QUEENSLAND COAL MINING BOARD OF INQUIRY

Coal Mining Safety and Health Act 1999

Establishment of a Board of Inquiry Notice (No 01) 2020

Before:

Mr Terry Martin SC,
Chairperson and Board Member

Mr Andrew Clough,
Board Member

At Court 17, Brisbane Magistrates Court
363 George Street, Brisbane QLD

On Thursday, 20 August 2020 at 10am
(Day 12)

<ROBERT GAVIN TAYLOR, on former oath: [10am]

<EXAMINATION BY MR RICE CONTINUING:

MR RICE: Q. Mr Taylor, at one point yesterday I was asking you about a scenario where a regulation set a standard of what must be done to achieve an acceptable level of risk. I think there is some qualification you might want to make on that subject, I've been informed?
A. If I may.

Q. Yes.
A. When we talk legislation in Queensland, there are four elements. There's the Act. There's the regulations, which of course are inviolate, so you have to be in full compliance with those. And then there are two other elements - the recognised standard and the guideline. The guideline speaks for itself. It is a guide to how you can achieve compliance.

I misunderstood you when we talked about a standard. I thought you meant recognised standard. Whilst you really should try and reach that recognised standard, there is an opportunity, if you believe that you can be better than or equal to, then you can take that road, but you have to be able to prove that.

Q. You had in mind the system of setting standards through that mechanism rather than the regulation, which is really what I was speaking of?
A. Yes, yes. The trouble is there are too many standards. There are standard operating procedures, there are recognised standards, and it's the one that I picked up incorrectly. I apologise.

Q. Just to be absolutely clear, so far as the Act and the regulations are concerned, I think you readily agree that that falls into the area of rigid compliance?
A. Well, after being chief inspector in Queensland and New South Wales - sorry, and then New Zealand, and enforcing those for a period of time, yes, they are inviolate, yes.

Q. I think yesterday you were intending to emphasise the existence of what you called the multi-layer systems of mitigation of risk. Is that a theme of your evidence?
A. It is. If we have a look at methane and how we

control it, if you go back to the ERZ zone, the explosion risk zone, there are methanometers across there. So there is an alarm when it reaches 0.25 per cent, and we disconnect power when there's 0.5 per cent.

If we move, then, into the coalface, on the coal-cutting machine, the shearer, there is an alarm given when the methane level reaches 1 per cent. At 1.25 per cent, you withdraw power from the cutting drums. At 2 per cent, you cut power off the face or wherever you - and then there is the 2.5.

So what I was trying to get to is that there is a gradation as we come through, so it gives you an opportunity all the way through those levels to make sure that you are picking up that there is a potential danger or potential hazard. The potential is there. It doesn't mean to say that there is a danger, but the potential is there, and you should pay close cognisance to how you are actually going to deal with that.

Q. Quite apart from the measures that the legislation requires, we're talking here about mitigation of catastrophic risk, so that it would be absurd, wouldn't it, to place reliance on a single layer of mitigation?
A. Correct, yes. That's why there's multi-layers within the system, yes.

Q. That obviously is intended, at the end of the day, to mitigate that risk so far as it is possible to do so?
A. Correct.

Q. To summarise, what I would call perhaps the primary layer or level, there is the controlled ventilation supported by the gas drainage. That's your primary layer of mitigation; correct?
A. Yes. Just so we come back on that, one of the things that you do is you try and work out the gas content of the seam and the specific gas emission, what I call the gas load - in other words, the total gas make that you may or may not have within that area.

Then there are a number of things that you can utilise to reduce that gas level. Ventilation is the first one. Then if you work out that the volume of gas will not be able to be catered for with that ventilation, then you look at pre-drainage and then you will look at post-drainage.

That may involve underground inseam drilling or surface to inseam drilling. It is all about, then, trying to reduce that total gas make to the least possible content.

Q. Understood. Those measures, can I suggest, comprise the first and foremost layer of mitigation for the management of methane?
A. Yes.

Q. And then to move to the next layer, there are the kinds of things that you have been speaking of, for example, the trip of power to the face?
A. Correct.

Q. I classify that as a secondary measure because it won't be called upon unless the gas reaches a certain level to actually effect that trigger; understood?
A. Yes.

Q. The trip of power is based on the sensor readings that feed to the machinery; am I right?
A. Correct.

Q. Something that perhaps hasn't been made much mention of, but you may be able to comment on it - is there a degree of lag time involved in the sensor recording a reading?
A. With the methanometer?

Q. Yes.
A. Milliseconds.

Q. You think?
A. Yes. There are two different things you use. One is the real-time monitoring, and dependent on distances they are pretty instantaneous. The other one that we use at times is a tube bundle system, and that's usually used more as a back-up to the real-time monitoring, and particularly within the sealed areas, there is a lag time on that because of the length of the tube back to the reading station. But the gas monitoring systems that we're talking about here on the face, yes, nanoseconds.

Q. Another measure within that secondary layer, can I suggest, is the requirement to remove workers to a place of safety once the gas reaches 2.5 per cent?
A. Correct.

Q. And then to add to that, I suppose, you would say that such attempts as can immediately be made to identify the source and bring the gas back under control is part of the secondary layer of mitigation?
A. Correct, yes. Can I just say there, Mr Rice, one other thing. When I went home, I thought about our conversation yesterday. I took occasion to re-read the New Zealand legislation, which I was involved in rewriting as the chief inspector there. We actually mention 2 per cent to withdraw people, which is in the New South Wales legislation, which is a lower level than here. But we don't mention the word "danger". It's about removing the people. Whilst the potential could be there, at that level it's not dangerous but could get to a level.

Q. Talking about potential, isn't it?
A. Correct. And that's, I think, where I was maybe at odds with where you were coming from yesterday, yes.

Q. In Queensland, of course, the legislation deems 2.5 per cent to be dangerous, and that is what triggers the requirement to remove workers from the coalface to a place of safety?
A. Yes, and as we said yesterday, you should be doing a full investigation. Whether it is at 2 per cent in another jurisdiction or here, you have a level of gas that you need to be concerned about; you need to do a full investigation.

Q. Can I suggest this to you: notwithstanding the existence of these layers of safety, any attitude within the industry that there is very little potential risk from a methane HPI because secondary layers of safety can be relied on to protect workers should be strongly resisted?
A. All I can say is being a manager of a mine for many, many years, if I found that was a culture at the mine, we would be having closed-door conversations. No way.

Q. That attitude, as I've expressed it to you, is not one that you would have held as a mine manager or as chief inspector?
A. No, and in fairness, I can't think of too many places that I would have ever come across that attitude. Methane in general terms is dealt with in a professional and a concerning manner.

Q. To bring this back to your report, you are not in any part of that report looking to suggest, are you, that there is little potential risk from a methane HPI because of the existence of the layers of safety that you have described?
A. No, and I think I've also explained in the report that I was encouraged by the level of detail through the LFI process at both Moranbah and Grasstree, the level that they went to to investigate, the rigour that they went through to investigate where the gas problem was, and the recommendations and the course of action they took to ensure it didn't happen again.

Q. To come back to attitudes, the correct attitude is the one that you first described in your evidence, that there must be rigid compliance with both the statutory standards and, as they are reflected in these mines, PHMPs?
A. Yes. The level of 2.5 per cent is not a legal - the level of 2.5 per cent is a trigger point for you to remove people and to report it and investigate it.

Q. You don't want it to get to 4 or 4.5 before you start to remove workers from the scene, do you?
A. You certainly don't.

Q. Can I then take you to some parts of your report where you express certain opinions. Mr Operator, the report is TGA.001.001.0001. I want to go to page 11 of that. I've just brought up that part of your report, Mr Taylor, where you commence to give a description and reach a conclusion about, in this case, the first of the HPIs that you considered.
A. Moranbah North?

Q. Yes.
A. Yes.

Q. I'm not going to ask you about the circumstances of the event. We've already heard a lot of evidence about that. I just want to understand, really, the approach that you have taken in the final paragraph of that section, being the paragraph just above the heading "Grasstree". Just have a look at that. You reach a conclusion at the end of that paragraph that there was little danger involved. If we look at what precedes that, your conclusion seems to be based upon the effect of certain measures that you described falling within the category of the secondary level of mitigation that we discussed

a moment ago; is that right?
A. Yes.

Q. Would we be right to conclude that what you are saying there is really a commentary that the secondary systems were effective so that the inherent potential risk of an HPI was not realised on this occasion?
A. Yes.

Q. What you have said there, can I take it, is not intended to be any commentary on the proposition that there is inherent risk with a methane HPI?
A. I think as I explained yesterday, any methane around a coalface, there's a potential. What I'm getting to in here is if we have a look at what happened on that day in particular and the control measures that were put in place by the statutory official, the deputy or ERZ controller, I thought it was handled in a professional manner.

Floor breaks are a regular occurrence on a longwall face because of the stresses that are set up. So you will, generally speaking, have floor breaks along a coalface, and it is usually towards the back of the roof support or towards the back of the shield.

When that happens, and if there is a conduit to a lower seam or a gas reservoir some place that hasn't been effectively drained - and that can happen at times, and I can explain why that can happen - you will get a blow-through of gas. So the only way that you can control that, which was done by the ERZ controller, was to use the ventilation that flows along the face and direct all of that ventilation by brattice sail towards that issuance of gas. That then will dilute and render harmless the gas that is coming from there.

