details as follows. So conversation on speak phone with AC Nicholls, who has noted that there was a sudden move for a team to enter the mine, a risk assessment was to be sent to Paula, myself and Department of Labour for review and comment. Paula was also tasked with reviewing the plan and if possible the gas readings and also she was asked to head to the mine and provide comment to Superintendent Knowles. Dr Beever's and my understanding at this point, based on the information that was available to us in Wellington and Greymouth respectively was that Mines Rescue were preparing to make entry to the mine. At 1404 hours Assistant Commissioner Nicholls sent an email, reference NZFS12, to members of the technical experts group, including me, with a request for

25

30

an urgent response on the Mines Rescue operational risk assessment. I forwarded the email to Dr Beever at 1422.” She’d contacted me to advise she hadn’t received it, she had problems with her phone or something, that’s why there’s a delay there. “I reviewed the risk assessment as recorded previously in this brief. I had repeatedly raised a concern about the lack of reliable information on the atmospheric conditions in the mine. Dr Beever with her specialist expertise has stated the same concerns. I considered that nothing had changed in the operational situation that required or justified a change of approach at this point.”

5
10
Q. Could I just please now have page 30, same document, back up on the screen again, and can we just look at the reference 1424 halfway down the page. So this refers to a conversation you had with Dr Beever at 24 minutes past two?

15 A. That's correct.

Q. And that summarises the result of your joint consideration of the risk assessment. Is that correct?

A. Correct.

Q. Can you just read through what is there please?

20 A. “1424 call between myself and Dr Paula Beever. Summary details as follows. Both agree that the plans lack detail. Purpose unclear. Questioned whether the plan assumes zero ignition risk or that the fire poses no risk. They only know that the atmosphere is safe in certain parts. How will they assess and manage the areas we don’t know about. What has been the substantial change that leads them to think they can go in.”

25
Q. So can you just comment on that in relation to what you described before as the role of the experts group in the terms of reviewing the risk assessments which were being produced?

30 A. I think I should, in doing so, just be clear in having sat through evidence last week it is now clear that Mines Rescue were not looking to enter into that mine. We were acting at that stage on information that suggested they may have been and were asked under urgency to review the plan. In doing so the role of the Wellington base group was

to consider the issues, and as is clear in my log it is clear on the actual documents themselves there were significant gaps and we felt those gaps had the situation been that Mines Rescue were looking to enter which, as I say, we now know not to be the case, we were very clear in reviewing the plan that there were too many gaps in the planning material or in the risk assessment, the risk was too great and that under no circumstances should anybody be entering the mine.

1235

Q. And can I just take you, Ms Basher, to the following entry, and can you just tell the Commission, Mr Stuart-Black, what information you then conveyed to the police in relation to your view that you had formed?

A. Really, it, in summary I've just outlined, so we advised the police that the collective advice from Dr Paula Beever and myself on behalf of the New Zealand Fire Service that was on the basis of the information available to us at that point in time was that we didn't believe that it was safe to enter the mine.

Q. And did that conversation take place before or after the news of the second explosion which happened pretty much at that time?

A. I mean the conversation occurred at 1434. I don't recall what time the explosion happened, but as we, from recollection as we finished the conversation it was as near as tail end of the conversation or close to that, the phone rang in AC Nicholls' office and then we were advised of the fact there'd been an explosion down at the site.

Q. So after that very sad event and in the ensuing days the operation changed its focus to what has been termed one of recovery. Can I just take you now into that phase of the operation? What was the role of the experts group in that recovery phase and was there any difference from the role that it might have had in the rescue phase?

A. From my observations, was clearly there was a change in part of the focus and that being to one now of recovery. The focus was one that still was all about effective and timely decisions, was about supporting those personnel who were committed to the scene in terms of enabling them to undertake their role.

Q. But there was a much wider range of activity that was now required wasn't there at the mine site?

5 A. There was in the sense that clearly there was the issue around a now somewhat more detailed process stabilising the mine, but again from a reference group point of view, essentially our role didn't change. We were still there to peer review either plans or risk assessments because any action either in front of the mine, near the mine or above the mine would put people in at-risk spaces. So we were there to assist police in understanding that risk.

10 Q. Now you heard Mr Devlin's evidence last Thursday about the New South Wales approach to incident management and assessing risk. He produced a document called, "*A Guide to Reviewing a Risk Assessment of Mine Equipment and Operations*," which for the record is summation reference CAC0090. Have you had an opportunity to read that document since then?

15 A. Yes I have.

Q. Can you comment on it from your emergency response perspective?

20 A. It's clear it's a useful tool. It's a guideline that provides a number of thought prompts for somebody reviewing a risk assessment to ensure that it is being done in a comprehensive way. It requires then a sign-off at the end by clearly a competent authority to say they've reviewed the plan. I don't see anything in the document that in any way is different to what the review group did, the one exception being that it's in a printed format rather than what was being done through professional expertise
25 of the review group. What the plan doesn't do and clearly noting this document produced by New South Wales is a guide to reviewing risk assessments, but also speaks to around equipment and operations but it doesn't provide any detail about the operational plan and this is perhaps where one of the issues was that the reference group kept
30 touching on is that we would often see a risk assessment but what we would not see is an operational plan and so if you're reviewing a risk assessment, and perhaps as an analogy, if you've got a risk assessment for the foundations for a building which you may tick off and say, "Yes, we think this risk assessment is great for the foundations

we're going to do," but then you later find that it's going to be a 20-storey building put on foundations that's perhaps only appropriate for a single storey dwelling, then it doesn't work.

1240

5 Q. You commented on this, and there's a reference in your brief, in relation to this isn't there in respect of the need for a wider plan, can I just take you to paragraph 61 of your brief, if you can just read that out please?

A. "I was also concerned about the overall process for preparing and completing the risk assessments. I raised those concerns on a number
10 of occasions. In particular, I discussed them with Superintendent Christian at Police National Headquarters on the afternoon of the 27th of November. At this time, risk assessments were being prepared in respect of the proposed inertisation of the mine using the GAG but I was concerned that there was no plan for sealing the mine. I explained to
15 Superintendent Christian why it was important to have a full picture of what was to be achieved. I expected to see a flowchart showing all of the steps being taken and what would be needed to be done to have a completed mission."

Q. And so, can you relate that comment back to what you've just said in
20 respect of what you thought might be missing from the New South Wales guide? Just briefly.

A. A risk assessment, in this context, is developed on the basis of an operational plan, so what is the end-state we're trying to achieve? If your plan only looks at, say, one part of a 10 part jigsaw, you may
25 actually be then building in errors into your risk assessment process if you don't see the totality of what's trying to be achieved. So, my comment here to police is we need to see the whole picture and in no way is it a criticism of the New South Wales guide, it serves as a good template, I don't believe it shows the whole picture and that picture
30 is to really tease out what the operational plan is and then consider the risk associated with a complete plan.

Q. Now, you heard Mr Devlin's evidence as well, that risk assessments in the Australian context can be turned around quickly, without an elaborate decision-making structure, I think generally in a couple of

hours, I think he said on a number of occasions during his evidence. What's your comment on that in the context of Operation Pike, given what you've just said also about the value that that risk assessment guide had?

5 A. A two-hour window clearly is achievable. It was achieved on a number of occasions in my experience with the response to the disaster, there were a variety of means to communication information, whether it be from the mine site or from the police station here in Greymouth to Wellington and other places, so yes, I mean, two hours is achievable
10 and I'm very clear in my observations and in my log that on a number of occasions things were turned round extremely quickly.

Q. Could we just look at a couple of risk assessments and I don't have too much longer moving towards the end of things, but let's just look at a couple of examples. Can we first look at the risk assessment for the
15 installation of the GAG to insert the mine.

WITNESS REFERRED TO RISK ASSESSMENT FOR INSTALLATION OF GAG

Q. Now, the plan as to complete that risk assessment process so that the installation could proceed from about 1900 hours on the Sunday the
20 28th of November, is that correct?

A. Something like that I'd need to check for detail in my notes.

Q. But the fourth explosion intervened on the Sunday while that process was still underway, is that correct?

A. Yes.

25 Q. Can you just read from paragraph 65 to 67 of your brief please?

A. "Following the meeting, I continued in the work of assessing the risk plans for the GAG installation."

Q. Just to interpolate, the meeting that's referred to there, that's the meeting that took place that was referred to in evidence last week at
30 Police Headquarters with the fire service about a potential handover of control of the lead agency role?

A. That's correct.

1245

Q. Yes, okay, so read on please?

- 5 A. "I was aware that the mine company was hoping that the plans could be signed off quickly so that work could proceed and there was a view that the time immediately following the explosion was a good time to implement them. I reviewed the plans in detail. I considered they were incomplete and inaccurate and did not provide a satisfactory basis for the installation work to proceed. In particular, they contained no detail on atmospheric monitoring, the proposed second borehole or the predicted outcomes from the inertion operation, including how the vent would be closed and how it would be known that inertion had been achieved. Late in the evening, at around 23.30 hours on the 28th of November, I discussed the plans with Assistant Commissioner Nicholls. I made a call to Mark Boere, who confirmed that no information was known to him in relation to the point of concern."
- 10
- Q. And just to interpolate there, Mark Boere is?
- 15 A. He's fire service area commander based down here in Greymouth and across for the West Coast.
- Q. Thank you, continue please?
- A. "I then spoke to Inspector Mark Paynter, manager specialist search group, dive team and national bomb data centre" – he was working with the team at Pike River Coal in developing the plans – "and again to Assistant Commissioner Nicholls. My advice to Assistant Commissioner Nicholls was that it would not be safe to sign off the risk assessments at that stage. It was clear that further work needed to be done by those responsible for preparing the assessments. Assistant Commissioner Nicholls indicated at around midnight that he had accepted the advice and would inform the police personnel at the mine that the assessments could not be signed off that night."
- 20
- 25
- Q. Now that conversation is also recorded in Assistant Commissioner Nicholls' brief of evidence at paragraphs 296 and 297. You've read those paragraphs of that brief?
- 30
- A. Yes, I have.
- Q. The second of the risk assessments that I'd look at is the one for the sealing of the mine ventilation shaft. Now that took place on the 30th of November, 1st of December, is that your recollection?

A. Yes, it is.

Q. Could I please have document number PIKE.14803?

WITNESS REFERRED TO PIKE.14803

Q. So this is the risk assessment that we're referring to here?

5 A. That's correct.

Q. What would you like to comment about in relation to this document?

A. Is there an email record?

Q. Well, we'll come to the email record shortly, but if you could just talk about the assessment itself?

10 A. Yeah, well there's specific comment in my email in terms of areas of concern with the risk assessments, so clearly, you know, there are signatures on the document from individuals stating they're comfortable with the intent and the content of the document, and one of the first issues that struck me, I kind of do initially a very quick flick through
15 before then getting into the detail, was there's a later part within this document, there is a list of persons stated to have been involved in developing the risk assessment with a space for them all to sign to confirm they have been involved, and there were no signatories to the document.

20 Q. Yes, can I just refer to page 5 of the document, just to illustrate that please? Was that the page?

A. So here we can see on page 5 the reason why, and certainly this was only one of a few issues which I flagged. The reason why I picked up on this issue is because it was critical that any risk assessment or plan developed at the scene involving the experts with responsibility of
25 conducting any entry into the mine or any activity around the mine, their signatures are important, because what it shows us is that they have been formally engaged, and I spoke earlier that the intention within this whole process was to ensure that all parties had a voice and so when I
30 see in this case a risk assessment where there are not signatures from all parties, that's a cause for concern and a request back into the police system, "Please can you follow-up and check that these people have actually been involved."

1250

Q. Ms Basher, can I please have the email of Wednesday the 1st of December at 6.52 am, which I'll produce as an exhibit.

WITNESS REFERRED TO EMAIL

5 Q. So this is an email dated Wednesday the 1st of December at 6.52 am on that day?

A. Correct.

Q. Was that, and was the request there from Assistant Commissioner Nicholls, "Your views on this latest risk assessment would be appreciated." Is that the document that you've just been referring to?

10 A. Yes it is.

Q. And noting the time of that request, can we just go to the last page of that document please Ms Basher. So you replied at 7.29 am?

A. That's correct.

15 Q. And can we just highlight the sections, page 4 and page 5 there just in the middle of the page there please. So can you just comment quickly on what you said in your response there?

A. So three key questions. Clearly, we're trying to turn the space or make the mine inert. The issue I flagged is that is we're going to do gas testing I would expect that we would know ahead of time the kind of
20 levels we were looking to achieve and have some means of actually assessing whether that we've actually achieved it. There was uncertainty around the sealing procedure and there's comment there, and particularly because the plan at that stage didn't provide them commentary around making sure that oxygenated air didn't go back into
25 the shaft. The third point I've just spoken to, I flagged the issue around the second borehole because drilling was ongoing, and we've heard about some of the understandable challenges in drilling the boreholes, but clearly that was essential if we were going to use boreholes as a means of doing more atmospheric monitoring, and there was no
30 mention of that within the plan. And then finally the last point I've already spoken to.

EXHIBIT 29 PRODUCED – EMAIL FROM ASSISTANT COMMISSIONER NICHOLLS TO JAMES STUART-BLACK

1253

Q. So just to conclude and comment about this, in relation again to the contribution that your team was making, your group, your expert group was making to the overall progressing of the operation of Operation Pike?

5 A. In my assessment, and I've stated previously, the role of the group is not one of trying to second-guess the technical advice coming from either Mines Rescue, Pike River Coal or other parties, they're clearly areas that they have technical expertise in, the role was to provide some independent peer review and amongst other things ensure the process was robust.

10

Q. Now you heard suggestions last week from the Australian experts and from others that in Australia under the New South Wales practice, particularly the statutory mine manager would take the role of the lead agency in the incident and that the mining personnel would be responsible for the risk assessment process. How does that notion fit with the process as you have understood it, sorry, as you have explained it to the Commission this morning?

15

A. The approach we heard last week, both from Queensland and New South Wales is different in part to the approach here within New Zealand in terms of giving statutory footing, that the common theme, which I think is the really important part, is that the actual developing of an operational plan is done by the experts. So we hear in Queensland or New South Wales the Mines Rescue individuals and several developing core technical options, we've seen that in Queensland and New South Wales that plans go through a review process. We've heard in evidence last week that on occasions that review process may need to be sent to another layer away from the site. Frankly I would see the majority of things are akin to what actually occurred down here in the Pike River context.

20

25

30 Q. And finally, penultimately sorry, would you have found value in having a Mines Rescue expert as a member of your risk assessment review panel?

A. Mines Rescue experts have to be involved in the process. I believe where they can add the most value is in the layer that is actually

developing what I'd call the tactical response plans in terms of the issues around entry and operations underground, that is their real area of expertise. I'm not, personally, I'm not of the opinion that having a Mines Rescue person involved in the review process at that strategic level would've had any material outcome on the process.

5
1256

Q. And that's because of the nature of the role which was, essentially, a review role in accordance with the New South Wales review document that we've discussed, is that correct?

10 A. That's correct, yes.

Q. So, now finally I'd just like to ask for your view on one other matter which was mentioned by Assistant Commissioner Nicholls during his evidence when he was talking about what could've been done better. He referred to the need for multi-agency planning to cover a major explosive event in a coal mine and was several mentions of that. Now, the fire service are very involved in operational planning and preparation have you got a comment on the benefit which such an exercise might have?

15

A. I think, if we put to one side, statutory footings and how sign-off is achieved and regulatory frameworks, fundamentally I completely agree with what Assistant Commissioner Nicholls said and other people have spoken to. Training and exercising is key to ensuring that you have robust and appropriate plans in place should an incident occur. Your exercising regime is your real sole means of auditing and validating your planning assumptions. Secondly, it provides an opportunity for people to get an understanding of each others experience and capabilities, how resources may be used and there is a wealth of research that speaks to the stronger the personal relationship between those involved in response, the stronger your outcome, because there is that kind of relationship. From a fire service point of view, we have undertaken some exercises involving Mines Rescue and certainly down here on the coast including some of the rail tunnels. The more exercising, frankly, the better and you get a far more robust set of plans and a far more solid response if you've done all that work ahead of time.

20

25

30

Q. Thank you Mr Stuart-Black for your evidence and ask you to remain for any other questions which might come.

MR BUCHANAN ADDRESSES THE COMMISSION

**THE COMMISSION ADDRESSES COUNSEL – APPLICATIONS FOR
5 LEAVE TO CROSS-EXAMINE – ALL GRANTED**

COMMISSION ADJOURNS: 1.00 PM

COMMISSION RESUMES: 1.59 PM**CROSS-EXAMINATION: MR MOORE**

Q. Mr Stuart-Black, how did you feel the CIMS model operated in this particular case?

5 A. Within the context that CIMS is a management tool. It is a tool that has been around for a number of years and is well understood across agencies. It was applied in a manner that is largely consistent with the CIMS manual. Interplayed with the CIMS approach which is a management tool, was then the positive and strong organisational
10 engagement and it was effective. It did what it's there to do.

Q. What, in your view, are the elements of CIMS which allowed it to work well in these circumstances?

A. I think beyond what is perhaps the more obvious in terms of common terminology and a flexible system that allows you to expand or contract
15 as required it's set, I think, for an appropriate division of responsibility and labour in terms of having some quite distinct areas, but perhaps as importantly is the fact that it was and is so well understood across the emergency services community but it actually allows for effective use.

Q. So when you talk about well known across the emergency services
20 community, what agencies are you talking about?

A. More routinely so what I'd refer to as your 111 services, so police, fire, ambulance. If you look at the agencies involved in redeveloping CIMS you'll see New Zealand Defence Force, Department of Conservation particularly because of their rural fire actions, the national rural fire
25 service are clearly involved, the Ministry of Civil Defence and Emergency Management. So agencies that have clear significant roles in co-ordinating the response to incidents, be they small scale through to large events of national significance.

Q. A crisis or emergency arising from an event in an underground coal
30 mine, is that something at least from your perspective which deserves particular or special treatment, say as compared to other emergencies which you encounter?

1402

A. I think all incidents require a range of skills and layers of knowledge at different parts of the response. Within the context of a mine incident then clearly there are parts of that response that require quite detailed mine rescue knowledge, which is why it was so important, I believe, that
5 Mines Rescue were at the forward operating area where they could commit that knowledge. The wider issue of co-ordinating the response is one which I think is best done within an environment and using approach that is routinely used, tested and exercised. And perhaps as an example towards that, or not so much an example but to expand, the
10 way we respond to incidents on a routine basis that the closer to that model we can use if it becomes an event of national significance then the more effective our responses. So if we use terms, we use processes, we use procedures which are familiar we're less likely to find choke-points either in information flows, decision-making or anything
15 like that. If we have an instance that we then introduce a wholly different or significantly different response framework, i.e. we're creating a step change in the process then all that familiarity, all that understanding, all that institutional knowledge, which is transferred from one event to another, automatically falls down. So there is a clear need,
20 you know, if we have a mining disaster you need mines expertise at a forward arrow and providing input. There's no dissimilar if you have a building fall down, you need people who know how to deal with that building collapse as part of that process but working within a wider permissive environment led by a competent lead agency.

25 Q. I mean certainly in the New Zealand context there are all sorts of different underground coal mines of different size, of different geographic location, run by different organisations, and obviously the nature of the emergency can change can't it, could be a flood, it could be a collapse, it could in this case, as it was, be a fire, does that
30 variability have an influence in terms of the way in which you would prefer a model to operate?

1405

A. Within general planning terms, you have site specific plans or you may have a general plan and a site specific plan may speak to certain

nuances are particular to that area, ie, where there are control valves or immediate notifications and so on and so forth. Beyond that, a plan has to be functioned based on, ie what are the functions that need to be undertaken rather than named to individual people and it needs to be developed in a way that is permissive and flexible, because let's say you've got a plan for every perceived eventuality. Two things, one, there's always going to be the one thing that you didn't see and you didn't train for, you didn't plan for and secondly, in my professional experience, I have yet to see a disaster or emergency unfold in a way that is true to something that's sitting in a plan. So your plan has to allow for that flexibility, it sets out the conditions and the framework within which you're going to work.

Q. In this particular case, we know that there were really three levels of control. There was the forward command there at the mine, there was the incident controller, Superintendent Knowles in Greymouth and there was the response co-ordination in Wellington. There's been some criticism about this three-tiered sort of approach. Do you have a comment about that?

A. I think that there will always be observations after the fact where people wonder whether maybe a different system or a different process, that the distinction between a forward command, an incident command and a response co-ordinator, that's entirely permissive and in some respects, encouraged within the CIMS manual, either because of number of sites or because of the significance of a particular incident. So I think it was entirely, consistent, entirely appropriate. I think where that there's criticism, I would suggest that largely that is, and without disrespect, is largely from people's lack of understanding about the roles and functions of those groups and the clear distinction between the activities that were to be undertaken. To my mind, it was appropriate and was effective.

Q. Do you have any examples of the shortcoming that you've just talked about, in this context?

1408

- A. The shortcoming I would see is not in terms of the structure but it's more in the application of part of that structure. There's been comment made, I heard last week, around the use of the incident management team. I attended one IMT meeting at the incident site. It would be fair to say it was not conducted in a way that I would normally expect to see. There were far too many people in that meeting, you know, span of control, if you take an ideal model which is somewhere between a one person with a span of control over between three to seven people, the ideal being around five, we saw both in the organogram that was presented last week but also on evidence that at times the numbers were huge. There is, I would suggest, an opportunity to identify some of those issues post-Pike River, to consider how incident management teams are run in the future in a way that ensures they are timely and they really are focussed on the particular issues and don't become unwieldy.
- 5
- 10
- 15 Q. Do you run IMT's or have experience in running IMT's yourself?
- A. Yes, I've conducted a number of IMT's at different levels. I've done them both in a developed country context where English is the first language and I've done them in developing countries where English is not the first language. My personal approach is perhaps slightly more ruthless than others, in that I'm very strict about who I expect to see within the IMT, the level of preparatory work which I anticipate will have been conducted beforehand. So those looking at planning an intelligence have done just that, all those looking operations, and it is not uncommon for me not to have chairs in the room with the idea being then that you keep the meeting short and succinct and you don't give people the opportunity to sink back with a coffee, particularly when you're dealing with time critical issues.
- 20
- 25
- Q. So you make people stand, a bit like the old Privy Council, is that right?
- A. Akin to that, yes.
- 30 Q. And as far as those IMT meetings are concerned, ideally, looking at the circumstances of this particular case, what would be the skill sets of those who would attend the IMT meeting?
- A. To an extent it's going to be relative to what the issues are, they'd need to be discussed at a phase in an operation and you would adjust and

advise people ahead of time of who you would expect to see there, but as a minimum as an incident controller, you would expect somebody there who can represent operations, planning intelligence, logistics, so your three core, mainstays. You would always want a safety person there and then one or two others depending on the incident. The issue is though if you're looking at a particular phase in an operation, you may not necessarily want the leader of the operations group. You may ask for a particular expert within that group to be present and provide you that expert advice, so you tailor it accordingly.

5

10 1411

Q. On the occasion that you attended an IMT at Pike River, do you remember who was taking the primary lead role at that?

A. Yes, I mean I only attended one IMT on site. Police were the lead for it. However, at that time and to be fair, I arrived perhaps five minutes into the IMT. Mr Ellis was at that stage in front of the whiteboard facilitating the discussion, I think drawing on advice and opinion and comment from within that group.

15

Q. There's been some suggestion and I imagine you may have been in the courtroom when this was ventilated, but there's been some talk about the desirability of the mine owner or management taking a lead in terms of forward command or incident control. Do you have a comment about that?

20

A. Yeah. I've listened with interest to the comment. I personally and professionally believe that goes against all the principles of effective and comprehensive emergency management.

25

Q. Why?

A. Well I think that there's a clear role and clearly an owner of an establishment has a duty of care interest in the people who have been affected, and so clearly they have a part to contribute because, you know, it's their staff, and clearly they also have or may have specific knowledge or information that can assist somebody running an incident. But fundamentally the role of co-ordinating a response to an incident is a role that requires expertise and experience and it's expertise and experience that is not just from a textbook and that is not one that's just

30

come from an exercise and I don't, in saying that, condemn the value of both learning and doing exercising, but it actually comes from learning and experience and doing, and so to my mind the role of running an incident has got to be left with those people who routinely run response to incidents.

5

Q. Which is who?

A. Well typically in New Zealand on your week in, week out, the two agencies that do most of the response to emergencies are police and fire.

10

Q. You would also have been present when it was suggested that Mines Rescue might have a role in terms of leadership at forward command incident control. You remember hearing that?

A. I do, yes.

Q. What are your comments in relation to that?

15

A. Mines Rescue have clear expertise in undertaking technical rescue functions within a mining context in a mining situation and they have a critical, I'll stress, an essential role, in supporting the forward operational planning of activities. Again I would draw a distinction between expert tactical skills that are about dealing with particular rescue functions. There's quite a distinct set of skills from those required to co-ordinate a response. That is in no way in any way, shape or form a criticism of Mines Rescue. Mines Rescue are experts in conducting the rescue function and I would suggest that in an incident where there may be one or two persons involved, then it would be entirely appropriate for an organisation such as Mines Rescue to front-foot that.

20

25

Q. Just pausing there. If you're talking about, you said one or two people involved, you're talking about a mining emergency where there might be one or two people trapped in a mine or otherwise compromised.

A. Yes, sorry.

30

1416

Q. Yes.

A. Yes, that's correct, yeah. Given the significance of this particular disaster, given the numbers of people involved, both national and international people, the volume of resources, the duration of the

incident, is such that I maintain the position that an instance such as this required strong leadership from an experienced organisation well accustomed to running the response to difficult issues. Again though, repeating what I said right at the start in answer to your question, Mines Rescue do have a key role with their expertise in supporting that forward command function.

CROSS-EXAMINATION: MS SHORTALL

- Q. Mr Stuart-Black, you have a BA in international disaster management. Is that right sir?
- 10 A. That's correct.
- Q. And a background in emergency management and disaster responses, right?
- A. That's correct.
- Q. And you were responsible for compiling the fire service's log which was at NZFS0010, is that right?
- 15 A. If that's the reference number, then yes.
- Q. And the log records, I believe, your brief notes which you did, said and observed during the first few days of the incident. Do you recall that evidence in your brief?
- 20 A. Yes I do.
- Q. So if you misunderstood something or got it wrong, that misunderstanding or inaccuracy could still be recorded in the log, right?
- A. If I was unsure of information then I will seek clarification of that information.
- 25 Q. Is it possible that information in your log reflects a misunderstanding or inaccuracy?
- A. It is always possible that situation could eventuate.
- Q. You have no expertise in underground coalmining do you?
- A. I have expertise in the conduct of confined space technical rescues and managing issues with hazard materials, including atmospheric conditions.
- 30 Q. But you have no expertise in underground coalmining do you?

A. That is correct, and nor did I at any stage allege to do so and nor was my role one that required that particular expertise.

Q. You have no expertise with underground coalmine gas?

5 A. Do I have expertise with gases such as methane, carbon monoxide, oxygen, ethylene and so on, yes I do. If you, in some way, are associating that there is a particular distinction between gases that are underground versus elsewhere but are the same gases I'm not entirely sure I'm seeing where you're coming from?

10 Q. Well prior to the 19th of November did you have any experience with explosions in underground coal mines?

A. No.

Q. You're not a chemist?

A. No.

15 Q. And you have no experience with underground coal mine gas interpretation do you?

A. No I do not.

Q. Now you referenced your view of IMT meetings and I just wanted to confirm, that view's based on attending just one IMT meeting at Pike River isn't it?

20 A. I attended one meeting and my observation in that meeting was there were perhaps too many people present at that meeting for it to be effective, that's correct.

Q. And then you discussed your experience attending IMT meetings elsewhere, do you recall that evidence?

25 A. I do recall that.

Q. And none of those were IMT meetings called following an explosion in an underground coal mine were they?

30 A. They were not. And I would suggest it would be an extremely large leap in any way to assert that an IMT for a mine incident is in any way different from an IMT for another incident other than the subject matter, but the principles of effective co-ordination and managements are the same.

Q. So to the extent that an emergency response plan provided for the establishment of an IMT would you accept that the structure existed?

A. I believe based on evidence that's been provided by others that there was some structure already available.

Q. At Pike River Coal?

A. I believe that to be the case.

5 1420

MR HAMPTON ADDRESSES THE COMMISSION – SEEKS LEAVE TO CROSS-EXAMINE - GRANTED

CROSS-EXAMINATION: MR HAMPTON

10 Q. Mr Stuart-Black, you've heard the proposition in terms of what I've just put forward, it seemed, and I've been absent for your evidence-in-chief this morning and I hope I don't get it wrong in any way, but listening to discussion with Mr Moore, it seems that there's absent from your structures that you've been talking about for the future, any reference to, assuming we have it in New Zealand, a properly resourced and funded
15 inspectorate of coal mines with chief coal mines inspector. Where would that person and his inspectors, sit in relation to the structures you've been talking about?