Q. I'm not so much interested in asking you, Mr Taylor, about the technical aspects of what was done.
A. Okay, sorry.

Q. It is really a question of your approach to what you have set out in your report.
A. Okay.

Q. You have already agreed with me, I think, that what you have done is come and look at the events as they unfolded by virtue of reports created after the event --

A. Yes.

Q. -- which described what happened and what the outcome was; correct?
A. Yes.

Q. Having reviewed all that, you have seen that the secondary measures that existed were effective, in your opinion, on that occasion so as to mitigate the actual danger to workers on that day?
A. In that particular instance, yes.

Q. The second part of what I was putting to you was that what you are saying there is not intended to detract from or even comment on the inherent risk, or the potential risk, to use the more correct word, inherent in a methane HPI?
A. Definitely not.

Q. You are not addressing that subject at all?
A. Definitely not. But just on that, I think the thing that really encouraged me through this, when I read the LFI that was generated after this particular event, going through the witness statements and the rigour and the level of detail that they went through in the investigation, that was encouraging because it really indicated that they were taking this seriously, they recognised the potential, and the recommendation was where they were going to do additional drilling with floor and roof touches, which hopefully then would eliminate that potential gas reservoir if that lower seam came closer to the middle seam.

Q. We've already heard a fair bit of evidence along those lines, which is why I didn't propose to ask you about it.
A. Fair enough, yes.

Q. As you've seen, I was more interested in the way in which you approached your task and what your prevailing attitudes are to that task. Okay?
A. The way I approach anything like this is that the first thing is compliance. So you are always looking to make sure that whatever happened is in compliance with the legislation. That's number 1.

Number 2, then, you start to look at if there was residual hazard or risk that wasn't effectively addressed by the legislation, what did the operation do to identify

that hazard and mitigate the risk that is associated therewith. Then the third thing is how did they go about getting back into production.

Q. Could we just go forward, Mr Operator, to the next page. We will just take a couple more instances. You are turning here to the incidents at Grasstree. In the third paragraph of that section under "Incident 1", you express another view concerning the level of danger to the operation. Again, as the concluding words of that sentence indicate, you are relying for your conclusion on the effectiveness of the secondary systems that were in place?
A. Yes.

Q. Again, you are not intending to comment on or minimise the potential risks involved in a methane HPI?
A. Definitely not.

Q. Could we take it that that is the case in other parts of your report where you express conclusions about the existence of actual danger - it is not actually a comment on the potential associated with an HPI?
A. Correct.

Q. More it is a comment on how you would view that the secondary systems worked in the instances that you were asked to consider?
A. If you want to describe them as secondary - I mean, it's a system.

Q. I call it secondary because they are not going to be called on until your primary systems fail.
A. Okay, that's a fair comment.

Q. Is that reasonable?
A. That is, but it's a system. But, yes, I accept where you are coming from.

Q. You might not use that terminology?
A. No, but I know what --

Q. You call it a multi-layered system?
A. Yes.

Q. That probably covers it, but just for completeness, could we go to page 15, Mr Operator. At the very conclusion of your report, you express a general view of

the HPIs that you considered, and can I suggest once again, particularly in the last sentence of that, that you are referring there to the operation, in the instances that you have considered, of the mitigation systems that were in place and that they seemed to work effectively?
A. Correct.

Q. With a view to mitigating danger to the workers?
A. Correct.

Q. But again, as you have already agreed, you are not intending there to make any comment on the potential associated with a methane HPI?
A. I fully agree, yes.

MR RICE: Thank you. Thanks, Mr Martin.

THE CHAIRPERSON: Mr Roney, anything?

MR RONEY: No.

THE CHAIRPERSON: Mr Trost, anything?

MR TROST: Yes.

<EXAMINATION BY MR TROST:

MR TROST: Q. Mr Taylor, may I just introduce myself. I am counsel for one of the injured workers that was unfortunately injured at Grosvenor on 6 May, Mr Mulholland. I'm not sure if you are aware of his name, but I'm counsel for him. I would just like to clarify a couple of things that you said to my learned friend Mr Rice QC yesterday. You mentioned that there were all sorts of potential failures that could lead to an exceedance of methane above the 2.5 per cent?
A. Can I just interrupt. I know nothing of Grosvenor.

Q. I appreciate that. I'm not going to turn to that specifically. It's just more in general, for the purpose of today.
A. Fair enough.

Q. You did mention that there were all sorts of potential failures that could line up and cause a 2.5 per cent exceedance at a mine?
A. Potentially, yes.

Q. You used the words "all the cherries line up".
A. Mmm-hmm.

Q. You mentioned that there could be a sudden fall within the barometer, an overhang in the waste, so is it correct, then, that you are not always going to achieve the 2.5 per cent level?
A. There is a distinct possibility that you will exceed 2.5 per cent at some stage. The goal, of course, is to keep it below there, but, as I say, if in all of these systems you have in place there is a mechanism within there that doesn't quite work - and bear in mind some of the stuff that we're talking about here is not a science, it's an art, because we're actually dealing with non-homogenous rock. So if you've got a layer, and I think it was described by one of the previous witnesses, for example - the question was asked by Mr Clough if you can bring your gas holes closer together. Sometimes that will work, sometimes it won't, because there will be abnormalities within the strata that could cause a problem.

When you are doing some of these very long holes, surface to inseam or underground inseam drainage holes, because you have actually drilled through the ground again, you can have a blockage within that hole, so the hole is not as effective as it normally would be, so it fills up with fines. Then when you have a little bit of stress around that hole, these fines move. Then all of a sudden, you have a surge of gas that has been blocked behind that. So there is a number of issues within there, and if they all line up at the same time, then you may well have that exceedance.

Q. Now, I won't take you to the transcript from yesterday, but you said that such occurrences shouldn't be accepted in the industry, the exceedances, and that they should be kept as low as possible, even eliminated if at all possible?
A. Correct.

Q. These should be a rarity, when these circumstances line up; is that correct?
A. Yes.

Q. You said that if 2.5 per cent is the mandated figure, then you should investigate why there has been an

exceedance of that 2.5 per cent?
A. Yes.

Q. But you also say that 2.5 per cent may not be dangerous - you didn't like the use of the term "dangerous" - because there is an array of other measures in the systems of control; is that correct?
A. 2.5 per cent of methane is not a danger within itself. It's the potential within there that it may go higher. And the other thing, too, about methane, it's non-toxic, it's non-respirable.

Q. Sure. You also mentioned that you should investigate to determine why that exceedance has occurred over the 2.5 per cent?
A. And the legislation requires you to do so.

Q. Absolutely. Presumably one of the purposes of that investigation is to determine whether that 2.5 per cent was in fact dangerous?
A. Or had the potential to be, yes.

Q. Is it correct, then, you won't necessarily know whether that 2.5 per cent exceedance was dangerous or had the potential to be dangerous until you have done that investigation?
A. No, no. Because the methanometer continues to read, you will know the maximum level that was achieved. For example, in all of the incidents that I was asked to look at, at no time did it come anywhere near the explosibility limit. I think the highest was about 4.1, but the majority were just over the 3 per cent mark and for a very, very short period of time.

Q. But you did acknowledge, as well, that any level is undesirable?
A. Yes, yes.

Q. And could still ignite even at lower levels?
A. Yes, yes.

Q. As a result of these investigations, might you then note it as an incident of over 2.5 per cent and decide that, well, actually, we're not in full control there, and assess the things like ventilation systems and your drainage systems? Would you reassess those aspects of your control systems as a result of an exceedance of

2.5 per cent?
A. When I went through the LFIs, that's exactly what the two operations did. They looked at it, analysed it and then, as I said, if we discuss, say for example, Moranbah, they took another flight plan - sorry, the detail of where the drill strings go, to actually do touches floor and bottom to ensure that they were degassing that lower seam.

With Grasstree, for example, they put additional blowers on the surface of the gas holes to ensure a greater flow and started to monitor the flows. With the one that caused them most of the problems where one of the methanometers was, they set up additional systems of ventilation to make sure that that gas stream, the goaf stream, was effectively controlled. So yes.

Q. So you look at all sorts of measures. You mentioned there that you might install other sensors as well. Would that be another possible measure?
A. That's what I used to do as a mine manager, yes. Obviously you comply with the legislation. Then if you have a concern with respect to a goaf stream or there may be additional gases being given off some place, you would place your sensors where you considered there may be a risk. That's exactly, for example, what - which I was very pleased about, if we have a look at Grasstree, they left that monitor where it was because they recognised that it was picking up levels of methane. So they didn't remove it.

Q. Might you also consider production rates? We know that production, of itself, causes releases of methane. Might you consider changing those production rates as well?
A. Yes, there's a number of things. One of the biggest problems we have right now in the industry where this gas is coming from - over the years, we've steadily grown from 5,000 tonnes a day from a longwall and thinking that was a world record, to longwalls that are doing 50,000, 60,000 tonnes. So if you take a block of coal that has, say - you've reduced the gas level to 5 cubic metres a tonne, so when you produce that one tonne of coal, there are 5 cubic metres you are releasing into the - so, yes. So depending on the speed of the shearer through the face - and that's why you now link your methanometer back into the shearer speed, particularly when it comes towards the tailgate end.

There are other things you can do, like going from bi-directional cutting to uni-directional cutting. And there are a number of coal mines I know that once you reach a certain tonnage for the week --

Q. And you covered a lot of those in your report, those sorts of measures.
A. Yes.

Q. The Queensland legislation, as you have acknowledged, deems the 2.5 per cent to be a dangerous level. I understand that you don't necessarily agree with that, but --
A. Far be it from me to argue with the legislation.

Q. Absolutely. However, you also mention that 2 per cent is mandated in other jurisdictions, including New Zealand and New South Wales.
A. Two per cent, yes.