A. Given the suggestion of a mines inspectorate and some function has in no way been teased out or considered in the context that we operate
20 within New Zealand, I wouldn't be in a position to even begin to try and assume how they would or wouldn't play a role.

Q. Have you looked at the Queensland model and where the coal mines inspectorate sits in that model?

A. I have very briefly looked at the evidence and information supplied by
25 both Queensland and New South Wales. I would suggest that in considering any system for New Zealand, it needs to be a system that is appropriate to the conditions that we face, both in terms of numbers of mines and the way in which we routinely manage emergencies. That may or may not lend itself to a model that is currently used in Australia.

30 Q. But assuming we do get a "proper inspectorate, properly funded and resourced," there must be a role for such an inspectorate in these sort of events. They'll be the people, hopefully, familiar with the mine, the

conditions underground, what's been going on underground, the structure of the mine, the structures within the mine and so on, won't they?

5 A. I'm not sure I can comment on what is an assumption of yours. I'm not trying to be evasive.

Q. You haven't applied your mind to it?

A. You've assumed a model, and it's not something I have sat and given consideration to.

10 Q. Right, so you haven't factored it in, in terms of your thinking at this stage?

A. My role here today is to provide evidence based on the information of what I've seen rather than what may or may not be for the future.

Q. Well, Mr Moore was asking you really but, I won't enter the discussions but thank you Mr Stuart-Black.

15 **CROSS-EXAMINATION: MS BEATON**

Q. Mr Stuart-Black, I take it from the evidence this morning and again, just briefly this afternoon, that your experience, perhaps prior to joining the fire service in 2004, I take it was in the UK?

20 A. That's correct. Sorry, to qualify I had about 10 or 11 months working for the Ministry of Civil Defence and Emergency Management here in New Zealand but before that, yes, in the UK.

Q. You confirmed to Mr Moore that you'd been involved in a number of IMTs, or incident management teams, prior to, well, throughout your career I take it, would that be correct?

25 A. That's correct.

Q. Have you ever been an incident controller in that particular role yourself before?

A. Yes I have.

Q. On many occasions or?

30 A. A large number of occasions, yes.

Q. In your view then, given that experience as a role as an incident controller, is it necessary for the person who fills that role to

have had training, and I'm talking in the New Zealand context, on the CIMS model and how it's intended to run?

A. I'd say it's essential.

Q. Why?

5 A. CIMS has since '97, '98, has been adopted as the incident management tool that'll be used in the response to management of emergencies within New Zealand and I'd suggest it'd be almost impossible to run an incident if you didn't have an appreciation of the core terms, the core principles of command and control in the way in which structures should
10 be established to assist in response to an incident.

1425

Q. Sir, I'm aware that you've been in Court last week and you've referred to you were listening to the evidence that's been heard and you've been asked about various roles for Mines Rescue and mines inspectors. Do I
15 take it then that before representatives from either of those organisations could adequately fulfil the role of an incident controller they would need to have training in the CIMS model?

A. CIMS is a management tool. Having an understanding or indeed a qualification in CIMS is not in its own, or on its own, sufficient to lead
20 somebody be an incident controller. You would then need a wider understanding of emergency management principles, their arrangements more generally within New Zealand. I suggest you would also need to have the more routine skill and practise in using these on a regular basis and I – in answer to a question from Mr Moore earlier, I
25 spoke to, in responding to an incident you apply business as usual models, and then for a significant event, you would ramp up that model but using consistent language and consistent approach that comes from transferring knowledge from one incident to another in terms of the experience. If you step-change either in terms of a model that is unique
30 for an incident, or you take people who don't routinely practise outside of exercises in doing, applying these skills, then the system's just going to fall over at the first hurdle.

Q. I understood before that your view was that in the context of a Mines Rescue Service in this country that there was clearly a, "was essential" I

think your words were for them to be involved at the forward command level and have input at that front-end point, is that my understanding?

A. That's correct, yes.

5 Q. Do you, or what's your view on Mines Rescue in the context of a similar type situation taking one of the leadership roles, for example, underneath the incident controller, so for example, in operations planning, perhaps not logistics in the circumstances, but operations or planning, what's your view on that?

10 A. I would – personally, I would not be uncomfortable in certain conditions with representatives from other agencies leading particular functions within the incident management group.

15 Q. I just want to ask you a couple of more questions arising from the structure of the CIMS response that occurred at Pike and perhaps to assist you, I know you've read it, but just to assist you and other, if we could have please, a paragraph from the National Commander Mike Hall's brief of evidence which I understand you've read, Mr Stuart-Black and it's paragraph 37, which is, Ms Basher, page NZFS0017/11?

WITNESS REFERRED TO NZFS0017/11

20 Q. If we could have highlighted paragraph 37 please? You will see there, Mr Stuart-Black that Mr Hall describes the fact that at Pike the response co-ordinator's role in supporting the incident controller extended to actual decision-making on what he says is a range of important areas and he describes that as "unconventional," in terms of the usual
25 application of CIMS. Do you agree with his comment that that's unconventional?

30 A. CIMS, the CIMS guide book speaks to a philosophy and a set of guiding principles. Within the New Zealand Fire Service we have a command control technical manual that articulates the way in which we then apply CIMS within our own environment and I would assume, I don't have firsthand knowledge in this, that police would have a similar document that articulates the way in which they conduct their incident management in accord with CIMS principles. There may be something in the police approach that allows for that, because I'm certainly aware

of other incident types where the response co-ordinator has quite an active role in the decision-making, so there could be transferring in that sense. Similarly there is nothing within the CIMS that expressly prohibits that role and in fact the, if the response co-ordinator can be used when a particular incident is complex, then I think it's entirely appropriate that some of the decisions will be referred up.

5

1430

Q. Mr Hall goes on to say in that paragraph that CIMS envisages response agencies having sufficient flexibility to organise the response in the optimal way for the incident. From your perspective, and I know it was at a national headquarters level, but was it an optimal way?

10

A. I think in broad terms yes I believe it was a permissive and an enabling environment that was appropriate to the New Zealand context given the nature of how we normally manage incidents within New Zealand. My question mark comes more into the IMTs and that is about the opportunity for improvement. Admittedly, I only saw one IMT but I would think it's fair based on evidence given from others. I wouldn't be alone in this opinion, that there are opportunities for improvements in the way in which IMTs are conducted.

15

Q. Prior to your attendance at that IMT meeting that you told us about, had you been aware about the size of the IMT meetings that were occurring at Pike?

20

A. Anecdotally, yes.

Q. Had you passed on your concerns about the size of the group that was meeting to anyone else?

25

A. I discussed it within the fire service context in terms of speaking with colleagues because it came from colleagues there. In our discussions we were not there running the incident. It's not for us to go and tell other people per se how to run their incident. It was, when the comment was put to me, I heard it at the very beginning of the incident, and as I understand it, with time the IMTs became more structured, but no, in terms of beyond the fire service, I didn't raise it with anybody.

30

Q. Do you recall when it was that you were in Greymouth and obviously at Pike River and attended the IMT?

A. It was, the GAG was in operation. Beyond that, without checking, I know I have other notes, but without checking those notes I couldn't say when.

5 Q. In your view, in following on from your evidence this morning, was there sufficient flexibility within the Pike structure for those people on site at forward command to be able to make quick decisions if they needed to?

A. Noting the fact I was only in attendance for the one day, if perhaps I just speak to the concept and the principle.

Q. Yes, that's fine. We'll come back –

10 A. The co-ordination and decision-making frameworks were established in a way that was intended to be enabling or empowering at all levels, with the notion being that perhaps once certain quality assurance processes had taken place and a set of parameters had been agreed to cover left and right of the particular issue, then people could operate freely and
15 with, you know, latitude within that space. The issue, though, was about making sure people were actively engaged, and I spoke this morning by way of example, noting the expertise of Mines Rescue. You know, we were challenged if we hadn't seen Mines Rescue signature on documents because we were already keen to make sure the right
20 people were involved making the right decisions in the context of the incident.

Q. Prior to your actual visit, though, to Greymouth and to the Pike River site and attendance at that IMT meeting, when you were in Wellington and participating in the expert group, did you have any concerns at that point
25 in time about whether there was sufficient flexibility within the police's multilevel structure for those at the site to be able to move quickly if they needed to?

A. I didn't see that as an issue. There was nothing that was raised or discussed either through what you could perhaps call the command line
30 or through the communications line, and certainly I was in regular contact with fire service personnel on the site. I mean they were not there to speak on behalf of anybody other than what they were seeing and what their thoughts were, and at no stage did anyone from the fire

service side indicate an issue to me. So I didn't see any particular problem.

1435

5 Q. We don't need it back up on the screen but the last comment that the national commander Mr Hall made at paragraph 37 was, "In my view the most important point is that the decision-making arrangements should be clear among the participants so the incident can be managed effectively. You agree with that I take it?

A. Absolutely, yes.

10 Q. And was it clear from your perspective in Wellington?

A. It was very clear in Wellington, I can't speak beyond Wellington?

15 Q. Were you aware while you were part of this group in Wellington, and perhaps I'm limiting it at this stage to up until perhaps the 24th, the second explosion, were you aware at that point about the different levels of decision-making ability between the incident controller and the response co-ordinator?

A. The process was established in the period between the first and the second explosion.

Q. Yes.

20 A. So it was an evolving process and certainly some actions were initiated on site for which there was no national awareness. For example, from recollection the initiation of the first drilling for a borehole, as time evolved then the decision-making and control regime was established.

25 Q. So you were aware, for example, that Assistant Commissioner Nicholls had responsibility for decision-making about a number of things which imagine you were here for last week, including sending of mine staff into the mine, the ending of recovery efforts and so-on. You were aware that those were decisions to be made at his level?

30 A. Yes they were, and what I would perhaps add, particularly on the issue of sending people into mine because there's a potential to see that, I suggest, the wrong way round where there may be a national process that says based on all the information available entry into the mine is approved, the actual decision within that context then rests with the

head of Mines Rescue or the individual rescuers because they have the right to say, "No," they had that veto point.

5 Q. I think there's also been evidence that the decision for physical closure of the mine would be one that would be referred further up the command structure from Assistant Commissioner Nicholls, I think, to Deputy Commissioner Pope. Were you aware of that, that extra level of decision-making ability?

10 A. Informally, well let me rephrase that, no, nobody directly told me that, given the significance of that action I would've been very surprised had that decision not been referred to the deputy commissioner or indeed the commissioner.

15 Q. Having this multiple level of decision-making structure, from your perspective in looking back now with the benefit of hindsight, would it be able to be streamlined? Would that be optimal to streamline it more, to remove one or more levels of that decision-making structure?

20 A. Decisions, there was a framework established to quality assure some core elements of the response and create an environment then that became enabling to people to conduct their operations and do specific roles and functions. I don't believe, based on what I saw, that that was a hindrance to the response. There are a number of examples of very timely reviews of information and report-back and there are clear examples where issues raised by the review team related to risk to life. And we have heard last week comments from others that indicate to me that at no time was our advice inconsistent with the advice and opinion
25 of a number of the experts that were forward.

1440

30 Q. In terms of the risk assessment process with which you were involved in is this expert group in Wellington, what was your understanding of, once a risk assessment had been sent up to your group and you all looked at it and gave an answer whether it be a positive risk assessment is sufficient or a negative one it needs further work, those are obviously my layman's descriptions, but were you aware where that advice then went? I take it you provided it to Assistant Commissioner Nicholls?

A. So, yes, we provided it to the response co-ordinator, so either Assistant Commissioner Nicholls or his alternate.

Q. Of course, yes.

5 A. Information moved in two ways and Assistant Commissioner Nicholls spoke last week about the issue of arcing and that he was speaking then about the command structure and he outlined that his, within a chain of command sense, his point of contact was to the PIC in terms of the forward commander.

Q. Which is the police incident commander?

10 A. Sorry, yes, that's correct. So, that happened, notwithstanding that though, and accepting the principle of not wanting to arc a command level, what was happening on a number of occasions, was direct communication with those forward at Pike River and I believe in evidence I spoke to earlier on Sunday the 28th, and it's annexed to my
15 statement, there is an example where we were speaking directly with a police representative at the site to say, "Look, hang on, we've got concerns here, we're not supplanting any command point, but can you fast track, if there's people in rooms near you, knock on doors and find out the information." We were trying to be as enabling as we could to
20 ensure that people were included.

Q. The scope of the risk assessments that your group looked at in Wellington, were they restricted only to tasks which involved entry of either equipment or personnel into the mine and sealing of the mine, is that as I understand it?

25 A. If you factor in things like that in drilling boreholes et cetera, yes.

Q. Yes. In terms of, or are you able to recall now how many risk assessments for different tasks that your group would've dealt with?

30 A. A dozen or more perhaps which were, sorry, I should qualify that. It's probably around a dozen occasions in the first phase where a risk assessment was reviewed but there may be a number of iterations coming back so that there could be 30 or 40 documents, I wouldn't know off memory, but there are probably around a dozen core, and I stand to be corrected it may be slightly more or less, ones that came through and certainly throughout the latter part of December there was a significant

body of work done then looking at what some of the more enduring options may be in terms of use of Floxal units and other things so there was more work done there.

5 Q. You said, "First phase," what period of time, just so we're clear, does that relate to?

A. Sorry, so maybe the period up to and including the initiation of the GAG and having that running and maybe the second borehole going in, there was a core concentrate of risk assessments there.

10 Q. And of that group of risk assessments are you able to comment as to how many were, again my words, sent back by the Wellington group to Pike requiring further work?

15 A. I can't recall off memory, what I can say is that as time evolved the attention to detail within the plans was far better and of less significant concern beyond, for example, things like not seeing signatures from the key parties that needed to be seen. So certainly the risk assessments improved with time based on what I saw.

20 Q. I asked you that because there's a reference in the brief filed by Lesley Haines from the Department of Labour, and I'll just read it to you, it's at paragraph 19 of DOL7770020005/6 where Ms Haines comments at the end of the paragraph, "I understand that police HQ, then either approved plans or most often sent them back for further work with relevant comments or suggestions." Are you able to comment on that, or not?

1445

25 A. I can't comment on the Department of Labour's perception of numbers of plan that went back, other than to say that they were not involved in all risk assessments, whilst they may have been sent the information, there were occasions where they didn't make a submission for reasons I'm not aware of, so I'm not too sure.