Q. Is the 2 per cent level too low, in the sense that if 2.5 per cent is rarely dangerous, a little over 2 per cent is probably never dangerous?
A. No, look, methane is always a concern. You have to have a figure some place where you consider it necessary to withdraw men to ensure safety, whether that's 2 per cent or 2.5 per cent. Okay? So it's a level. As I said yesterday, is 2.48 per cent more dangerous than 2.5 per cent? So there's a level, and what that's doing is saying when you get - come back a bit.

At 1.25 per cent, we drop the power off the cutter heads. At 2 per cent, power goes. Then you come to the next step, which is to then withdraw your men from a potential that it could go higher, and there may be something that they do in that area that could cause a friction or ignition. So you remove your men completely from that area - men or women - whether it's 2 per cent or 2.5 per cent. That's a necessary safety precaution to ensure that you minimise wherever you can.

Q. Is it more of a safety precaution or is it a regulatory requirement, because if it is a safety precaution --
A. Well, in this instance, it is a very - it's a regulatory requirement based on sound mining practice.

Q. But if 2 per cent is a safety requirement in other jurisdictions, couldn't there be potential in Queensland, as well, that 2 per cent is also deemed - you might need to withdraw men as a safety precaution?
A. Two per cent, we cut the power off.

Q. I understand that, but might you increase your precautionary measures, your secondary measures?
A. I can't see that it's going to make a huge amount of difference, but you could. I don't see it making such a difference.

Q. In Queensland, obviously, if it exceeds 2.5 per cent, you launch an investigation, and you have mentioned in your report and your testimony that that ought to be done and has been done at the mines that you have reviewed?
A. Yes.

Q. Now, in New South Wales and in New Zealand, at 2 per cent you are required to investigate that, and you have mentioned earlier today --
A. No, no, you're required to withdraw men.

Q. Sorry, the 2 per cent mandated requirement in New South Wales?
A. Would be a reportable incident. In New Zealand, not. You just withdraw the men.

Q. But you mentioned earlier today that you would investigate where there has been an exceedance in those jurisdictions as well?
A. Correct.

Q. So might there be instances, even in Queensland, where although the requirement says 2.5 per cent --
A. Can I say also - look, come back. As a mine manager, if I was continuing to have the power cut from the face at 2 per cent, never mind the 2.5 per cent, I would be working out why that shearer is not working, because we continue to have these gas exceedances and we continue to lose power.

Q. That would obviously lower production as well?
A. Well, two reasons, yes. You don't want to be losing - look, a longwall face is going to lose about 2,000 bucks a minute if it's stopped, so you're not going to do that willy-nilly. But the other thing is, yes, you want to make sure, number one, safety of the men, because you want to

know why your system - as explained by Mr Rice previously - is not handling that level of gas. So, yes, you are going to go look for it.

Q. And also then to determine what steps might need to be taken to avoid those further exceedances?
A. Yes, yes.

Q. If that's the ideal process after there has been an exceedance, can I take you back to the process before you even get to operating. I assume that there are studies of the mine site that take place beforehand and that there is presumably - you study the strata where the coal seam is located, and then there is planning and design of this underground operation before you even sink a drill into the ground?
A. Yes, yes.

Q. Presumably, there is modelling of the gas controls?
A. Yes, I don't know if you heard the evidence the other day from the CEO of Anglo, but, yes, they are difficult calculations, again, because you are dealing with unquantifiable issues relative to the strata. But, yes, you will run it through and you will put a factor on top of that, because you know that could be a little bit wrong. Yes, there is a lot of detailed work that goes into this.

Q. Sure. Part of that process before you even get underground is pre-drainage, before you actually send workers down?
A. Dependent on the gas content of the seam.

Q. Well, regardless of whether it is pre-drainage or ventilation or other systems, the design is to remove a lot of the methane before you send workers down to start shearing the longwall; is that correct?
A. I don't want to be pedantic, but a lot of the gas drainage that you will do is underground inseam, so you develop insets first, and then you will do the drainage from underground.

If you need longer-term - and this will depend on the permeability of the gas. Some gases release more quickly than others. If it's very tight coal or if the millidarcies that are measured - it's according to Darcy's law. If the millidarcies are very low, like, say, around about 2 or 1 or less, then you would probably look at

surface to inseam to give you a longer lead time. Okay? So all that is taken into consideration.

The main reason for gas drainage, by the way, is the fear of outburst. That's the reason why it was initially developed. So you drop the level of gas content below the threshold limit once you have worked out what the threshold limit is. The additional benefit to that is that it then further reduces the gas content to make it a much more mineable and safer proposition.

Q. Initially that's based on modelling, but, as you say, there might be things that you don't --
A. From a greenfield site, it's all modelling. From a brownfield site, then clearly after you have been in the seam for a period of time, you will work out the best angles and the best length of hole to drill to maximise the recovery of gas, yes.

Q. And is that moving from one longwall to the next longwall?
A. Correct.

Q. You learn from the previous?
A. Yes. If you have a look at - as I say, I don't know what they do at Grosvenor, but I know that at the mines that I managed and I know that when I've looked at Moranbah and Grasstree, they actually have a review between one longwall and the other, and then there is a decision based on what happened in the previous longwall block, to the drilling pattern inseam, and also to the distances of the goaf wells based on the effectiveness of the previous one. Okay? So there is a continual review process to try and maximise the reduction of gas.

Q. When you are moving from one longwall to the next, that's still based on assumptions from the previous longwall that might not in reality turn out to be correct in the next longwall?
A. You're getting pretty close.

Q. You are getting close?
A. You are getting close.

Q. But there can be variances?
A. Because of the geotechnical nature of the strata, yes, there could be. There could be variances within the one

block. But if you have a detailed drilling program, an exploration program, you have a pretty fair idea. So over a period of time in the life of a mine, you are getting pretty accurate as the mine advances.

Q. So if you are moving particularly from one longwall to the next and you think that it is very accurate, and perhaps you even improve if you have had a tough experience with one longwall and you are moving to the next, you might increase those controls or increase the drainage to try to improve the situation?
A. Yes, you would.

Q. If it turns out that that still hasn't had a positive effect, might you engage in further controls before you actually start operations on that longwall?
A. If there was a fear that your controls weren't effective, then, yes, you wouldn't start the longwall.

Q. So might you ever just work out that you would have to abandon that seam because, no matter what you are doing, it isn't affecting positively the gas quantities?
A. I've never known of that as a proposition.

Q. Never?
A. It could possibly happen, but with the level of effectiveness that we have at the present stage with gas drainage, gas wells, surface to inseams, I --

Q. You could perhaps just drain it for a lot longer or do a lot more of these other measures that you have talked about?
A. Yes. For example, if we talk about the permeability, some longwalls drain very quickly; but others, the coal becomes tighter and you may go from, say, a six-month lead time to a nine-month or a 12-month lead time, dependent on a number factors.

Q. That would primarily be driven by safety, I assume, as well as the requirement under the regulation to keep it under 2.5 per cent, because if you are over 2.5 per cent, you are not allowed to operate?
A. All of the above, yes. All of the above.

Q. Once you have started actual operations and shearing from the longwall, you are doing that with the ventilation systems and potentially drainage systems in place, all

based on the modelling of how much methane will therefore be produced and what will be a safe content and also what will keep it under the regulatory requirements; is that correct?
A. Yes, correct.

Q. Production rates will also respond to that as well; you will keep those at a level that will tie in with these other controls?
A. Yes, with a longwall, the three things you want to do are: keep it level, keep it straight and keep it moving. You don't want to be stop/starting a longwall because of the stresses of it. So it's much better to, say, do 100,000 tonnes a week consistently than to do 200,000 tonnes one week and then nothing in the next week. So, yes, it's about that consistent movement.

Q. And smoothing out that production level, so it is also assisting?
A. If you can.

Q. Again, I put the same question to you: once you have already started the operations, might you reduce production - bearing in mind you want to keep that fairly smooth rate, but might you continually reduce production?
A. And, yes, I think you'd adjust your - if, for example, you were producing 150,000 tonnes this week, and because of the volume of coal you produced, you're going to be stood for two or three days next week, then you would look seriously to how you are going to even it out. You would also be looking at a whole bunch of things with regard to how effective has your pre-drainage been, how effective is your post-drainage. So, yes, there is a suite of things that you would be looking at, not just one factor.

Q. And that - sorry. Anything else?
A. No, no.

Q. That would be driven by an exceedance that occurs, and you therefore investigate it and work out what other controls you might put in place or improve on to get it under the 2.5 per cent?
A. Yes, correct.

Q. You would expect that to happen fairly quickly after an exceedance?
A. I would think so, yes.

Q. Because you want to keep production going at a safe rate within the regulation?
A. Well, you want to make sure that you are not continually having gas-outs, yes, more than anything else.

Q. I've only got one final question. You mentioned the requirement to extract workers when it gets to the 2.5 per cent in Queensland.
A. Yes.

Q. It is 2 per cent in New South Wales and 2 per cent in New Zealand?
A. Correct.

Q. Could you conceive of any circumstances where either because of the volatility of a mine in total or a particular longwall or because of the design of the mine or where the workers are in fact located, you might consider extracting those workers at a lower level than the 2.5 per cent or, indeed, 2 per cent in other jurisdictions?
A. It seems to have worked fairly well so far. I think one of the things that was being discussed previously in the inquiry was relative to remote operation of a longwall. That's one way you could potentially remove people from the working face. You are not going to remove them from underground because of all the services that have to go on. But there's no reason why you can't remotely operate a longwall so that there is no-one on the face.