30 Q. You're referring to the Department of Labour representatives?

A. The Department of Labour, yep, so beyond that I can't really comment.

Q. Mr Stuart-Black, do you have any concerns from your perspective as to the length of time that it took before the rescue operation was formally changed to one of recovery, so after the second explosion on the 24th?

- A. Any decision to move from rescue to recovery is the hardest in the decision-making space, because it is a very definite statement to the people who have been directly impacted in terms of in this context within the mine. It's a very definite statement to families. It's a very definite statement to the public at large, and it's a decision that needs to be taken on the basis of all available information and fundamentally on the balance of probabilities, because it is not like sitting in a lab in a sterile environment where you're dealing with just ones and noughts, that are absolute. You're dealing first and foremost with human life and secondly you're dealing in often a space where there are shortages of information and I can say from personal experience and a number of incidents, most recently in Christchurch when we had to make the decision from moving from rescue to recovery, it was a decision that was not taken lightly. It's a decision that was full of competing opinion and conjecture, but was based as I mentioned a moment ago, on the balance of all the available information, and I believe that was a decision police respected, didn't undertake lightly and took at a time that on the basis and balance of information was appropriate given everything that was presented to them as the lead agency.
- Q. And do I take it that you're referring to the fact this was post the second explosion that the decision was made?
- A. That's correct.

QUESTIONS FROM COMMISSIONER HENRY:

- Q. Mr Stuart-Black, I'm interested in how the New Zealand Fire Service integrates its command and control structures for emergency management with CIMS. Now I understand you have a technical manual and that technical manual discusses CIMS and how the two fit together, is that right?
- A. That's correct, sir, yes.
- Q. Is it possible under your concepts at the fire service to have more than one incident controller if the incident is at a single site?
- A. It is possible that you rotate who the incident controller is given the 24 hour nature of an incident, and it is also – there is also the potential

that as an incident develops that control may be handed over to a different agency for either some or all of the continuing phases.

5 Q. Yes, well, subject to the fact you can't work 24 hours a day, the fire service running an incident at a single site, would have an incident controller, from what you've said and that incident controller would have ultimate responsibility for the decisions taken, according to your manual?

A. Within the limits of either their command level or what the incident is, yes.

10 Q. Yes. So it's not possible in that sense to have two incident controllers operating at the same time?

A. Not in the way we do things, no.

1450

Q. Is it possible to have two incident management teams operating?

15 A. At a – for a single site?

Q. At a single site?

A. That would be highly unusual.

Q. And does the incident controller always chair the incident management team?

20 A. Usually, although there will be occasions where either the individual responsible for planning, intelligence or operations may chair that team.

Q. And in your, the way you operate within New Zealand Fire Service, would the incident controller who has ultimate responsibility for decisions, would they be transferring any of those operational decisions to another level above them?

25

A. Yes there will be occasions when they will either refer through to their regional commander or up to the national commander or their designated alternate.

Q. And those would be operational level decisions would they?

30

A. They would be decisions that were deemed to have a significant bearing on the incident, ie one, that may result in loss of life, or have a significant impact to, you know, in terms of the media context or political context certainly there are situations where that may occur. In saying that, and part of this is the way fire service does business, for the most

part we push all our decisions forward. We don't do that much by way of remote co-ordination. A lot of ours is forward at the incident site or incident sites.

5 Q. So have you had experience in the past where the fire service is leading, where risk assessments are sent from the forward site of the incident to an incident controller who is somewhere else, and then on to someone else in the organisation?

A. Not in my personal experience, no.

QUESTIONS FROM COMMISSIONER BELL:

10 Q. Mr Stuart-Black, I've got a few questions for you. Looking at section 17 of your statement, you talk about dynamic risk assessment. Does that operate efficiently in the multilevel system we've been hearing about during this exercise, in terms of the fact that sometimes the definition of "dynamic" means decisions need to be made urgently?

15 A. Again, I think it speaks to, in part, the question just asked by your colleague. We operate in a slightly different environment. It is not, in my experience, that common for us to send risk assessments to others to look at because typically the incidents we're involved in from a fire service point of view are ones of very short duration, so therefore the dynamic risk assessment is appropriate and indeed we don't then have
20 much by way of a template risk assessment process. For enduring events our colleagues in rural fire we'd say slightly differently because they're most focused on campaign events, but our operations typically are very short in duration so we don't operate in that space.

25 Q. So if you were fighting a chemical fire which can be complicated and can go on for some time, you wouldn't be referring decisions back up the line to someone else that had been made by the fire commander on site?

A. Typically yes that's correct.

30 Q. Because I'm just trying to contrast a complex situation like a chemical fire with a coal mine which is really in some respects to some degree similar, but you wouldn't see the propensity for the possibility for that

sort of thing being controlled locally? You're still in favour of a three-level or a two-level system?

5 A. In the context of the disaster on the 19th of November, which involved a large number of people, requiring a large number of resources and some very difficult decisions, I think it was appropriate to have that extra layer. In incidents perhaps where we're talking small numbers of people involved much more locally focused, then perhaps that additional layer may not have been appropriate.

10 Q. With regards to New Zealand Mines Rescue did you know Trevor Watts at all? Had you been in contact with him yourself? Were you aware of the capacity and capabilities of –

15 A. No, not personally. From colleagues, people have always spoken in very high regard of Trevor and in my limited dealings with him have really just confirmed the high regard with which people, you know, hold Trevor in.

20 Q. I just want to move on to section 53 of your brief, talking about the expert panel. I know this has been talked about a bit, but you're talking about peer review. I'm just a bit puzzled about a peer review process taking place when none of the people on the expert panel were peers with the experts at the mine.

1455

25 A. Well okay perhaps then in terms of selection of language to the definition of a peer, absolutely, I'd accept that. Perhaps it's just because of any level I'm always very cautious about the word, "Expert," so I prefer more comfortably to talk about, "Peer," but perhaps in a slightly incorrect use of the word, that the rationale behind the group was a group of people with understanding of risk assessments and emergency management if you could consider risk assessments and/or operational plans with the intention of providing meaningful comment to police as the lead agency.

30 Q. And the people on that panel, I'm not decrying they're all experienced people, but I don't think any of them actually had any underground coal mine experience. I know Professor George is a geologist but he's not a mine or an explosions person, and the point I was making would be, I

accept what you're saying about Mines Rescue people being on that panel might be the wrong place for them to be, but what about an experienced mine manager being on that expert panel as well who's not directly involved with Pike?

5 A. I think there's - maybe answer it in two parts. I think first of all it's important to make sure that the expertise is plugged in at the right level and as you've just indicated my appreciation of the situation such that Mines Rescue were in the right place at the right time. With regards to a national group considering options, at the end of the day you would
10 always look at what is the nature of the group, what the role is and therefore what level of skill you need within the group. It was important, I think, that the group whilst had a decision-making role didn't seek to try and get into operation or tactical planning. I guess if somebody was involved in the group with that, say more routine mines experience,
15 didn't then seek to try and supplant planning, which should be done at the scene and we end up then complicating the incident, then at the end of the day you've got to keep a complete open mind and treat each incident accordingly.

Q. I thought I heard you say a minute ago that the situation that was at Pike was handled basically in a similar fashion to what would happen in say Queensland and New South Wales. Did I hear that correctly?
20

A. I think my comment was with a reference to the fact that operational plans are supported by risk assessments and those risk assessments are considered. And we heard under evidence last week that for some decisions, and I think this was in the context of New South Wales, it may
25 on occasion be necessary for somebody to seek advice and approval from somebody offsite and there was the two-hour timeframe that was referred to, and in that context I was saying there was a parallel that core bits of work were done forward, plans were developed, risk assessment were conducted and the difference between what was
30 spoken to last week, which was non-specific that on occasion it may be that approval was sought from elsewhere, in the Pike River context there was some parameters that were established.

Q. You talked about methane, carbon monoxide, ethylene, oxygen all being the same gas whether they're in a confined space or whether in a coal mine, and that's true, they're also the same gas whether they're in a coal mine in New South Wales or Queensland or New Zealand so why should New Zealand be operating any differently to much more experienced states such as New South Wales and Queensland for the same gases and the same problems?

A. Absolutely, I think we've got to be a bit careful about comparing apples and oranges with how we look at the issue. In broad terms, absolutely a mine is a mine and the intrinsic safety issues and concepts are the same. Then overlay that within the operating context and there are far fewer mines within New Zealand. The routine practice, and if we think in the Australian context where in Queensland there may be the MEMs approach, MEMs then sits within the AMES concept as well in terms there's the wider appreciation, over here we have CIMS. The challenge, and it's a comment I spoke to a little bit ago, is if you have techniques, management tools and processes that are routinely used, if you scale them up to meet the demands of a complex big incident then you do so successfully. If you try and step-change and use something that is not understood, that is not routinely practised and exercised on a day-in/day-out basis were you get the knowledge transfer you start setting yourself up for fail. My concern in any option in the opportunities for improvement and lessons identified from this, is looking to the future and then applying a model that is unsustainable and is actually not appropriate to the context in which we find ourselves within New Zealand, that doesn't mean there are not opportunities to learn things, whether it be from Australia, America, UK, Germany, wherever it happens to be, but we need to be careful that apply model that's fit for our purpose and not necessarily fit for someone else's.

30 1500

Q. Yes, the point I'm making is the statutory mine manager is the sort of common thread, if you like, that runs through all of our mines whether they're New Zealand or, and that person has responsibilities across a whole range of areas of responsibility in terms of skills and technology

he needs to understand and that's the point I'm making. I think that person should be the link, if you like, that can drive the system forward. The person who knows what he's talking about.

- 5 A. I mentioned a moment ago, we've got to look with an open mind as to where the information source has come from if that is a source of information that needs to be factored in then clearly consideration should be given to that.

QUESTIONS FROM THE COMMISSION:

- 10 Q. Mr Stuart-Black, in paragraph 6 of your witness statement, you record that in the first few days you provided advice to the police about a number of matters including, "The establishment of the decision-making structure for the operation." Did you advocate the setting up of a multi-level structure of the kind that eventuated?

- 15 A. The comment there speaks to a discussion where what I was encouraging was that there was an appropriate framework within which decisions were made and appropriate controls were in place, not about whether there was one, two or 10 tiers of command structure. It was about making sure decisions were done in a way that was enabling and appropriate to the situation and that there were sufficient controls to, amongst other things, record the fact that key decisions had been taken.

- 20 Q. Well, is the short answer to my question, no?

- A. That would be correct.

- Q. It's actually helpful to answer questions with a yes or no and then qualify if you can.

- 25 A. Okay.

- Q. So you didn't suggest that it was a good idea to have decision-making split between Greymouth and Wellington?

- A. No I did not.

- 30 Q. Have you had previous experience of the existence, the structure where you had an incident control point adjacent to the incident itself, as we had here, and then an operations room hundreds of kilometres away in Wellington?

- A. Not in New Zealand, no.

Q. So, for example, with the Christchurch earthquake, everything was dealt with in Christchurch was it, the decision-making?

A. Yes it was.

5 Q. Have you had previous experience of such a division of decision-making authority between, on the one hand, an incident controller and on the other a response co-ordinator as we had in Pike?

A. Not whilst I've been at the fire service, no.

10 Q. I understood you to say, in answer to one of the questions a few minutes ago, that there is nothing in CMIS to, and I think your word was, "Prohibit," the response co-ordinator having decision-making authority?

A. That's correct.

Q. Right. I wonder if we can have a passage that was referred to Deputy Commissioner Nicholls in the CIMS booklet which is SOE.001.00027 page 29.

15 **WITNESS REFERRED TO SOE.001.00027 - CIMS BOOKLET**

1505

20 Q. If we can highlight the first half, the paragraph, the long paragraph? If we can have all of it if possible, Ms Basher, please, thank you. The second to last sentence in the first paragraph, "In very large or complex single agency incidents" – and I think our emphasis is on the very large – "there may also be a need for a higher level response co-ordinator." And then the reason for that. "The formation of the higher level structure is necessary because the control function will quickly become swamped if it doesn't have the higher level support." So, that's the
25 rationale, if the incident controller is at risk of being swamped, well then there may be the need for a response co-ordinator as well. Is that how it works?

A. It's what it says in the manual, yes.

30 Q. And it's the last sentence that troubles me. "Note that this higher level structure does not include an operations function but only co-ordination and planning/intelligence and logistics. Incident controllers of individual incidents maintain control of their incidents." What do you understand that to mean?

5 A. I think the comment in the manual is one that projects command decisions happening at a level that is not the PRC. In saying that, the fire service has a command and control manual that outlines how we will conduct operations and we conduct operations is in accord with what is stated there. There is nothing there that prohibits a variation to that. These are guidelines and my understanding of the police system is that there are incidents where the PRC may and will exercise, at a strategic level, strategic operational decisions, and there's a distinction between at that national level versus what's been done forward at the incident site.

10 Q. The response co-ordinator, you're saying, can take strategic operational decisions. Would that include here, the key decisions about re-entry and sealing the mine?

15 A. The, I believe, given the complexity of this incident and with everything we know, it was appropriate to have a high level of review being done by, in this context, the response co-ordinator. If, and I draw a distinction, if the decision is, yes, the system at large is satisfied that sealing of the mine may be undertaken, the conduct of sealing of that mine can be then committed by the incident controller at their discretion going forward, so it's about establishing the controls regime, so it's, and that's where I was drawing a bit of distinction between what are operational decisions about, okay, you, between Monday and Friday, incident controller, whenever you're happy, we're satisfied you can go off and do what you need to do when you need to do it. But there is at a high level, a process that says, we've considered all the facts, we believe it is now appropriate given everything we know, yes, you may conduct your operations and that to me is, I believe, an incident that involve highly complex issues and large numbers of people is appropriate. In just the same way in Christchurch in the Christchurch

20

25

30

quake as the person responsible for co-ordinating the urban search and rescue operations, I could not terminate those rescue operations without approval from the national controller.

Q. You told my colleague Mr Henry that you are familiar within your organisation with the concept of consultation with a superior in relation

to decisions. What I'm not clear about is whether, if you were the incident controller, for example, you would consult before making the decision, or you would actually refer the decision to the superior to make on your behalf because that's what we seem to have in this instance?

5 1510

A. From my experience, the majority of situations that I've encountered, it is a consultation and then it is a decision vested with the incident controller and we have command levels accordingly. There are some subtleties around certain resources in the organisation that require higher approval before they can be accessed and used, but once that approval has been given, then it is up to that incident commander to commit as appropriate.