Q. But, sorry, just to answer my question, you wouldn't conceive of a situation where, on a particular site, you might think of putting in place a control to remove them at an earlier level than the 2.5 per cent in our jurisdiction or 2 per cent in other jurisdictions?
A. I can't conceive of a situation. There is still a fair margin of leeway there between 2.5 per cent to 5 per cent or from 2 per cent to 4.7 per cent, if we're going to be accurate. If you were that concerned, you wouldn't have your men there, anyway. So if I thought that we were going to have a problem of that nature, yes, I don't think I would want to be there, no.

MR TROST: Thank you, Mr Taylor. No other questions.

THE CHAIRPERSON: Thank you, Mr Trost. Mr Crawshaw?

<EXAMINATION BY MR CRAWSHAW:

MR CRAWSHAW: Q. I just want to clarify one thing, Mr Taylor. The regulation you are referring to - I think it is regulation 366 - says that the 2.5 per cent level of methane is taken to be dangerous; is that right?
A. That's the wording, yes.

Q. How long has that regulation, or at least the content of that regulation with the level of 2.5 per cent, been in existence, to your knowledge?
A. I think that's been in there since Mount Mulligan, or the aftermath of Mount Mulligan, which would be the 1926 Act, I think. As I explained yesterday, Mr Crawshaw, one of the reasons for that figure is because of the use of an oil flame safety lamp.

Q. You said to my learned friend appearing for Mr Mulholland, who was just asking you some questions, that it would be far from you to take issue with that description of the 2.5 per cent being taken to be dangerous?
A. I'm sorry, could you repeat that?

Q. I thought you said to my learned friend just a moment ago that it would be far be it from you to take issue with that 2.5 per cent level being taken to be dangerous?
A. I'm not too sure I understand what you are asking me.

Q. Well, are you taking issue with the description in the regulation of the 2.5 per cent being taken to be dangerous?
A. I must hard of hearing. I'm having real difficulty hearing you, I'm sorry.

THE CHAIRPERSON: Hang on, Mr Crawshaw.

Q. I think what you are being asked is, in relation to what you said to Mr Trost a little moment ago, that it would be far from you to question the statutory regulation, or something of that nature. I think you are being asked about that.
A. Oh, sorry. Sorry. Yes, if that's what the legislation says, then we comply.

MR CRAWSHAW: Q. Of course you comply, but do you take issue with the description of 2.5 per cent as being taken to be dangerous?

A. Yes, I think I understand you now, yes.

Q. You do take issue?
A. I don't believe - yes, I don't believe the word "danger" is correct in that term, because it's not dangerous. The potential for it to go to a higher level, yes; but 2.5 per cent in itself is not dangerous.

Q. So you think it should say "2.5 per cent has the potential to be dangerous"?
A. I think it just should say if you reach 2.5 per cent, it's a high potential incident which you will report to the inspectorate and you will fully investigate.

Q. But for those who have to comply with this regulation, don't you agree that it is important for them to be told why the 2.5 per cent requires compliance?
A. If I've got to explain to a guy with a first class mine manager's ticket that that's a problem, then we've got a bigger issue in the industry.

Q. Being dangerous doesn't mean that the danger has to actually be manifested, does it?
A. No, I think the word that Mr Rice was trying to come to before was "potential", and I accept the fact that the potential may be there for it to go higher. So, as I was explaining before, I have no problem with there being a set point. You need to have an arbitrary figure some place that says that if you reach this level, you will do certain things. If that level is 2.5 per cent, then I'm fine with that, or if it is 2 per cent, I'm fine with that, as long as there is a point some place that you say that if you have reached this level, you will do certain things. One of those is to remove your men from the potential, and the other one is that you will conduct a full and thorough investigation of why you have reached that level of methane.

Q. This view you have of the regulation and the description of 2.5 per cent as dangerous, which you say has been around for about 100 years - have you ever taken issue with it before?
A. I just did what I had to do, which was to withdraw the men and conduct a full and accurate investigation. I've never really, until it was placed to me the other day, thought too much about the word "danger". It was the trigger point for me to take action, as a mine manager, to

ensure that I've thoroughly investigated that situation.

Q. What about when you were a chief inspector - did you take issue with the wording of the regulation?
A. Well, I changed the wording in the New Zealand legislation.

Q. I'm talking about this regulation.
A. No, it never came up, Mr Crawshaw. But when we did the New Zealand legislation, that word was removed. But, look, it's a word. I wouldn't really get too hung up on it, as chief inspector or as a mine manager. The most important thing for me is that there is an arbitrary figure that is set that says that when that figure is achieved or realised, you will withdraw your men to safety and you will carry out a full and thorough investigation, and I'm happy with that.

Q. You can be assured I'm not hung up on it, Mr Taylor. I'm just asking you about your answers that appeared to draw a distinction. Thank you very much.
A. I accept that. I accept that.

MR CRAWSHAW: Thank you very much, Mr Chair.

THE CHAIRPERSON: Thank you, Mr Crawshaw. Ms Holliday?

<EXAMINATION BY MS HOLLIDAY:

MS HOLLIDAY: Q. Mr Taylor, do you maintain the evidence that you gave yesterday that the prescriptive requirements in the regulation are aspirational rather than achievable?
A. I will give you the same answer as I gave yesterday.

Q. The answer is that you do maintain the evidence that you gave yesterday; is that correct?
A. Yes.

Q. You are very much an outlier in that opinion in this Board of Inquiry, Mr Taylor. Surely you must accept that if a mine has done adequate pre-drainage and has adequate ventilation systems in place, then they should not have a gas exceedance?
A. I don't accept that, no. As I said to you, you can think you have the most effective systems around, and there may be an issue with a gas hole, there may be an issue with an underground inseam hole that could block, there may be

a movement in the strata above you, the goaf may hang up, and then you will have a sudden exceedance.

Q. Let's break that down. In terms of the answers that you have just given, in terms of foreseeable events - exclude those from your answer. In other words, if you are looking at foreseeable events, then with pre-drainage and ventilation systems being adequate, you shouldn't have gas exceedances, Mr Taylor?
A. But the legislation does foresee that. The legislation actually says that you can have a short exceedance --

Q. Putting that to one side. Mr Rice put that to one side yesterday in terms of the one exception under the regulation. So put that out of your mind.
A. Yes.

Q. And hopefully you did when you gave the answer that it was aspirational, not achievable. So going back, then, to foreseeable events with adequate gas drainage and adequate ventilation systems, a mine should not have gas exceedances; do you accept that?
A. I'm trying not to be glib, Ms Holliday. In a perfect world, everything would work. The issue that we have is we're not dealing with a perfect world in an underground coal mining environment. Things unfortunately, because of the way mother earth behaves, can at times - not regularly, I accept - but if you ask me can you 100 per cent guarantee with everything in place --

Q. That's not the question that I asked you.
A. Well, I think it is.

Q. No, it's not.
A. Okay.

Q. The question that I asked you was in relation to the foreseeable events, with adequate pre-drainage or adequate drainage and adequate ventilation systems, then gas exceedance should not occur?
A. When you design the mine or you design that longwall, all of your design techniques relative to methane drainage, ventilation, are all designed and take into consideration reducing the quantity of gas that's liberated into the working place to the barest minimum. You design that, so you try and achieve that. That's what you are trying to

achieve from the very beginning.

However, every now and again, something may happen that will put you over the limit. That's why you're designing it, I accept that, so you are designing everything that you can see that's foreseeable. So you put all of that into the sausage machine, and you hope it comes out the other end as a perfect sausage. But every now and again, something could go wrong. As I said, you can have a gas hole that blocks because there is a collapse of the hole --

Q. The question I asked you is in relation to foreseeable events.
A. And that's what I'm trying to say. When you design it, you are trying to bring everything you can to a foreseeable level based on experience, so you design your whole ventilation/gas drainage network to ensure - never mind 2.5 per cent; you don't want it to even reach 2 per cent, because it is going to knock your power off. So you are really trying to minimise the gas level. No-one designs to bring it up to 2.5 per cent. You try and reduce it to the barest minimum.

Q. Mr Taylor --
A. I'm obviously not answering your question.

Q. No, you are not giving me an answer to the question, because the answer to the question is in relation to foreseeable events, adequate gas drainage and adequate ventilation systems, that if those three things operate, then you shouldn't get gas exceedances?
A. If those things operate to the design level, no, you shouldn't.

Q. If it is then the unforeseeable events that cause gas exceedances, the number of events that are unforeseen reduce - the number of times they occur. So, for example, in relation to an HPI, you have an HPI in the canopy shield, you learn from that incident, and it shouldn't be repeated again; you accept that?
A. I see where you are coming from now. My apologies, yes. So if all the foreseeable events - but there is a possibility you may have, and then you fully investigate what went wrong.

Q. In order to ensure that you don't have a repeat of

a gas exceedance with the same root cause?
A. Correct.

Q. So in relation to foreseeable events, if adequate gas drainage has been done and you have adequate ventilation systems, it is not aspirational; it is achievable, isn't it?
A. The way that you have phrased that, yes.

Q. Mr Taylor, if I can take you to your statement, TGA.001.001.0001, at 0007, and it is the last dot point on that page. In relation to the "Direction of mining" dot point that you have there, you are effectively saying there, aren't you, that the risk of methane accumulation in the tailgate is greater at Moranbah than Grasstree?
A. Given the buoyancy of methane, yes.

Q. So were you satisfied that Moranbah had controls in place that were adequate to address that risk?
A. From the permit to mine system that I looked at and the spacing of the holes, yes, I think it should have been under control, yes.

Q. Can I say, in relation to any of the questions that I ask you, if you weren't provided with sufficient information or it was outside the scope of what you were asked to consider, just let us know.
A. Thank you.

Q. If I can take you now to 0008, at "Extraction height", the first dot point there, you speak about the fact that 1 metre of coal is left to protect the roof - this is at Moranbah - that could result in some gas being generated in the goaf area from the face coal. Do you accept that that introduces a risk of spontaneous combustion in the goaf?
A. Most definitely, yes.

Q. Were you satisfied that there were adequate controls in place at Moranbah to address that issue?
A. I went through the principal hazard management plan on spontaneous combustion, had a look at that whole system, where the monitoring points were, and I was satisfied from the information I saw that that was well under control at Moranbah, yes.

Q. Mr Taylor, I'm not sure how much of the evidence of the inquiry you have heard or sat through --

A. Some of it.

Q. -- but you must have been here for Mr Mitchelson's evidence, because you referred to it, or at least you have heard of it?
A. I heard some of it.

Q. There was at least a project in place with the aim of Moranbah achieving 24 million tonnes per annum?
A. I did hear that bit, yes.

Q. In terms of that aim of 24 million tonnes per annum at Moranbah --
A. Was that Moranbah just on its own, or was that --

Q. No, it was Moranbah and Grosvenor, but because you didn't assess Grosvenor, I'm limiting it to Moranbah.
A. Okay, thank you.

Q. Did you see this as safely achievable, given the gas strata and structure constants at Moranbah?
A. I would have to have a look at that in greater detail. It's not something I really considered at the time. I would have to go away and have a look at how they were going to achieve that or what their plans were to achieve that.

Q. In other words, you weren't tasked to consider that and you didn't have sufficient information to be able to answer my --
A. No, no, no. I mean, that's 12 million tonnes per mine, I guess. Twelve million tonnes from a longwall mine these days is achievable, on its own --

Q. You're saying that generally without any specifics at all in relation to --
A. No, that's exactly it, no, so I can't comment on that.

Q. Taking you back to 0008, and it is about halfway down the page, the paragraph that commences, "On reviewing the PTMs for Moranbah's L/W 604 and Grasstree's L/W 909", you make the point there that, in most instances, the in-situ gas content had been substantially reduced by well over 50 per cent. I suggest to you that you are stating no more than the obvious, that that had to occur in order to be able to safely mine?
A. Sorry, no. What you're looking for, as I explained to

our friend behind me - the principal reason to gas drain is to lower your gas, the in-situ content, below the threshold level.

Q. That's right.
A. In a lot of instances, when I looked, for example, at both Moranbah and Grasstree, that was achievable very early in the piece, so that we were below the threshold level, but because the holes had been there long enough, they had further reduced the level of gas, so in a lot of instances the core samples were well below the threshold level.

Q. Does that mean, then, that on the basis of the opinion that you have just expressed, they had excess reserves by way of gas drainage?
A. No, I wouldn't say excess. As I said, you drill to drop the in-situ content below that threshold level. The added benefit to that is it reduces your gas level further, so that when you are mining, you produce less gas and keep yourself below the mandated numbers within the legislation.

Q. Yes, but then you would also have reserves of gas drainage, wouldn't you, because you have reduced it down by more than 50 per cent? So it is not just the levels, but you would have reserves to call upon for your gas drainage, if that's the reason why you say that they have done this?
A. No.

Q. You would be aware, wouldn't you, that at one point someone asked for more gas drainage and they were told that they were at capacity?
A. Oh, sorry. They were talking there about gas wells. That's the gas that's in - that's post-drainage. What I'm actually talking about here is pre-drainage.

From a pre-drainage perspective, as I say, what you're trying to do is - I will give you an example just off the top of my head. At Grasstree, the threshold level is about 7.3 tonnes per cubic metre. Their in-situ content was around about 10 or 12 in this particular instance. In that particular one, they actually reduced it before they started mining, or within that permit to mine, to about 3 cubic metres a tonne.

Q. So you reject the suggestion, then, that they had to reduce the in-situ gas content by well over 50 per cent to safely mine?

A. No. All I'm saying is when I looked at the permit to mine, a lot of the holes had actually reduced the in-situ content to well below 50 per cent of what it originally was.

Q. My first question, then, in this tranche, essentially said that the reason why they did that is no more than the fact that they had to do it to safely mine?
A. That's why you do it, yes, to safely mine, yes.

Q. So the answer to my first question was "yes"?
A. Yes, yes.

Q. In relation to ignition sources - this is at page 0009 and then over on to 0010 - you talk about the risk of spontaneous combustion at the bottom of page 9 and the top of page 10. In terms of the risk at Moranbah for spontaneous combustion, we've already assessed one of those risks because of the flow of methane into the tailgate. Isn't there another risk as well because of the overlying seams that report to the goaf, and this is basically what you're saying there at the bottom of page 9 and the top of page 10?
A. Yes.

Q. Is your answer the same as what it was before, that you were satisfied that the controls in place were adequate to manage that risk of spontaneous combustion at Moranbah?
A. When I was chief inspector, we had a number of - we had a couple of issues at Moranbah that I recall very well. The improvement in their principal hazard management system and in their preparedness for a spontaneous combustion event was marked.

Q. That didn't really answer my question, though. They might have had an improvement, but my question to you was whether you determined or considered that the controls were adequate for that risk?
A. No, they were adequate, and if they weren't, I would have put it in there that they weren't adequate. I was impressed with what they had.

Q. Continuing on on page 10, under the heading of "Gas Exceedances", you indicate in the first substantial paragraph:

As I have indicated above, it is my

opinion, from the documentation I have reviewed that both Moranbah North and Grasstree have compliant, robust systems that strive to meet industry best practice ...

So it is the choice of words "strive to meet" industry best practice, rather than "meet", that I'm interested in. Is my question a matter of semantics and you meant to say that they actually meet industry best practice or that they are only striving to meet that practice?
A. They meet industry best practice at the present sites. Best practice is a moving target. There are things that people are doing all the time. For example, Grasstree do something that I've never seen elsewhere, or they're starting to do elsewhere, where they use nitrogen to inertise the adjacent waste to reduce the volume of methane that may seep from that waste into - now, I've never seen that done before. I've seen nitrogen being used to control a spontaneous combustion outbreak, but I've never seen it used like that. So the techniques that are being used have moved and continue to move.

Q. Yes, but you gave a statement as at a date, and so therefore it has to be those industry practices as at that date that are relevant. You chose to use the words "strive to meet" rather than "meet". Were you intending to say that they met them or only that they are striving to meet them?
A. Let me rephrase that. From the documentation that I was provided with, I am of the belief, to my knowledge and experience, that Grasstree and Moranbah North have some of the best systems that I've seen.

Q. Yes, but that again is not the question. The question is whether they are meeting industry practice, in your opinion, or whether they are striving to meet industry practice.
A. How can I put it? They're up there with the best.

Q. Is that the closest I'm going to get to an answer to that question?
A. Well, they're up there with the best.

Q. Finally, the last question is: is it your opinion that no further steps should have been taken to reduce the number of HPIs at Grasstree mine?

A. I think as I explained in my document, I had a concern that the placement of the canopy sensor should have been dealt with far quicker than it was, and the concerning thing for me is, when I read the LFI, which I thought was an excellent document, that they had all the answers. The question I had at the time: well, why didn't you do it sooner?

Q. Other than that issue, you are satisfied that they had taken all appropriate steps to reduce further exceedances?
A. With that one caveat with regard to that zero, as they called it, the zero sensor, the canopy sensor. But, yes, for the rest of it, I thought - there was only one other one, if we're talking about minor things. That was the second exceedance, where the longwall had started and they hadn't ventilated the inbye end correctly, which was picked up by a deputy, another one of those controls, a physical controller, the deputy, and that was addressed there and then on the spot.

Q. I did say it was the last question, but one more. In relation to what you say as controls, and you place great reliance on the fact that at 2 per cent, the power trips - there are many possible sources of ignition in a mine, aren't there, Mr Taylor?
A. Of course there are.

Q. Cutting power to the mechanical equipment is only eliminating one of those possible ignition sources?
A. Correct. As I say, yes, there's a number of ones, and they have addressed a number with pipes, cables, lightning strikes - they've all been looked at.

MS HOLLIDAY: I have no other questions, thank you, Mr Martin.

THE CHAIRPERSON: Thank you. Ms Freeman?

<EXAMINATION BY MS FREEMAN:

MS FREEMAN: Q. Mr Taylor, at the start of your evidence yesterday, you were asked about your current role as president of the Mine Managers Association of Australia. You also have held a number of other roles in the coal mining industry, haven't you?
A. A number, yes.

Q. Sorry?
A. I said a number, yes.

Q. In your career, you have held a number of supervisory and management positions at coal mines; is that right?
A. Correct.

Q. You have extensive experience in running longwalls?
A. Correct.

Q. And, in particular, you have managed a number of what you would call gassy mines in Australia?
A. Correct.

Q. Including the West Cliff Colliery with BHP?
A. Yes.

Q. There you oversaw the first trial in New South Wales of SIS gas holes; is that right?
A. I did.

Q. In 2008 you joined the Department of Mines and Natural Resources, as it was called then, as Chief Inspector of Coal Mines; is that right?
A. I did.

Q. You held that role until you retired in 2013?
A. Correct.

Q. During that time, as you have mentioned, you were seconded to New Zealand for a period of time?
A. Correct.

Q. That was immediately after the Pike River disaster; is that right?
A. Correct.

Q. Your role there was to be the chief inspector for their extractive industries?
A. Yes, I had two roles there. One was to act as their chief inspector and also to set up what they called the High Hazard Unit within the Department of Labour, which then transferred into WorkSafe after the Royal Commission.