10

Q. And hence the last sentence in the passage that I'm referring would continue to apply. The incident controller of the individual incident maintains control albeit he may have to consult before he takes the ultimate decisions?

15

A. In terms of as a dry desktop read of the CIMS manual yes, but that's when agencies develop their own doctorings that articulate the way in which they will conduct their operations.

20 **QUESTIONS ARISING - NIL**

WITNESS EXCUSED

MS SHORTALL CALLS**STEPHEN ELLIS (AFFIRMED)**

Q. Could you state your full name to the Commission please?

A. Stephen Ellis.

5 Q. And do you presently, Mr Ellis, hold the position of statutory mine manager of Pike River Coal Limited (in receivership)?

A. Yes.

Q. And as of the 19th of November 2010 had you been with the company at the mine for around six weeks as the production manager?

10 A. That's right.

Q. Now have you prepared and filed a statement of evidence for the purpose of these proceedings?

A. Yes.

Q. And is that statement marked DAO.03000001?

15 A. Yes.

Q. And do you confirm, Mr Ellis, that the statement is true and correct?

A. It is.

Q. Now rather than read your brief and with the lead of the Royal Commission for which I am grateful, I am going to lead your evidence today, and so do you understand that like in your brief, your evidence today will cover three topics. First, your qualifications and experience. Second, the risk assessment and emergency response management processes that you were aware were in place at the mine on the 19th of November 2010, and third, events immediately prior to and following the 20 19 November explosion?

25 A. Yes.

Q. So let's start with your qualifications and experience, and I'm only going to touch on some of your background because a copy of your CV is attached to your written brief for the convenience of the Commission isn't it?

30

A. That's right.

Q. Now you achieved your UK first class mine manager's certificate of competency in 1983, didn't you?

A. Yes.

Q. And from 1985 to 1995 you contracted as a site manager at underground coal mines around the United Kingdom, right?

A. That's right.

5 Q. You then worked in senior management roles in several underground coal mines in the United Kingdom, didn't you?

A. Yes.

Q. And did you have any experience while in the United Kingdom in those roles of emergency situations?

A. I did.

10 Q. Can you explain that involvement to the Commission please?

A. Similar to Australia, we would have mock emergencies at the mines that I worked at and we would run desktop emergencies and also a more live situation where we would carry out full evacuations of the mine. I also had experience of real emergency in Scotland where the mine I was
15 deputy manager at flooded in 20 minutes with 13 million gallons of water.

1515

Q. And what was your role in connection with that incident, with the flooding sir?

20 A. My role there was the equivalent of the incident controller in Australia.

Q. Now in 2006 you relocated to Australia to work at Rio Tinto's Kestrel Mine, right?

A. That's right.

25 Q. And you then held several senior mining positions at Kestrel. Was that right?

A. Yes.

Q. And in 2008 you completed training in the Queensland MEMs system, is that right?

A. I did.

30 Q. And can you explain your recollection of that training to the Commission?

A. The MEMs training involves an information pack where you have a couple of weeks of taking that information in and assessing it. It's a five-day residential course and we held this one in Mackay and you do

the theory for three days and then do a live desktop practice as part of the final assessment. And in that assessment I was chosen by my peers to be the incident controller.

5 Q. Now in 2009 Mr Ellis you achieved our advance diploma in underground mine management. Is that right?

A. That's right.

Q. And did part of that advance diploma involve training in mine emergency preparedness and response systems?

A. It involves passing that standard, yes.

10 Q. And when you refer to that standard, what do you mean?

A. The standards when I took it were the MNC standards, which are part of the advance diploma in underground mine management as nationally recognised in Australia.

15 Q. And also in 2009 you were qualified by the Queensland Board of Examiners to be a site senior executive under the Coalmining Safety and Health Act 1999. Is that right?

A. That was part of my application to become a mine manager in Queensland and it signified that I could understand all the relevant legislation.

20 Q. Now in September 2010 you relocated to New Zealand with your family. Is that right?

A. That's right.

Q. And you took over as production manager at Pike on the 1st of October 2010. Is that right?

25 A. Yes.

Q. What did that role involve at the time?

30 A. I oversaw the underground operations with development mining in particular. The production mining in terms of the hydro were still an uncompleted project and was in the hands of a project manager. The installation of infrastructural underground was similarly still under the control of a project team. So very much so my brief was to progress the development mining at Pike River.

Q. Who did you report to as the production manager at Pike River at the time?

A. Doug White.

Q. And what was Mr White's role at the time?

A. He was statutory mine manager at the time.

5 Q. At that stage Mr Ellis were you qualified to be a mine manager in New Zealand?

A. No.

Q. Were you involved in training to get the New Zealand mine managers ticket in around September and October 2010?

10 A. I was, it was an important piece of work that we'd discussed when I first arrived at Pike.

Q. Who's the, "We," sir?

A. Me and Doug. That it was very important that I got my statutory manager's certification.

Q. What was your understanding as to why it was important?

15 A. In terms of the roles changing after I'd arrived in New Zealand Mr Ward left, Mr Whittall moved up, Doug White moved up, and obviously he had a couple of roles that he was answering to and my understanding was that if I was to get my statutory mine managers certificate then by negotiation we could discuss that position for me.

20 Q. Now what did the training in September and October 2010 to get your mine managers certificate in New Zealand involve?

A. I covered on and off site first aid, shot firing, legislative requirements, New Zealand Mines Rescue Service, fire fighting, those are the standards as I remember them.

25 Q. And did you participate in a professional conversation?

A. I did, that was in October, 29th I think.

1520

30 Q. Is it fair to say Mr Ellis that from the 1st of October when you became the production manager at Pike River up until the 19th of November 2010 that you spent around half your time understanding and completing training to get your New Zealand Mine Manager's certificate?

A. Very much so, it's not a position that I would take lightly. The work required meant that I had to complete a presentation that was put in

front of the panel for my professional conversation and that in itself was a five hour process.

5 Q. Now, let me move to the second topic that I'd like to cover today involving the risk management and emergency response management processes that you were aware were in place at the mine on the 19th of November. When you arrived at the mine, did you set about getting to know its emergency response plans?

10 A. Not on its own significantly, I think the Commission's seen there is a large amount of paperwork and information at the mine site and obviously I sat around trying to familiarise myself with all that, that work which involved going through the emergency response management plan.

15 Q. And am I correct, Mr Ellis, that in your brief, and in particular for the record at paragraph 12, you describe that the company had in place processes for assessing and managing risk as part of its normal operations?

A. That's right. and that's what I would expect at a mine site.

Q. And for major proposals, a standard form document called a risk assessment was prepared?

20 A. Yes.

Q. And for less significant proposals a simpler document called a job safety and environmental assessment was prepared, is that right?

A. That's right.

25 Q. And for day to day activities, do you recall that employees would often use a, "*I Am Safe*," handbook?

A. That's right. I am more familiar with the "Take 5" process which is similar which is what we would use in Australia.

Q. And can you describe the Take 5 process to the Commission please?

30 A. It's where you start by identify plan, you put controls in place and then you do the tasks, so each individual task you look at, you're actually doing a small risk assessment before continuing.

Q. Now, were you aware at the time that you joined the company that there was an emergency response management plan in place?

A. Yes.

Q. Did you have a view of that plan?

A. I've been very fortunate to visit about 20 mines in Australia. I have viewed significantly more comprehensive emergency management plans. However, I wouldn't class Pike River as a bad emergency response mine management plan.

5

1523

Q. Were you aware that the company had a corporate crisis management plan when you joined?

A. I read it as part of the emergency response management plan, but hadn't taken a great deal of information from it. The last emergency management plan that I was familiar with from Australia also had a crisis at corporate level and that would be more, we termed it the disaster management plan. The Commission referred to it in terms of the CIMS model as taking a more higher level and taking the strategic decisions and looking after things like corporate legal responsibility and so on. The IMT part would always look after the operations.

10

15

Q. And did the IMT component exist in the emergency response management plan at Pike River when you joined?

A. Yes.

20

Q. Did you have any understanding at the time that you joined the company, Mr Ellis that the emergency response management plan was under any type of review?

A. I'd heard anecdotally that Neville had been tasked to review and perhaps update, and I'd offered just my advice and my experience where I could maybe offer something towards that.

25

Q. And when you refer to "Neville," do you mean Neville Rockhouse, Mr Ellis?

A. Yes.

Q. And is it your recollection when you joined the company that Pike River also had several trigger action response plans or TARPS in existence?

30

A. Yes.

Q. And what was your understanding at the time of what a TARP was?

A. A TARP is a trigger action response plan. It's a plan that is activated at certain trigger levels, but they are formulated in the cold light of day

such that when an event occurs you'll follow that TARP. It gives you the action response. I think the police have referred to it as reflex tasking, and it takes the emotion and the fatigue out of the initial decision-making process.

5 Q. When you joined the company, Mr Ellis, did you go through any type of induction process?

A. I did go through an induction.

Q. And do you recall being provided with a copy of the company's safety induction handbook?

10 A. Yes, and an "*I Am Safe*" book and numerous other documents.

Q. Now if I can move to the third topic that I'd like to cover with you this afternoon and that is the events immediately prior to and following the 19 November 2010 explosion. Can you tell the Commission whether you were at work on the morning of the 19th of November at the company's mine site?

15

A. I was at work on the Friday the 19th.

Q. And do you recall generally what you were involved in doing that morning?

20

A. I would arrive at the mine normally around half past six in the morning and liaise with the nightshift underviewer and review the past 24 hours for any safety incidents, production, other issues that were happening over that 24 hours. I would also meet with the dayshift underviewer and we'd discuss the coming day's work. I would generally attend the morning briefing with the dayshifters who got the lamps and rescuers, and then I would hold a meeting with all key management stakeholders at the mine to review the 24 hours past and to look forward for the next 24 hours. Being a Friday, we'd also be looking at the weekend work that was required to be done.

25

30

Q. Do you recall, Mr Ellis, that your routine was any different on the 19th of November than your standard routine that you've just described to the Commission?

A. Not that I note.

Q. Do you recall a problem at the coal prep plant on the 19th of November?

A. That was something that Mr Klopper the coal prep plant manager made us aware of. There was some vibration. I can't remember what it was on. I'm not a coal prep plant man. It was some pump that was important to the plant and in consultation with Doug, Mr White, we decided a planned shutdown would be the correct way to address that.

5

Q. And can you explain to the Commission what you mean by a planned shutdown?

A. Well a planned shutdown of the plant meant there would be no fluming water and no availability to be able to pump coal slurry out of the mine for a period during that shutdown, and that was from approximately 12 o'clock 'til 4 o'clock in the afternoon.

10

Q. As a result of that shutdown, did you ask the interviewer to undertake any particular tasks?

A. Because we knew there was a shutdown we've always discussed contingency work, so mining is a fluid process, and I recall asking Marty to work on the contingency jobs that we discussed.

15

1528

Q. Do you recall what those contingency jobs may have included?

A. It would've included stocking up the ABM, the continuous miner with materials to continue mining. It included stone dusting. We had a planned exercise – not exercise, a planned task over the weekend of stone dusting the returns, and this was an opportunity where we could gain some time on that job. It involved bringing the roadheader out of its mining place. That was to the downhill and that roadheader had previously been flooded and disabled because it'd been left in there over the weekend without serviceable pumps so we'd determined that that wasn't going to happen again.

20

25

Q. If I can just take you to the afternoon of the 19th of November, do you recall being in a meeting around 3.00 pm with Doug White and George

30

THE COMMISSION ADDRESSES MS SHORTALL – CHANGE OF TOPIC

COMMISSION ADJOURNS: 3.29 PM

COMMISSION RESUMES: 3.46 PM**EXAMINATION CONTINUES: MS SHORTALL**

- 5 Q. Mr Ellis, just before the break I started to ask you about the afternoon of the 19th of November and in particular, a meeting around 3.00 pm. Do you recall being in a meeting at that time?
- A. I do.
- Q. Who were you meeting with?
- A. I was in a meeting with Doug White and George Mason.
- 10 Q. And we've talked about Mr White, what was Mr Mason's role at the company at the time?
- A. He was a hydro-panel co-ordinator.
- Q. And what did that role involve?
- A. Involved co-ordinating the actions that we were taking as a company in the hydro-panel.
- 15 Q. Do you recall why you were meeting around 3.00 pm that day?
- A. There'd been some discussion around the mine of the use of shottfiring to ease the coal. It's a technique that they've used at other mines around the area and at that point Mr White certainly was against that.
- Q. Did you have an understanding as to why Mr White was against that?
- 20 A. We were still trialling the hydro operation and really wanted to see – in trialling an operation you only want to change one parameter at once, and we were still working on the pressures and flows of the hydro-monitor and the direction we were cutting and so, so change one parameter at a time and prove whether that's effective or otherwise.
- 25 Q. Do you recall that around 3.45 pm, during that meeting, the lights flickered?
- A. That's as I recall it and that's what we saw or perceived. It was as quick as that.
- Q. And did you have a view at the time as to what that meant?
- 30 A. No, not particularly, even in the few weeks that I'd been at the mine, there'd been power outages before, a tree across the line or whatever. We weren't on a secure city centre power feed. We were many kilometres even from our substation.

Q. Now around this time in the meeting that you were having with Mr White and Mr Mason, were you planning to head elsewhere that afternoon?

A. I was, I needed to get to the post office in Greymouth before it closed to send a registered letter.

5 Q. And why did you need to do that?

A. I'd committed myself to come to New Zealand with my family and only the week before the explosion I was in Australia closing my affairs and bringing the family over here. We were actually living in the Scenicland Motel and that was where I was at. The registered letter was to
10 complete my sale of my sale in Emerald and then I was busy purchasing a house here in Paroa.

1549

Q. And when you discussed with Mr White that you needed to get to the post office what was his view? He was fully aware of that during the day
15 and he said, "Get on your way," or something to that effect, certainly Mr White told me to get going. He and Rob Ridl were still on site and in my view or even at that time what I knew, that was sufficient resource to investigate the power out.

Q. And what was Mr Ridl's position at the time?

20 A. Engineering manager.

Q. So did you then leave the mine and head to Greymouth, is that correct?

A. I did leave the mine, and with reflection had anybody needed me, and I still had to get out to the gate around 10 to 15 minutes after that, where they could've stopped me and said, "Turn round." So the first I knew
25 was around 10 to five and Doug White telephoned me on my cellphone.

Q. Well just before we come to that conversation, while you were still meeting with Mr White and Mr Mason do you recall whether Mr White took a call from the control room?

A. He did take a call from the control room and I believe it was to say the
30 power was out.

Q. So let's come to the call that you received on your cellphone. What's your recollection of what Mr White said to you at that time?