Q. That High Hazard Unit was a regulatory unit that you established in order to respond to some of the issues that arose out of Pike River?

A. Correct.

Q. You also provided advice over a period of time to an expert review group, which then led to changes to the New Zealand legislation regarding coal mining and other areas of that industry?
A. Correct. Correct.

Q. In terms of your engagement to provide the report for this Board of Inquiry, you were provided with an extensive range of documents, weren't you?
A. Correct.

Q. And you were asked to apply your experience both as a manager of coal mines and longwalls and also your experience in the regulatory space to provide an independent assessment of those documents?
A. That's correct.

Q. And to provide independent advice or opinions about the issues that the Board is concerned with here?
A. Correct.

Q. And that's what you have done by virtue of your report?
A. Hopefully, yes.

Q. There are just a couple of amendments I think that you might need to make, Mr Taylor. They are only minor, but we should probably correct them for the record. Mr Operator, if we could bring up Mr Taylor's report - I apologise, I don't have the number. If we could go to page 5, which would be 0005, I think, please. Just in relation to Moranbah North there, Mr Taylor, you have listed some existing mining conditions and you refer to "longwall 808" in the fourth dot point?
A. Yes, it should be 604.

Q. So that should say "longwall 604"?
A. Apologies.

Q. If we could go to page 0013, Mr Taylor, just in the final paragraph on that page there, you refer in the third line to "shield 157" and also, a few lines down, "156".
A. They should be "158" and "157", yes.

Q. No. In fact, I think it should be "196" and "197".

Do you think that sounds right?
A. There you go. Yes.

Q. In terms of where the particular shields were for the Grasstree canopy sensor?
A. Yes, we're talking about the last and the penultimate, yes.

Q. Mr Taylor, you reviewed some safety and health management system documents as part of providing your report?
A. I did.

Q. In terms of the materials that you have reviewed for Grasstree and Moranbah North, you were satisfied, weren't you, that, first of all, the safety and health management systems that they had in place were effective?
A. Correct.

Q. They were robust systems?
A. Yes.

Q. And had the appropriate controls in place to ensure safe operations at each mine?
A. As they applied to the longwall and gas drainage of longwall, yes.

Q. You are aware, aren't you, that those systems have been audited under an independent review process?
A. Yes.

Q. In relation to Grasstree, you refer in your report to a review in 2019, in terms of compliance with the legislation, by Reed?
A. Correct.

Q. You are also aware, aren't you, that in 2017 there was a review in relation to the effectiveness of that safety and health management system?
A. For Grasstree, yes.

Q. You reviewed those audit reports as part of your review?
A. I did.

Q. There was nothing of concern from your point of view in relation to those audits?

A. No, there wasn't. Just so I can explain that, I looked at the overall, and I guess it was to give me a feel for the overall compliance with legislation. It was a vertical section, so I then drilled down specifically into the standard operating procedure for the longwall, which is required underneath the legislation, and then looked at the principal hazard management plans and the associated documentation with that to make sure that those were effective and they were to best standard in the industry, and they were.

Q. In fact, as part of that review, you were of the view that the standard operating procedures that you looked at for both mines were particularly commendable and amongst the best that you have viewed?
A. Correct.

Q. In particular, as they relate to gas management?
A. Correct.

Q. In terms of technical considerations, you were also satisfied from your review of the material that both operations have appropriately taken into consideration and effectively addressed those issues that you advocate as being best practice to manage gas emissions at a mine site; correct?
A. Correct. What I did, I guess, was to - what I considered to be, and the industry considers to be, the best practice with regard to gas drainage, so set these out first, and then you look at what the mine is doing against those, and they ticked all the boxes.

Q. As part of your review, you also looked at a suite of Anglo American corporate-level documents, didn't you?
A. I did look at some, yes.

Q. You were satisfied, weren't you, that Anglo have developed and implemented a high set of standards of operational requirements for gas management and coal dust explosions?
A. Yes. I mean, that one is fairly broad, obviously, because they are looking at a range of jurisdictions, so they can't be specific. But the standards that they were looking for, taking into consideration the broad range of jurisdictions, were of a high standard, yes.

Q. Anglo regularly utilise qualified technical

consultants who are leaders in their field, don't they?
A. Yes, there was a couple of things I looked at there. One was the level of technical expertise within their own organisation. A lot of these individuals I have either met or have been present when they have given presentations for continuing professional development. And then I had a look at the consultants that they use - people like Roy Moreby, who is pre-eminent in his field. I think the question was asked before about how do you determine the gas load, and Moreby's probably one of the best in the world at doing that, so that gives you a degree of confidence that they are using the correct people to control the systems.

Q. Just following on from that, Dr Roy Moreby has done a lot of gas modelling in relation to the Grasstree operation, hasn't he?
A. To my knowledge yes, from what I can read, yes.

Q. In relation to site level, in terms of the mining operations you have looked at for Moranbah North and Grasstree, there are also lots of very capable people engaged in technical roles at site level, aren't there?
A. Yes. Yes, Grasstree in particular, they've got four first class mine managers on site.

Q. That's very impressive, isn't it?
A. I think it is. It's more than the department have got.

Q. In terms of gas drainage at Grasstree, just generally speaking, they utilise both SIS and UIS in pre-drainage before they mine, don't they?
A. Sorry, can you say that again?

Q. Before they mine at Grasstree, they utilise SIS?
A. They do, on some occasions yes.

Q. And UIS is utilised --
A. Primarily.

Q. -- primarily as well. There is also some draining of the overlying Corvus seams as well?
A. At times they have done that with the SIS, yes.

Q. From what you have reviewed, Grasstree are continually looking for means to reduce gas wherever and however possible, aren't they?

A. Yes, they are.

Q. In terms of goaf drainage wells, there has been some discussion about the spacing of those, and at Grasstree they did trial them at 25 metres for a period of time, but they found that didn't particularly work for them. Do you have any views about the spacing of goaf drainage wells and where that should be at?
A. That's one of those things with different strata conditions and what have you. I hate to say this, but it's a hit and miss, it's a trial and error, really. They have trialled a number of distances. It's interesting, if you go back to their previous longwalls, they are learning all the time the best place to put it. As I explained previously, at the end of every longwall block, there is a complete review. In some instances, they have reduced the spacing, and they have also varied the distance from the rib line into the block itself to try to maximise. And now that they have actually gone ahead and these are all linked up to the Citect system, they can actually record the volume and pressure flows from those holes, so you get a better idea over a period of time, by analysis, of the best place to actually place these holes.

Q. Is it the case that it is simply a matter of moving them closer together to get more capacity, or is it more complex?
A. Possibly not, because they can interact against each other, so you end up taking a hole offline because of oxygenation. So, yes, it's a trial and error and it's analysis until you get it right.

Q. It is the case, isn't it, that effective gas management really arises by utilising a number of different techniques and processes rather than a single one?
A. There is no single panacea, no.

Q. And there is no magic bullet for managing gas?
A. No, no

Q. From your review of the material, it's fair to say that both Grasstree and Moranbah North consistently are reviewing what they're doing in terms of gas management?
A. From their documentation, yes, they are.

Q. They are consistently looking for ways to improve how they do that?

A. Yes, they are.

Q. As part of your review, you have looked at a number of LFI reports, or learning from incidents reports, that have been produced?
A. I have.

Q. In terms of the Anglo learning from incidents process, from what you have seen, what is your view on the quality of that process?
A. I think the LFI reports are - the rigour and detail that goes into them is excellent. The form 5A leaves somewhat to be desired, and I am pleased to hear through the witnesses that they are actually going to move that LFI into that form 5A. I think, to be truthful, some of the form 5As were a bit glib in how they responded to them, to be truthful. But the LFI process I thought was excellent.

Q. Now, there has been some discussion both yesterday and this morning about this level of 2.5 per cent that has been nominated in the legislation as the point at which you withdraw workers and take certain other steps. I think yesterday it was suggested to you that once you get to that 2.5 per cent, you have no way of knowing how high it is going to go from that point onwards?
A. You don't, no.

Q. Therefore, that's the potential risk or danger that's inherent?
A. Yes, so you should be looking at the trend all the time. That's what you're looking for, is the trend; is it going up?

Q. The same could be said for 2.4 per cent methane, couldn't it?
A. Or 2 per cent.

Q. Just because methane is rising doesn't necessarily mean it is going to keep rising?
A. Correct.

Q. There are peaks and troughs?
A. Yes, and in fact if you have a look at all - I think I said before, if you have a look at all of the exceedances I was asked to look at, I think the highest was just a tad over 4 per cent. The majority of the rest of them were in the 3 per cent range, and I think the maximum time was

something like just over an hour.

Q. That, no doubt, is why you have suggested that watching and understanding trends is really important as part of your gas management process?
A. Trends is all important.

Q. You accept, though, don't you, that you need to pick a number or draw a line in the sand from a regulatory point of view in terms of --
A. Yes, there needs to be an arbitrary figure some place. You can argue 2.4, but if it's 2.5, fine.

Q. There is no magic in what that number might be, apart from creating a buffer between that and the lower explosive limit for methane?
A. Agree.

Q. In terms of drawing the line in the sand, 2.5 per cent is not a bad place to put it, really, is it?
A. Fifty per cent, I guess, of the lower explosive range, yes.

Q. There is no real difference to coal mine workers in terms of risk, real or potential, between 2.4 per cent and 2.6 per cent methane, is there?
A. No.

Q. Apart from the fact that at 2.4, you don't have a HPI; at 2.6, you do?
A. Correct.

Q. Just because you might have exceeded that 2.5 per cent doesn't mean your systems have failed, does it?
A. As I've tried to explain, no. No.

Q. I think you have gone through this morning the controls that are in place, as Mr Rice called it, the secondary controls, where you have at 1 per cent, a visible alarm on your longwall shearer; at 1.25 per cent, the shearer cutters are slowed down; and then at 2 per cent, you lose power to the face?
A. Yes. It's like any risk management system, you need - and we talked earlier on about critical controls. You need a level of controls, not reliant on one. You need a suite of controls, particularly when you are dealing with a high potential situation.

Q. And then the last line of defence is at 2.5 per cent, you remove everyone from the face?
A. Yes.

Q. And they are out of harm's way?
A. Correct.

Q. You were asked some questions just before about achieving the legislative requirements, excluding things like unforeseen events, I think it was put to you. What did you understand an unforeseen event is, or was, in the context of you answering those questions?
A. When I finally worked out what your learned friend was asking me. When you design these things, you look at a whole bunch of potentials, and that's what your hazards are, your risk potentials, so you throw all the things up that can happen. So they are the foreseeable events, but every now and again there may be one that pops out of nowhere that you didn't foresee.

As I said, that could be a hole that blocks up. You can't say that every hole is going to block up, but you try your best, through measurement of the holes, to work out which ones may be blocked and which ones may not be blocked. I'll give you an example. Take the time back to West Cliff, for example. You could go behind the longwall face there, and there would be two holes about 5 metres apart. One would be purring away like a Cessna, and the one alongside it would be like a 747 roaring with the gas coming out. They are not that far apart, the flight plan is exactly the same, they are aiming at the same direction, but the quantities are so much different.

Q. In a complex environment that is the longwall, is it unrealistic to exclude those types of events when you are considering --
A. I think it's unrealistic.

Q. It is unrealistic to exclude those things?
A. Yes. The technology that we have at the present stage doesn't preclude those things happening. Now, where technology goes - I mean, the directional drilling that is now used underground on the underground inseam holes compared to what we started off with in the early 1970s has just moved on tremendously.

Q. But in terms of some of these events, there are still issues around how you control them; right? In terms of a goaf fall, that's something that is likely to happen. I mean, the whole point of a goaf is that it's falling.
A. Yes, and sometimes it can --

Q. You can't necessarily control that?
A. No, sometimes it can hang back, for whatever reason - there is a piece of stronger roof there.

THE CHAIRPERSON: Q. But that's well known, isn't it?
A. They're not uncommon.

Q. I beg your pardon?
A. They're not uncommon, Mr Martin, but it's pretty hard to know exactly where they are going to happen.

Q. Sure. Where and when, I suppose?
A. Yes, it is. Yes, it is, exactly.

MS FREEMAN: That was all that I had, thank you, Mr Martin.

<EXAMINATION BY RICE:

MR RICE: Q. You agreed with my learned friend Ms Freeman when she put it to you that you had been asked to advise on issues that the Board was concerned with.
A. Correct.

Q. To be more specific, with respect to those passages from your report expressing opinions about danger that we looked at earlier, can we take it that you incorporated those passages of expression of opinion because that's what you were asked to do?
A. I was asked to provide a technical report on the exceedances and what I considered, yes.

Q. But more than that, you were asked to express a view, were you not, on the degree of danger that you discern by reference to the events as they unfolded as reflected in the documents?
A. No, that's not what I was asked to do. The solicitors provided me with a suite of information and I was asked to provide a report. They didn't ask me to comment other than give an honest appreciation. And it's pretty hard to prevent me giving an opinion.

Q. You do not give any opinion or comment in any way, can I suggest, on the subject of potential for harm associated with methane HPIs either generally or with respect to the particular HPIs in this matter?
A. As I said previously, the information I was - the brief was to provide a report on the exceedances at Moranbah North and Grasstree, and, for that, they provided a whole suite of information with regard to the safety and health management system, corporate documentation, the mine record entries, the form 1As, the form 5As. From all of that information, I distilled all of that and then prepared that report.

Q. Were you asked to comment, either generally or specifically, on the potential for harm associated with methane HPIs or with these methane HPIs in particular?
A. No, I was not. That was not detailed.

Q. And you chose not to do so?
A. Pardon?

Q. You chose not to do so? I say that because your report doesn't in fact do so.
A. My report doesn't what, sorry?

Q. It makes no comment on the potential for harm associated with methane HPIs either generally or specifically with respect to these two mines?
A. I thought I did, actually. I thought that's what I said, that when I reviewed all of them, I was satisfied that the attention to detail in addressing the issues, the recommendations that were taken by the organisation to deal with those, reduced those levels of potential harm in the future. And right at the last paragraph, as I think I said, when I looked at all of them, I never felt at any time with the level of detail or the level of controls that were in place was there any danger to any individual underground. Yes?

MR RICE: Thanks, Mr Taylor.

THE CHAIRPERSON: Mr Clough?

MR CLOUGH: Q. Mr Taylor, I have a couple of questions. The first question: are you familiar with a document put out by DNRM called "Best Practice in Methane Management"?

A. Is that the one that was released in the middle of last year.

Q. Yes, it was to do with the placement of the sensor between nought and 400 metres?
A. Yes, I have read that document, yes.

Q. You will have to forgive me because I'm relying on my memory, but what I recall from that document was that the logic was that the sensor, where it was placed, only picked up the gas at that particular location, and modelling suggested there may have been other areas where the methane concentration was much higher. Is that what you recall reading?
A. Yes, I think from memory, Mr Clough, where they put the monitor at 400 metres, because of where the shearer could be in the tailgate, they worked it out simplistically that 50 per cent of air was going to go that way, 50 per cent was going to go over the top, and then when it all came together, that that would be the general body reading for the total area, which I felt was a bit simplistic, actually.

Q. What I recall is that the modelling suggested that the tailgate drum of the shearer, as it came into the tailgate, could actually go into a methane concentration much higher than was being picked up on the sensors that are sitting on the tailgate drives, and there was a concern in relation to frictional ignition if, for example, the picks hit the roof or hit the cans. Do you recall reading that?
A. I do, and that's why at any mine I have ever managed, we always had methane sensors on the last roof support both between the legs and along the canopy, because that would pick up that potential goaf stream coming out of the goaf, which is the concern that you're mentioning there, yes.

Q. My reading of it is that you can't actually put a sensor at that location where that drum is, because it is quite close to the goaf. So they actually said if you put a sensor further outbye, and as a result of the modelling, if the sensor further outbye was picking up 2 per cent, there is probably maybe 4 per cent in the goaf stream where the head is cutting. That was my recollection of that document.
A. Yes, and I think if you picture that, if this is the tailgate and that's your canopy here (indicating), if you've got one between your legs and you've got one further

along, that's picking up any flow that may be coming from the goaf stream between the legs as you start to bank your roof support over, because obviously you're going to disturb the pressures in that area, and that's exactly what happened with the methanometer that Grasstree placed. If you have a look at the reports, none of the other methanometers that were in that area that were statutorily required at the tailgate were actually picking up any methane at all, or any rise in quantity. That one was picking up 2.5 per cent and the others were picking up nothing. So that, to me, is the place that you should have it. And I'm pleased, as I said, that they maintained that there, because it's picking up.

Now, if you put it too far forward, then I accept that, because then you're going to have the dust and the water coming off the shearer drum, the drum's going to come in and you're not going to pick up an accurate reading. But if it is far enough back it is picking it up as it comes out of the waste, so you are picking that stream up.

Q. The point I'm making is that just because you have 2 per cent on a particular sensor, that's only that location?
A. Correct.

Q. It doesn't guarantee you haven't got another mixture at a higher concentration somewhere else?
A. Most definitely, yes.

Q. The second thing I want to ask you about is, you spoke about the principal reason for gas drainage being to lower the gas levels below the threshold level for outbursts?
A. That's right, yes.

Q. I will bounce some figures around that I'm familiar with. Between 6 and 9 cubic metres a tonne is fairly typical for most Australian mines, depending on characteristics of the coal seam and the composition of the gas --
A. That's about right. About 7.8 for 100 per cent methane down to about 6.2 when it goes to 100 per cent CO2.

Q. If I recall rightly, I think, it was about 7 metres a tonne for Moranbah North?
A. Yes, around about.

Q. Could I put to you that in fact if you drained at Moranbah North to, say, 5 cubic metres a tonne or 6 cubic metres a tonne you would never be able to achieve the development rates, the mining rates, because of the issues you would have with gas trips in the development panels?
A. Clearly, yes, I accept that.

Q. So there is a production imperative as well to get those gas levels down to a lower level?
A. There is.

Q. I just wanted that on the record. The last question is in relation to the response time on the methane sensors. Are you familiar with the term "lag of ignition of methane"?
A. Yes, I am.

Q. I just want to get your understanding, because you quoted figures of methane sensors responding in milliseconds. You even said nanoseconds. Do you know if the methane sensor knocks the power off at a time interval that is shorter than the lag time of the ignition of methane?
A. Say that again, sorry, Mr Clough.

Q. Is the response time of the sensor to knock the power off faster than the lag time of the ignition of methane?
A. My understanding is in most instances yes.

MR CLOUGH: No further questions from me, thank you.

THE CHAIRPERSON: Thank you. Mr Taylor, thank you for your evidence. You are excused.

<THE WITNESS WITHDREW

THE CHAIRPERSON: We might take the morning break for 15 minutes.