A. He said something on the lines of, "There's been a big bang, or a big blow," and that's just Doug's colloquialism, you know, "There's been big

bang here Steve, it's serious, can you get back to the mine?" I said, "I'll be there directly."

Q. And so what did you next do?

5 A. I rang my wife and told her that I wouldn't be coming home and I would let her know when I would be.

Q. What was happening when you got back to the mine?

10 A. When I got back to the mine I parked up, I went straight up to the control room, already present were various emergency personnel, including the local police, ambulance staff, rural fire brigade personnel, and staff from New Zealand Mines Rescue Service began to arrive later. I was told at that time that they'd been called.

Q. Now were you aware when you arrived back at the mine as to whether or not the company's emergency response management plan had been initiated?

15 A. It had been initiated by Mr White.

Q. How did you know that?

A. I can't remember if it was Mr White or Mr Rockhouse but they passed on to me the incident controller duty card and vest. Mr White was not in the control room and Mr Rockhouse was.

20 1552

Q. And what was your understanding, if any, as to your role having received the incident controller duty card and vest?

25 A. Well, very soon Mr White arrived back and he said, "Steve, you'll need surface co-ordinator role number 3, duty card 3," and that to me was to work as Doug's offsider, his number 2.

Q. And what was your understanding, at the time, as to your role as Doug's offsider, or number 2, what was it to involve?

30 A. In terms of surface co-ordinator and duty card 3, tasks with specific tasks, make sure that the duty cards are issued, which I did, and the ones that Doug had previously given out were then to check the understanding of the holder that they'd got that. It's to ensure the security of the site. Well, by the time I'd arrived there the police had already set up a cordon, that I'd had to come through so I knew that

we'd got good security at a level away from the mine site and working very efficiently.

Q. Where was the cordon established at the time you returned?

5 A. At that time it was on, what I call, the big bend on Logburn Road, so further away from the mine than our gate.

Q. Now, when you referred to making sure that other duty cards had been issued, do you recall who was issued duty card number 7?

10 A. I think Neville Rockhouse was given the emergency co-ordinator but very soon Neville had to go up to the portal as has been previously said. His son came out of the mine.

Q. And just so I'm clear, Mr Ellis, is the emergency co-ordinator role described in duty card number 7?

A. Yes, and that's the role I would've expected Neville to take on in terms of his role as safety and health manager.

15 Q. And why do you say that?

A. That would be, in Australia, that would typically be the type of role that we'd give out.

Q. Did there come a time when you carried out some of the duty card number 7 functions?

20 A. Yes, some of the functions there is starting to organise the emergency services, so in terms of where the ambulance people are going to be stationed, where the police are going to be used. The rooms that they were using were allocated by myself at that initial stage.

Q. And were those rooms in the administration block at the company's...

25 A. Yes, as much as we could, obviously to try and keep the core stakeholders in one building.

Q. What, if you're able to tell the Commission, was your impression of the state of affairs at the mine within, say, the first two hours of your returning?

30 1555

A. I would say they were hectic. I've seen, I've heard various statements around chaos, people running around and so on, and I would certainly argue against that, that it was hectic, it was busy. We don't expect an explosion of that magnitude at a mine site. Having said that, very

quickly within that first hour or so we had an extra 150 people on site for a mine that's designed for 30 or 40. It was very hectic.

Q. And in addition to co-ordinating where staff were to be located, do you recall now any other roles or duties that you may have been carrying out at the time?

5

A. We were setting up the IMT room as part of our emergency response management plan with Callum McNaughton who's a surveyor. "Let's run these plans off. This is what we need. What can we put on the table." Organising where different people went. The Mines Rescue arrived at around quarter past, half past six, and they have a dedicated room and resource that we use, so yes let's go down there and set up with everything that we required, and then initialising that first IMT meeting. And in my brief, I said that it's certainly before dark. It's only subsequently I found out that that first meeting was around 7 o'clock.

10

Q. And do you recall where it was that the IMT meeting location was established?

15

A. In the boardroom. We have two meeting rooms in the admin block. The boardroom which seats around 12 around the table comfortably. It has a recording whiteboard, and then there is what I call the committee room or briefing room, which is in the middle of the admin block, which has computer facilities, projector facilities, but is a larger room for bigger teams.

20

Q. And when you say that "we" were involved and establishing these types of systems for the IMT meetings, who's the "we"?

25

A. Well certainly from my point of view we – it was Pike personnel getting this room established and so on. The police were in attendance and the police were fully aware of what everything was being carried out and where they could set up and what rooms we could use and so on, so really a team effort very quickly. It seemed that we were establishing the IMT, as I understand it should be run from my manage training.

30

Q. What can you tell us about the first IMT meeting around 7 o'clock on Friday night?

A. At that meeting Doug White, in my view, was the incident controller. He was running the meeting and talking through the strategies that we were going to adopt.

1558

5 Q. Do you recall today what any of those strategies involved?

A. Gas sampling was obviously the most important requirement that we needed to identify and to interpret the atmosphere that we'd got in the mine, be it respirable or explosive.

Q. And why do you say that's obviously the most important?

10 A. That was the most important from our point of view in terms of re-entry and rescue.

Q. Do you recall, Mr Ellis, who attended that first IMT meeting on Friday evening?

15 A. In terms of the names, probably not. In terms of the people, the stakeholders, then yes, I can answer that. There was the police. There was certainly the rural fire brigade, I don't know if the full fire brigade had arrived. There were some ambulance personnel, Mines Rescue, Pike River people, and I believe that's it for that first meeting.

20 Q. Just thinking about the IMT's for a moment, can you describe to the Commission how they worked overall?

A. I had a very large part to play in the IMT meetings, say for the first five days I was running the IMT on days for 12 hours.

Q. And why was that?

25 A. Mr White was running the nightshift for 12 hours. I was running the dayshift for 12 hours. My training with the MEMS system and also with the mines I worked at in Australia, was such that I understand the IMT process. There's an IMT leader or incident controller, a co-ordinator and then a logistics and operations and planning co-ordinators. Notwithstanding the initial first couple of IMT meetings where that
30 process settled out, I didn't arrive back at the mine till Saturday morning. Now at that stage I was told the police were in charge but we were still running an IMT. Now I don't see that there's anything wrong with still running the IMT under a MEMS or a hybrid MEMS system and I say that because the police were running it. What would I expect to see in an

IMT meeting, well, an IMT controller or leader, and that was me. A co-ordinator and I had a lad called Nick Gribble who was doing my co-ordinating work. Then I want to see logistics and very certainly the police took that logistics role along with the Department of Conservation and fire. I couldn't order things like GAG's or Floxal's and expect them to arrive and customs and so on. We couldn't have done without it. Operations, Pike people, Solid Energy, drillers, Mines Rescue people, all the people that were involved in the hands-on doing was great. And then the planning part of it again, Mines Rescue, Pike people and if it was specialist work, CAL scan, drilling, then get those people involved too. I understand Mr Jim Stuart-Black's version of an IMT having so many things that you can look and think about. I've done the training too. However, I don't see there's any distinct differentiation with number of people in that room providing you've got control of them, that you've got those entities.

5
10
15
Q. And did you feel during the IMT process in operation Pike that there was control?

A. Yes.

Q. And why do you say that?

20 A. The comments that I received subsequent to the incident, many people were being complimentary if you like about my actions during that period in terms of running that IMT.

Q. Do you have a view as to whether, and there's been some evidence to the Commission to this effect, as to whether there was too many people in the IMT's?

25
30 A. No doubt about it, there was. The biggest part here and this is not because they were in charge was probably there were four or five police in there. There were maybe two firemen, two people from DOC, two from the ambulance. As an experienced IMT leader then, yeah, I want five people in there, but I'm not in charge and if the police want to have four or five people there, then that's fine by me. One was in charge, usually an inspector. One would be in charge of the logistics part, which was sourcing material, one would be taking notes, and that's fine. But if you take that group of people as an entity then I was really only looking

after five or six different groups in that meeting and we were covering all the important IMT issues.

1603

5 Q. If we take the initial, just staying on the IMT process for a moment Mr Ellis, if we take the initial period, let's even say running through until Saturday evening, do you recall what the frequency was of the IMT meetings?

10 A. Far too often. We started off running them around an hour and very quickly we dropped them off to two hours and by the end of the rescue period, if you like, we then went to three hourly, four hourly, twice a day, you know. But I mean that fits with the IMT, or with the MEMS process. You make that judgment call as it's going along.

15 Q. Now one of the questions for this Commission during Phase Two is to consider what contributions the Department of Labour and Mines Rescue Service made to the IMTs. Do you have a view on that?

20 A. I do have a view. Again going back to the MEMS model then Mines Rescue have an important part to play in terms of assisting with the planning but also in their own right with their own expertise. But it would be usual in Queensland for the Mines Rescue general manager to come and sit in your incident management team meeting. It would be usual to keep his rescue team in the rescue room, as we did, to ensure that they were ready and able, the kit was there, and that they can conduct their risk assessments and so-on for re-entry protocol. The use of them as a resource is not precluded in Queensland but they certainly
25 visited the mines and got a lot of this work done prior to any incident ever happening. So they've got re-entry protocols for mine A or for mine B.

30 Q. In your role as chairing the IMTs during the dayshift Mr Ellis did you have a view as to whether the Mines Rescue Service was able to contribute freely in the IMT meetings?

A. They contributed very freely, they always had somebody in attendance, it was usually Trevor Watts or his number 2 Rob Smith, and some senior personnel would be Troy Stewart or Dingy Patterson for instance, Robin Hughes, so they had complete input to it. Similarly the

Department of Labour had an input as soon as their people arrived on site, that Johan Booyse, Michael Firmin, and Kevin Poynter, were also available and in the IMT meeting to express their decisions and their thoughts as well.

5 1606

Q. Now, if we just talk about some of the logistics around the IMT meetings, you referred earlier to the recordable whiteboard in the boardroom where the IMT meetings were conducted, do you recall that evidence?

10 A. Yes.

Q. And was that whiteboard used during the course of the IMT meetings?

15 A. I'm afraid there should've been a whiteboard here, anybody who knows me, knows that's what I like to do. That's how I like to get a message across and on that whiteboard, an IMT meeting, you manage by objectives and I wrote up the objectives and then we look at the critical tasks, we look at less critical tasks that still need to be addressed and we looked at things like logistics and housekeeping and so on. We'd got 150 plus people onsite that's built to house 30 or 40. It was a huge issue to us.

20 Q. Would it be fair to say that notes written on the whiteboard formed an agenda for the IMT meeting?

25 A. It would form an agenda, both historical and looking forward for the next hour or two till the next IMT or even for the next 24 hours. It was used as a basis for handover notes between me and Doug White, it was also used as a basis for actions going forward and used as a basis of recording the decisions made in IMT meetings.

Q. And if I could just pause you there for a moment. When you refer to the handover with Mr White, and I'm just talking generally I'm going to come back to the evening of the 19th, how did that process work?

30 A. When I arrived onsite, initially I would bring the team out in a bus and then we'd got a bus service in so we didn't have to drive, which was good.

Q. And when you refer to the team, what do you mean, Mr Ellis?

A. The Pike resource is split into two teams. One on dayshift with myself as leader and one on nightshift with Doug and they stayed pretty static for, probably, the first three weeks. So the handover period, sorry, was that first half hour to an hour whilst we were onsite where me and Doug would go and sit in his office and discuss what had happened over his 12 hours or what had happened over my 12 hours, talk through the images from the whiteboard that'd been saved. Talk through any gas sampling results that we'd got and so on and so forth. Whilst we were doing that the rest of the team were having a one-on-one with their opposite, if you like, on the other shift and then to finish off we would have 10 or 15 minutes in the large committee room in the middle of the admin block where we would handover as a team, so that when Doug was going off he would say a small piece and when I was going off I would say a small piece and that was to sum up that last 12 hours. Where we'd got to, where we'd had any success, challenges or otherwise.

Q. Now, one of the other questions for this Royal Commission is whether the roles of the company mine manager and other supporting agencies were defined and understood by all participants. Do you have a view, especially based on your involvement in chairing the IMT meetings?

A. I don't think they were clearly defined at the outset.

Q. Why do you say that?

A. Certainly at the start, I believe Doug was in charge of the IMT. That is as I would expect. Statutory mine manager is running the operation and we've got all the services that we need around us helping that process. I went home at around 10 o'clock, I believe, on Friday night. We'd discussed succession planning and this is how come Doug ended up doing nights and I ended up doing days.

Q. And what do you mean by succession planning?

A. That decision to make that in terms of succession planning. Now, I left with a team because at that time on Friday evening, we had most of the Pike River staff actually at the mine, we'd called back, we'd got people in and so on.

1611

Q. And did most come back to the mine Mr Ellis?

A. Oh, yes. So that succession planning was, "Well, let's split 50/50, let's try and split the skill level 50/50, righto Steve, take these home," so we went. When we came back on the Saturday morning in the handover
5 Doug, you know, at some point during the night the police had said well we are the lead agency, we're in charge, and Doug accepted that and said to me, "So it's not a problem. We're all working together but I still want you to run the IMT," and that's what I did, and that, to the best of my ability is what I'm good at.

10 Q. Let me just come back to the Friday evening just with two topics, Mr Ellis, and then I want to talk about Saturday morning when you arrived back at the mine. It's been suggested in evidence from others that there was a fire burning in the mine following the first explosion. If we take Friday evening, did you have a view on whether there was a fire
15 that Friday night?

A. Not on Friday evening.

Q. And why do you say that?

A. We didn't have a basis to make any calls whether there was a fire
20 underground or not. Consistent trending of gas samples is what you require and at that time we didn't have them. We had people on "the hill," as we term it, over that Friday night.

Q. What's the hill, just for the purposes of clarity?

A. Around the vent shaft area. And they couldn't get the samples away
25 because of the weather. So there were no samples sent away Friday night. There were samples sent away Saturday morning. So we had no reason to make that call. People say there was smoke coming out of the shaft, and we've seen pictures of that, and they vary in black smoke, black, light smoke, but it also depends which way the light is, and on a night the smoke is totally different from when you see it in the day.

30 Q. Now, just staying on Friday evening, you described that you drove a team of people back to Greymouth around 10.00 pm, is that right?

A. That's what I believe the time is.

Q. And do you recall then going to the company's offices in Tainui Street?

A. Yes.

Q. And what do you recall about what happened when you went to the company's offices at that time?

5 A. There was a group of family members there and Red Cross assistance, there was Civil Defence, and I can't remember who else. It had been a phone call to me on the way home, and I believe it was done by Dick Knapp, if I could go there to talk to the family members. That Peter was in transit and Doug –

Q. Peter is?

10 A. Peter Whittall, sorry, and Doug White was still up at the mine site. So it's something that I did and I was very uncomfortable about doing.

Q. And why was that?

15 A. It's not something I normally do. And I went and talked to the people and spoke that we were still finalising who was underground. I don't believe that was finalised until half past three in the morning, that we were doing everything we could, and that we had all the stakeholders involved, and I didn't use the word "stakeholders". It would've been and the fire people are there, the police are there, the ambulance and Mines Rescue are there. And I left and I was quite upset about that, and then I got two hours sleep in a motel with my family before I came back to the
20 pit.

Q. So do you recall approximately what time you arrived back at the pit on Saturday morning?

A. Three o'clock in the morning.

Q. And at that time there was a handover with Mr White, right?

25 A. Yes.

Q. And did you discuss with Mr White any arrangement to the extent there were going to be any changes or decisions to be made during the day on Saturday when you were on duty?

30 A. Yes, Doug was very careful because I didn't have my ticket, that decisions that needed his permission needed to be his call. So if I needed to ring him up to make that call that will be fine.

Q. And during the time that you worked the dayshift as the incident controller – sorry, during the time that you worked the dayshift at the

mine when Mr White was off duty, were there occasions when you needed to call him?

A. No.

5 Q. Now when you got back to the mine on Saturday morning had any no-go zones been established?

A. Yes.

1616

Q. What do you recall of that?

10 A. I think we've seen in the brief the yellow tape across, preventing people accessing up near the portal. However, I did tell Neville when he was at the portal not to allow anybody into the mine until we could find out what the environment was, and that was the first step, as I remember, and also we set up on the Friday night that people wouldn't go past the White Knight Bridge. The White Knight Bridge is around 100 yards, 150 yards from the portal and it's a good delineation if you like, but the whole place is a kilometre away from the admin block, a one in four uphill at night in the dark. Nobody was going up there and people only went up as they did up onto the mountain if they had a task to achieve and that task would've come out of the IMT meeting.

20 Q. Do you recall whether a portal guard was implemented?

A. We had a portal guard but I do not know what time that was implemented. We also had a security guard at one time, at the admin block onto the road going up, but again I wouldn't be able to say what time.

25 Q. Now during the day of the 20th, during that Saturday, do you recall that throughout the day people were still arriving at the mine site?

A. Yeah, very much so.

Q. And Ms Basher if I could have displayed a chart DAO.030.0040?

WITNESS REFERRED TO DAO.030.00040

30 Q. Now in your brief Mr Ellis, you described that what we're seeing here as exhibit SE2 is a timeline that you put together illustrating the various stakeholders who were helping out at the mine, do you recognise this document as such?

A. I do.

Q. And is this document still consistent with your recollection, particularly in light of the evidence that the Commission has heard over the last several weeks, of who came to the mine to help in the wake of the 19 November explosion?

5 A. Yes.

Q. Thank you, that's all I have on that document. One of the things that the agencies coming to the mine site on that Saturday were involved in doing, was preparing risk assessments, is that right?

A. That's right.

10 Q. And in paragraphs 57 and 58 of your brief, you describe the risk assessment process – I'm not going to ask you to read that but with those paragraphs in mind, could you describe to the Commission your recollection of what the risk assessment process involved?

A. Once we had an idea or a proposal put forward in the IMT, then as IMT
15 leader I would ask certain stakeholders to prepare a risk assessment for that. So, for instance, a drilling risk assessment I can remember was a drilling company, there were some Solid Energy personnel with relevant expertise, our geologist who had relevant expertise, Pike River people. A Pike River template was used. That template was formulated in line
20 with New Zealand and Australian standards.

Q. And was that a template that existed prior to the explosion on the 19th of November?

A. Yes. And once a risk assessment was complete and it could vary from a couple of hours to a couple of days, once a risk assessment was
25 complete, it would go to Doug for signoff. There's a couple of occasions where I've signed risk assessments off, usually with Doug White's permission.

Q. And do you recall what happened after the risk assessment was signed off?

30 A. Once it was signed off by Doug, then it was given to the police and sent away on an approval process. Certainly at that time I had no knowledge of what was happening at Grey Base Police Headquarters in Wellington. What was important to me was that a risk assessment came back

usually with an inspector's signature, date on and we could proceed with the job.

Q. And when you refer to an inspector's signature, what do you mean by that?

5 A. Police inspector's signature.

1621

Q. Do you recall whether the team putting together the risk assessments as a matter of typical practise involved Pike River personnel at the time?

10 A. Yes, but it would also include relevant people, the standard says a relevant cross-section of the workforce, which we didn't have. What we have is a relevant cross-section of the stakeholders who were involved in carrying out this work. So we even had the Department of Labour inspectors or policemen involved, if his experiences were relevant to what we were doing. They were a team effort. We created little teams
15 to make risk assessments and everybody put input into them, as you do with a risk assessment.

Q. And do you have a view, one of the questions for this Commission Mr Ellis is whether the risk assessment structure operated effectively. Do you have a view on that?

20 A. I think the risk assessment structure operated effectively, however keeping it on site would've prevented it from being as tardy as it was. And I'm not being critical, all I'm saying is if you keep it on site you're even saving the five minutes of an email.

25 Q. Now if we just stay on Saturday the 20th of November, there have been claims that a fire was burning in the mine on that day, do you have an understanding as to whether that was the case?

30 A. In my brief I said there was potentially a methane burn happening, which a small methane burn to me has a different intonation than it's a coal fire burning out of control in a mine. I've been unfortunate enough to work under a burning methane flame in the UK, never even singed my hair. If there's a small methane burn it's something I believe is totally different to a large fire, a conflagration if you like. The evidence at that time really didn't say that we'd got a massive fire underground. Gas analysis is very specific and it's around data. Gas interpretation is

not so specific, it can be subjective. Robin Hughes in particular gave his view in one of my IMT meetings on the Saturday afternoon and said, "We've got a roaring fire," but somebody equally experienced in this sort of analysis was Darren Brady and he says, "No, perhaps we haven't got a great big fire." My thoughts, we'd got some light white smoke went out of the shaft, which to me may have indicated a methane burn or may have been afterdamp from the explosion being pushed out from the body of the mine as methane was liberated.

5

Q. And there's been other evidence about afterdamp so I won't get into that with you at the moment Mr Ellis. But is it fair to say that on Saturday the gas sampling work that was relevant to this question of whether there was potentially a fire was ongoing?

10

A. Sorry, can you repeat your question?

Q. During Saturday is it fair to say that the gas sampling work was ongoing?

15

A. Yes.

Q. And by Saturday do you recall who was involved with the gas sampling work at the mine?

A. I believe we had two distinct teams, which doesn't mean they were working in opposition, they were working in corroboration, which is the right way. So we had SIMTARS on site by Saturday lunchtime with a GC, and we had a base down at Rapahoe at the Mines Rescue Station with Robin Hughes and others, and I don't know the names of all these people, and there was the New South Wales people also assisting with that interpretation down there. So independently I could have three different interpretations coming back to me, although with 32 years experience and my training in ventilation and so on I've also a call to make. And my belief was that we didn't have a raging fire out of control underground Saturday afternoon.

20

25

Q. Now was the possibility of re-entry discussed during Saturday's IMT meetings?

30

A. I believe it was.

Q. And what do you recall, if anything, of those discussions?

A. I don't recall a great deal from it. I believe we talk about it as a contingency. One of the roles of the IMT is not to close your eyes, and we've talked about parallel planning and parallel operations, and one of the things that we wanted to do, and I believe was tasked to the
5 Mines Rescue, was to look at sealing options, and re-entry options, and recovery options. This is what the IMT does.

1626

Q. Did you have a view on Saturday as to the prospects of miners having survived the 19 November explosion?

10 A. Yes I had a view.

Q. And what was that view?

A. I believe that there was a chance of survivors.

Q. And why did you have that belief at the time?

A. I'm probably a realistic optimist, of 32 years just in underground
15 coalmining and there have been cases where people have survived for numbers of days, after explosions, entrapment and, similar to Wales' engulfment, you know, so people do survive. When I started mining I started at Lofthouse and they drilled for two and a half weeks into an air pocket because they believed the miners had survived and that's what we are, that's how we are and I still believed on the Saturday that we
20 that there were potential for survivors.

Q. Following on from that, do you have any comment on the suggestion that's been made through some evidence before the Commission, that the mine should have been sealed on Saturday?

25 A. No I don't think we were in a position to seal the mine on Saturday.

Q. And was that because of your view as to potential survivability?

A. That's right. And that's not just my view. There were numerous views in the IMT that we take account of. As my role as IMT leader, is also to be impartial and to take different views from different people. The
30 consensus was that there were still people, possibly alive on the Saturday and we would not be sealing.

Q. Now, there has been some suggestion before the Commission that it was possible to seal the mine but also run the compressed airline. Do you have a view as to that suggestion?

A. I don't believe that that's right. If you're going to seal a mine, you seal the mine and you stop the ingress of oxygen.

Q. Did you hear anything on the Saturday or in the subsequent days about a partial sealing idea?

5 A. I probably reiterate, there's no such thing as partial sealing, you seal a mine to exclude oxygen or you don't seal a mine.

Q. Do you recall any discussion about that idea?

A. Not around partial sealing. There was discussion around inflatable seals which had man-access doors in. There was discussion around
10 how we would seal the Slimline shaft, the vent shaft, the portal. Any of those options to be put in place would be part of a total package.

Q. Now, during the day on Saturday, do you recall, in addition to the topics we've just discussed, that you were busy with any other matters? And if it would assist, Mr Ellis, I could direct you perhaps to around page 65 of
15 your brief.

A. Okay, paragraph 65 then, we were talking around where we could get all the gas samples from. Certainly on the Saturday we were still just getting samples from the vent shaft and very early on, in fact I think
20 Doug mentioned it in his handover, we wanted to progress a drillhole into the mine which was subsequently called PRDH 43. We also needed to look at the logistic of going up and down the mountain and so we decided to call on the assistance of DOC, the Department of Conservation. The main thing on the Saturday was around the sampling and getting this drillhole started.

25 Q. Do you recall any discussion in relation to an army robot?

A. Yes, sorry. There was an offer of assistance from the defence force of an army robot and the talk to me made a lot of sense. It's a robot that looks like a bomb disposal robot. "You're familiar with those? Yes, all right, mmm, that might be good. We can go and have a look and we
30 could even strap some samplers to it and get more sampling information from the mine." So, at one of the IMTs we said, "Yes, that'd be a great offer, let's take it up."

1631

Q. And do you recall being involved in preparing a briefing for the families on the Saturday?

5 A. It was around 10 or 11 o'clock and Senior Sergeant Ealam of the police asked me to help her certainly to come up with a brief for the family and the criticism that they had not had a briefing in that period, Saturday morning, and so I assisted Sergeant Ealam write that and that's what was issued to them, I believe 11 or 12 o'clock Saturday.

Q. And around 5.00 pm on that Saturday you handed back over to Mr White and you drove back to Greymouth, is that right?

10 A. Yes it would have been. That first day I did a 13-hour shift on site. Doug did a 13-hour shift, trying to move ourselves so that we aligned at six to six if you like, which gave people a decent amount of time in bed to recover and ensure that the fatigue wasn't an issue although still a 12-hour shift's a heck of an ask in those situations.

15 Q. So let's move to the following day, Sunday the 21st of November. You were back at the mine around 6.00 am is that right?

A. Yes.

Q. And do you recall what work continued on Sunday in connection with sampling and other matters?

20 A. Continuing on with gas sampling. We were using SIMTARS, New Zealand Mines Rescue if I talk in terms of their gas chromatographs, so we'll get an interpretation. We were looking at the results from over Saturday/Saturday night, and we were considering whether we could use the grizzly borehole to get samples from, and the grizzly's a small diameter borehole with a cable down, so we look at
25 that. The difficulty, it's difficult just to say "Oh well we were looking at it," but to get there we needed a helicopter flight, we needed to go and assess the situation, it had to be safe to do so, come back, reassess it, "Can we get sampling from that point, well yeah we've had a look." Well
30 that's three hours later, you know, so it's not just a quick process to go and try all these things. We did further work with the drilling proposal. We decided where it was going to go, who was going to do it, and we got some great assistance from Steve Bell and Dean Fergusson in helping with Boart Longyear. Again, the risk assessments start.

Q. Do you recall whether there were visits to the mine site on Sunday the 21st of November?

A. Mr Whittall brought up two buses of family members on the Sunday. I met them in the administration block and accompanied them around the administration area and the control room and what we called the go-line.

Q. And what was your understanding of the purpose of that visit?

A. I think it was to give some level of information to the families that everything was being done that we could possibly could. And at that time I believe the fire brigade control van had arrived, we'd got three ambulances on site, numerous police vehicles, Mines Rescue vehicles, we got a large group of stakeholders involved, and we took the families around and introduced them around and showed them in particular from around the go-line where you've got an aerial view of the mine site if you like of the administration site of what was going on, that we were doing everything we possibly could.

Q. Do you recall during the Sunday the 21st of November being put in contact with some people in West Virginia?

A. Yes I was. Can't remember exactly what time, but it was with the West Virginians, Jimmy Gianato in particular who is the head of Homeland Security and Emergency Response, and they seemed a very knowledgeable team and it's always good in a situation like this incident to be able to talk to somebody and bounce your ideas off somebody who's been through it, and they had. So I found it was a distraction, if you like. It was a long phone call, a formal meeting setup, if you like, with everybody dialling in and so on, but I think it was worthwhile. Certainly they gave us some good information around response, nitrogen generators, what they'd used. At that first meeting they were particularly were interested if they could offer any help again on the interpretation point of view, so –

30 1636

Q. The interpretation of gas samples?

A. Gas samples, "So can you send us some plans of your mine, the latest gas samples you've got and so on and so forth, and we'll make our

interpretation and get back to you” and we did have subsequent meetings.

Q. And during that day, Sunday the 21st of November, did you know by now whether there was a fire in the mine?

5 A. No, no.

Q. Was there further discussion about sealing the mine on Sunday the 21st of November, and if it helps, I could direct you to paragraph 80 of your brief Mr Ellis?

10 A. Paragraph 80, I state, “I received clear direction from the Department of Labour and the police that the mine was not to be sealed until there was absolutely no chance of survival.” And I believe that accords with other people’s briefs.

Q. Did you agree with that determination?

A. It is, it accorded with my own view.

15 Q. At that time on Sunday the 21st of November, did you have a view as to survivability?

A. Yes, my view on Sunday is exactly the same as I had on Saturday, although the chance was less.

20 Q. And around 5 o'clock on Sunday evening, just to orientate ourselves in the chronology, you handed over to Mr White and went home, is that right?

A. That's right.

Q. So let's move to Monday, the next day, the 22nd of November and you were back at the mine again around 6.00 am, is that right?

25 A. That's right.

Q. How was the gas sampling work going on Monday?

30 A. We continued gas sampling from the vent shaft and also started sampling from the grizzly borehole and we got a line established in the grizzly borehole, weren't exactly confident where it had, whether it had come out into the roadway, or whether it was sampling slightly higher, but certainly it gave a representative sample and was somewhere else that we could draw samples from the mine. It was also agreed at that time that we do a document explaining to all the stakeholders what we

were looking for in the gas sampling and I believe Ken Singer was involved in drafting that.

Q. And why, if you had an understanding at the time, was that necessary?

5 A. It was necessary because of the lack of mining experience that was apparent within the IMT. It was necessary every time that the stakeholders changed out, one continuity within the IMT were certainly myself and Doug and the Pike River people, but the police teams changed out, the fire teams changed out and so on, and whenever I got a new team I would spend an hour re-educating if you like, and that's not being rude to people, but explaining what we were looking for, how we interpret. This is an uphill mine that is reacting differently to what everybody else expects or perhaps understands.

10 Q. And do you recall that there was work done on Monday the 22nd of November in relation to a tube-bundling system?

15 A. If you could maybe point to –

Q. Maybe if you look to paragraph 89 of your brief, Mr Ellis? Sorry, I think paragraph 90 of your brief?

20 A. Okay, that was steps taken to commission a Mihak pump obtained through SIMTARS. A Mihak pump is a vacuum pump that's used to draw air samples down thin plastic tubes to our sampler. However, at this stage we were more concerned in using it to obtain samples actually up on the mountain, and so we were talking through that. We got the pumps and we put them up, there was one up at the vent shaft and one up at the grizzly as I understand.

25 Q. And do you recall anything else about what was going on at the mine site during the day on Monday the 22nd of November?

A. We had started drilling PRDH 43 overnight, so that was continuing too. A working party was convened with various stakeholders in to consider re-entry options including the Mines Rescue.

30 1641

Q. Were you part of that working party?

A. No. I wasn't part of that working party, I wasn't part of risk assessment teams, as I am team leader I had a large enough role that kept me fully occupied for 12/13 hours a day.

Q. Was the progress of the working party discussed at the IMT meetings?

A. Yes, and people were asked to report back to see how they were going. We also had a visit from John Key on the Monday and Gerry Brownlee, and I met with them in Mr White's office a period of half an hour, explained the situation, what potentially had happened without speculation, how we can recover, sorry, how we could rescue or recover and went through the options. And I went and took them up to the control room and showed them the video footage of the blast and then they left site.

10 Q. Now if I could just pause you here Mr Ellis, can you tell us anything about the compressed airline at the mine and its status around the 22nd of November?

A. Early on in the piece we decided to keep that compressed airline running. If there was a possibility that people have survived in the mine then it would've been based upon use of compressed air, you know, supplying breathable air to two people. In the past it's been, "Oh, somebody might've put their head in a vent duct, somebody might've put a sack over their head and used compressed air, or somebody might've been able to isolate a room or an area and feed compressed air into it.

20 Q. And are those examples based on your experience?

A. They're just examples where you may have survivors. So we decided very early on that we'd keep operating the compressed airline, six inch I believe. We have takeoffs every 150 metres going up the drift. And Daniel Rockhouse had stated how he turned these taps on. Now based on the pressure and the usage we made a calculation that said that this line was probably broke around the 16/1700 metre mark, which was coincidental with the position of the abandoned loader from Russell Smith. And that wouldn't be a surprise, whether that loader had hit the pipes or been blown into the pipes, it fits. So there was considerable fresh air entering the mine at this time still, going up the drift. So I didn't see it as a great issue, even with a ruptured line then there may still be air going into the mine through that pipe range, and just because we know its ruptured doesn't stop any potential flow there.

Q. Now just staying on Monday the 22nd of November, it's been said in written evidence that on Monday you approved the removal of an SMV which had been parked inside the drift on Friday night. And my question to you is whether you recall that matter at all?

5 A. I don't recall the specific matter. I wasn't there Friday night, I didn't know the vehicle had been put in the portal. My recollection of being asked around it was that the vehicle was beyond the portal, that is parked up just past it.

Q. Do you recall who asked you about it?

10 A. Mr Pattinson from Mines Rescue and a senior Solid Energy manager. And he said, "Me and two Mines Rescue guys can go and get this vehicle and we can bring it back safely, we'll go down in the White Knight River so that we don't go in front of the portal." "Oh, okay." And I was having to make calls at this time about whether a helicopter could
15 fly near the vent shaft or people can go by the portal and so-on and so-forth. And I'm prepared to take advice, and I did do. But they said they could do it safely, which they did, and they returned the SMV down to the admin block.

Q. So was it your understanding at the time that the SMV was beyond the
20 portal, not inside it?

A. That was my understanding. If it was in the portal I may have addressed it differently, however, I can only say the SMV was recovered safely. It didn't need to be in the drift. I don't who put it in the drift. I don't know why anybody would want to put it in the drift but it needed to
25 be out of there, even if it was near it was liable to be damaged in an explosion. Why would you do it? It's an important resource for us for a re-entry or a recovery later on. Let's not destroy it at the outset.

1646

Q. And on Monday the 22nd, you left the mine around 6.00 pm as usual, is
30 that right?

A. I believe so.

Q. And you arrived back the following morning, Tuesday the
23rd of November at about 6.00 am?

A. Yes.

Q. Do you recall where you were with gas sampling by Tuesday the 23rd of November?

A. We also set up the Slimline shaft by this time. We've got tubes run out and were starting to draw these samples back towards the mine to the admin area. So that was good.

5

Q. And how was the drilling work going?

A. The drilling work was slow and that was just because of the ground. They were having some issues with it and we were also talking about where the next borehole ought to go. And again, that's contingency and parallel planning.

10

Q. Was there a report back from the working party conveyed on Monday to think about the forward plan during the Tuesday?

A. Yes, they produced a diagram spelling out that forward plan, an options diagram, if you like.

15

Q. I just want to touch on this, only briefly Mr Ellis, but if I could get brought up the document at DAO.029.00005.

WITNESS REFERRED TO DAO.029.00005 – OPTIONS MODEL

Q. Is this the options model that was put together by the working party?

A. That's right.

20

Q. And what does this model show? Just briefly because there has been some evidence on this.

A. Okay, well, we're busy getting the gas sample collection. We're collecting the samples, we're looking at the analysis of those and interpretation and you can see there that we've got external advice, Pike management mine experts, robots, et cetera and the current borehole. So, you're looking to see if there's a fire existing underground or what the environment's like. And there're various options have been listed there showing what you can use and how it works and if there's no fire in there, could be do a re-entry and deploy the Mines Rescue and again, you're looking at different options there.

25

30

Q. And so just if I can interrupt you there, Mr Ellis, was there still uncertainty on Tuesday the 23rd of November as to whether a fire existed underground in the mine?

A. Very much so.

Q. Thank you, if you can continue.

A. Very much so and the New Zealand Mines Rescue had, by this time, developed a re-entry plan that indicated if we got sample trends for long enough, which was part of one of those options, then they'd be prepared to look at a re-entry plan, but Mr White would need to sign that off as statutory manager.

1649

Q. Now there's been evidence from Mr Taylor of Solid Energy that around this time on Tuesday the 23rd of November he heard you say something like, these were his words, "Outside this room it's still a rescue operation, but within this room it's clearly a recovery operation." What do you say to that evidence?

A. I can't recall saying that. It sounds like something I might have said, but I'd really need to know the context it was said around.

Q. On the Tuesday the 23rd of November did you have a view as to continued survivability?

A. Yes.

Q. And what was that view?

A. The same as Saturday and Sunday, Monday, but the chance is getting less and less.

Q. And no re-entry plan was put into action on Tuesday the 23rd of November was it?

A. No, and that's not because of lack of will. That was because the sample interpretation that we had at the time was it was unsafe to do so.

Q. And again on the 23rd of November you were busy with a number of other things during the day and I think if I just direct you to around paragraph 100 of your brief, Mr Ellis, could you provide just a brief description of what else you were doing that day? It's 100, 107, 109 and 111?

A. Okay. 100, I begin with IMT meetings scheduled for 11 o'clock on the Tuesday. The police decided to take charge of the meeting. I don't know why they took that step, and they chaired the 11 o'clock and 1 o'clock meetings and at their request I resumed chairing the meetings from 3 o'clock onwards and that disappointed me. I believed I'd been

doing a good job in those initial days. We're carrying on with the sampling, carrying on with the drilling. The working party had reported back and in the morn, 7.00 am, we deployed the army robot.

Q. And what happened with that deployment?

5 A. That broke down at 550 metre mark.

Q. And do you have a view as to why it broke down?

A. No I take it it broke down because it went under some falling water which is not unexpected in a mine. However, the army have not worked in a mine before. They'd done extensive modifications to this robot, to
10 put larger batteries in to give it the capacity to go potentially to two and a half kilometres. This is a thing that has a normal working radius of 400 metres. It's a UK model machine. And in changing it they had to modify it extensively. Part of that meant that the electrics were exposed to the outside and it went under what we call a dripper, and it bang,
15 shorted it out. With hindsight a lot of us, oh why didn't we put a brollie over it or why didn't we seal it? Well, these guys were doing their best and they'd not been in that mine environment and it were something that we overlooked.

1652

20 Q. Do you recall on Wednesday the 23rd of November whether there was an offer of inflatable seals from a company in Perth?

A. Yes. And we took their offer up and they manufactured some, I believe. I think the Mines Rescue have still got one.

Q. And did you participate in another teleconference with the
25 West Virginians?

A. Yes, if you tell me that's the time it was. I think all together I took part in four conference calls with the West Virginians, in fact, I used him only a couple of months ago as well for some advice.

Q. And was it on Tuesday the 23rd of November that a video camera was
30 sent down the Slimline shaft in order to obtain footage of the fresh air base?

A. Yes, it was. We got some footage from it, but it wasn't particularly informative. Unfortunately the lighting configuration, the combination with the fisheye lens, it's what's called a, we call a snake camera, see

snake, and the falling water meant there was very little decent imagery off it. You could see perhaps a part of a sign, some mesh that looked to have been destroyed, you know, it wasn't as we'd put up in the mine, but there was very little clarity.

5 Q. And at the end of the day on the 23rd you again handed over to Mr White and left the mine, is that right?

A. That's right.

MS SHORTALL ADDRESSES THE COMMISSION – TIMING

10 EXAMINATION CONTINUES: MS SHORTALL

Q. So on Wednesday the 24th of November Mr Ellis, you were back at the mine around 6.00 am and there was a handover with Mr White, is that right?

A. That's right.

15 Q. Now, one of the key developments on Wednesday morning concerned PRDH 43, didn't it?

A. That's right.

Q. And what do you recall about those developments?

A. It was completed, but not satisfactorily and you've had evidence already
20 around, it actually missed the roadway is what we think and it came down the rig and that was sufficient for us to get a gas sample from it, until it totally collapsed, so to start with we were getting some samples, but again you have to be cautious with those initial samples, because you've introduced oxygen, air, in the drilling process, water, you've
25 affected the vacuum and the pressure in that part of the mine, so the first samples, it's not that you don't take any cognisance of them, but you just need to be careful about the interpretation that you make of them.

1655

30 Q. So by this stage, on the 24th of November, is it fair to say that there were five main sampling points, at the portal, vent shaft, Slimline shaft, grizzly and PRDH 43?

A. That's right.

Q. And was there a meeting that day or meetings to discuss the PRDH 43 results?

A. Yes. Late in the morning I met with a number of people in the meeting room including Seamus Devlin, of New South Wales or CSPL, Trevor Watts, Ken Singer and some police and Department of Labour representatives, but I really can't remember their names. And to be called to discuss these gas sampling results and the possibility of re-entering the mine and that meeting broke up for lunch. So we were in there for probably 10 o'clock till 12. I then met in Mr White's office with Mr Singer and Darren Brady and we discussed gas levels with reference to a possible re-entry, and I'd just like to read from my brief for this bit just to get the wording right.

Q. Of course, please.

A. "We spoke by telephone with Mr David Cliff at the University of Queensland who is an expert in the interpretation of gas analysis in coal mines. We discussed the gas sampling results which had been obtained from the top of the vent shaft at pit bottom and those from the first borehole which was deep in the mine. It is an important concept to get here now that he stated 97.3% of the air coming out of the top of the vent shaft was coming from the direction of the portal. The remaining, 2.7% was coming from within the mine, from where I call the body of the mine. His view was that this indicated that because there was gases missing between PRDH 43 and what we were seeing in proportion at the top of the vent shaft, that there was a small methane burn between those two points. There was also a combination of the explosive range of methane to oxygen which could now move into contact with that oxygen source and if that was to occur, there was a real possibility of an explosion." Those discussions and the emails from Professor David Cliff, were at 1.57 pm. The discussion with Ken Singer and Darren Brady probably took up to 20 minutes or so, quarter past two and at that time, I ensured that Trevor Watts was also aware and that no one was going to go into the mine. Seven minutes later the mine exploded. I remember with real clarity Ken Singer saying to me, "That's

the right call Steve.” And I appreciated that from a guy with a lot of experience.

THE COMMISSION ADDRESSES COUNSEL

COMMISSION ADJOURNS: 4.59 PM

5

INDEX

JAMES SAMUEL STUART-BLACK (AFFIRMED)	2155
EXHIBIT 29 PRODUCED – EMAIL FROM ASSISTANT COMMISSIONER NICHOLLS TO JAMES STUART-BLACK	2185
CROSS-EXAMINATION: MR MOORE	2189
CROSS-EXAMINATION: MS SHORTALL	2195
CROSS-EXAMINATION: MR HAMPTON	2197
CROSS-EXAMINATION: MS BEATON	2198
QUESTIONS FROM COMMISSIONER HENRY:.....	2207
QUESTIONS FROM COMMISSIONER BELL:	2209
QUESTIONS FROM THE COMMISSION:.....	2213
QUESTIONS ARISING - NIL.....	2216
STEPHEN ELLIS (AFFIRMED)	2217