SHORT ADJOURNMENT

THE CHAIRPERSON: Ms O'Gorman?

MS O'GORMAN: Mr Martin, I call John Sleigh.

<JOHN SLEIGH, affirmed: [11.55am]

<EXAMINATION BY MS O'GORMAN:

MS O'GORMAN: Q. Your name is John Sleigh?
A. Yes.

Q. You currently hold the position, don't you, as one of the vice presidents of the Mine Managers Association of Australia?
A. That's correct.

Q. In this session, we're going to explore with you some of the issues related to training and competency across the mining industry.
A. Mmm-hmm.

Q. In that regard, you have provided a statement to the Board, SLT.001.001.0001, haven't you?
A. Yes, that's correct.

Q. That statement was dated 9 August 2020.
A. Correct.

Q. If I can just ask you some questions about your background, to start with, is it the case that you have worked in the mining industry since about 1965?
A. Yes. I've had some periods out of it during downturns and during career choices, but basically yes.

Q. In terms of your own competencies, it is the case, isn't it, that you hold all three of the first, second and third class certificates of competencies and have done since the 1970s?
A. Yes.

Q. In terms of your work experience, then, relevant to those competencies, you worked as an under-manger for BHP Collieries Group in the late 1970s?
A. Yes.

Q. And then for nearly a decade in the 1980s, you managed the Cordeaux Colliery in Wollongong?
A. Yes.

Q. After that time, you left the industry but consulted in safety systems and training more broadly?

A. Yes. I deliberately made a choice during an industry downturn to stay away from mining for two years. About 18 months into it, somebody said, "Would you come and help me set up a new mine?", and I did.

Q. In 2006 you returned to the mining industry as a safety and training manager?
A. A full-time position, yes, yes.

Q. From 2008 to 2015 you held the role of a mines inspector with the Queensland Mines Inspectorate?
A. A mines inspector, and then a senior inspector, a district inspector, and ultimately the regional inspector for the whole of the coal field.

Q. You have been, haven't you, a member of the Board of Examiners from 2010 through to 2015?
A. Correct.

Q. As I understand it, since then you have engaged in consultant work?
A. Yes.

Q. Still within the mining industry?
A. On and off. I retired essentially when my contract was completed with the department, and a number of people think I'm too young to retire, so they offer me jobs and I take up the interesting ones.

Q. Now, can I ask you about the MMAA. Firstly, how long have you been a member with that association?
A. I would have been a member from the time that I qualified for membership, in probably the early 1970s, until 1988. At that stage when I left the industry, when I took the redundancy, there wasn't a provision for consultants or non-position holders to stay in the association, so I resigned from the association at that stage. When I came back into the industry, I rejoined. So 10 years in the 1980s and probably 15 years most recently.

Q. How long have you been in the role of vice president?
A. I think probably since about 2010.

Q. It is the case, isn't it, that the MMAA is made up primarily of people in senior roles in coal mines in Queensland and New South Wales but also of consultants, now, and some government officials as well?

A. Yes. Quite a number of government inspectors are members. There are educators - a variety, quite a variety of people.

Q. Is it the case that to have full membership of the association, one must hold a first class certificate of competency?
A. That's correct.

Q. Nonetheless, the association makes available associate memberships to other people who hold senior roles in the mining industry?
A. Yes.

Q. There is about 115 Queensland members; is that the case?
A. That's correct.

Q. In addition to maintaining an advocacy role, the MMAA conducts CPD programs, does it not, for its members and associate members?
A. One of the origins of the association back in the 1940s in the Hunter Valley was to share experiences, so that if something was happening at a mine - and this was pre mechanisation. So in the early days of the introduction of mechanisation, it was absolutely critical.

It became formalised in about 1975 to hold full-day seminars, whereas previously it had been two-hour meetings or three-hour meetings and so forth. The first full-day seminars I actually attended in about 1975. Since then, primarily they have been held in New South Wales, but we brought them to Queensland in about 2012.

Q. Since that time, up until the present, there has been a program that is offered by the MMAA to its members, and associate members, for that matter?
A. We have been held up by COVID, as everyone has, but we're looking at the moment at how we do that using remote conferencing.

Q. Can we turn now to the available certificates of competency that are relevant to underground coal mines in Queensland.
A. Yes.

Q. It is the case, isn't it, that there is available

a first class certificate of competency?
A. That's the mine manager's certificate of competency, yes.

Q. In addition to that, the second class, which is the under-manger certificate of competency?
A. The under-manger's certificate, which essentially is the sort of person who would be looking after a shift or would be responsible for the mine in the absence of the manager. That's mandated in New South Wales, and it is optional in Queensland. Quite a number of people do take up the second class certificate.

Q. Then we have the third class certificate, or the deputy's certificate, for those in the position of a deputy or an ERZ controller, as it has been referred to here?
A. Yes, it is called an ERZ controller in Queensland, but it is still referred to as the deputy's certificate of competency. That's the person who is responsible for doing the inspections and maintaining the standards around a workplace.

Q. Finally relevant to underground coal mines, we have, don't we, the ventilation officer certificate of competency?
A. That's a new certificate that has been introduced over the last five years, probably.

Q. Can I ask you some questions about the first class certificate of competency. It is the case, isn't it, that the Act mandates that the person who is in control or manages the mine must have a first class certificate of competency?
A. That is quite specific in the Act.

Q. However, in the absence of that person, the underground mine manager, the person who can be appointed to have control and management of underground activities in his or her absence need only hold a first, second or third class certificate?
A. That's correct.

Q. In your view, is there any difficulty or potential concern with the fact that the mine can be left under the control and management of someone who holds not a first class certificate or even a second class, but the deputy's certificate?

A. I need to be clear here that I'm expressing a view of the Mine Managers Association, which I do hold, that, yes, the New South Wales standard, that when the manager is away from the mine, if production is going on or if there are more than 15 people underground, you are required in New South Wales to have a second class certificate of competency - we see that as an appropriate level.

The Coal Mine Safety Advisory Council has put out a document on what sort of standards people need to have to hold a senior position in an organisational structure, called QGN24, I think, the organisational structure standard. It highlights the fact that the person at that level, level 5 on the national competency scale, the hierarchy of knowledge scale, deals with administering rather than merely monitoring and observing and following, but actually a higher level, and we believe that's an appropriate level.

Q. You have mentioned level 5, I think relevant to the AQF framework?
A. Yes.

Q. Is that equivalent to the first class certificate?
A. Level 6 is the first class certificate. Well, you need to do a whole lot of national competencies, 12 in all, or eight if you have a degree, that are at level 6 on the national competency standard, and they are the "establish and maintain" level. That hierarchy of knowledge goes up to the doctorate level, which is hypothesise and postulate and imagine, I guess. I do have the - I can find a document with it, but it's quite an abstract level of knowledge. The level that we are looking at for a mine manager is establish and maintain knowledge.

Q. This might be obvious, but in your view, what is the benefit that would flow from a requirement that in the absence of an underground mine manager, the person who is left with control and management of underground activities is somebody with either the first or second class certificate of competency as opposed to the deputy's certificate?
A. Simply the level of knowledge that a person is required to have before they take the job on. We've seen - it has been very interesting for an outsider to watch, the intelligence of the counsel is obviously very high in that they are able to grasp the concepts behind mining, and no

doubt to get to the stage where counsel have got to requires a very high level of intelligence. Now, the same sort of thing I think has been evident with the operating managers. The difficulties that they deal with on a day-to-day basis, and watching people like Damien yesterday, as a young operating manager, compared to my mentor, Gavin, and the level that he has got to - it is at a very high level of intelligence to answer the sorts of questions that come up, dealing day to day.

Now, some of it is at the administrative level. There are tick boxes and you make sure all of those things are in place, and that's appropriate in a third class certificate of competency level, level 4 on the national competencies.

Under-mangers are looking after a group of ERZ controllers or deputies, and they are administering, they are rearranging facilities, they are responding. But to actually plan it requires the sort of intelligence that is tested for in a first class certificate of competency.

One other way that I've seen it described: a machine operator in a mine, a good one, operates with a one-day view, so whatever I do now is going to look good at the end of the day. A deputy looks at a week-long view. An under-manger is looking at about a month. An underground mine manager is looking probably 12 to 18 months ahead, and an SSE five years ahead. The CEO of the company is looking 25 years ahead. That's another way of expressing the knowledge hierarchy. Now, we want somebody high on that knowledge hierarchy to be dealing with the problems we're dealing with.

Q. You've mentioned the SSE there. You are aware, aren't you, that under the Act the SSE is not required to hold any particular certificate of competency, whether it be a first, second or third class certificate?
A. Yes.

Q. What the SSE is required to hold is an SSE notice issued by the Board of Examiners to confirm that the SSE has undertaken the legislative exam and understands the legal framework, as it were?
A. I'm very familiar with that. I actually wrote the first of the SSE exams, so I'm right across that.

Q. Prior to the introduction of the current 1999 Act, it

is the case, isn't it, that the UMM or the mine manager was the most senior person at the mine, typically?
A. Absolutely, in the time when I was the mine manager.

Q. Now under the new Act, the 1999 Act, it is not the case --
A. No.

Q. -- that the mine manager is necessarily the most senior person at the mine. That is the SSE, isn't it?
A. Mmm-hmm, yes.

Q. Do you see any tension between the fact that the underground mine manager is required to hold a first class certificate of competency, but the SSE is not required to hold such a certificate?
A. Look, it is difficult to understand how you can manage and control and not be in control and be the senior manager. The tradition has been the qualified manager - the tradition prior to the introduction of the Act. But even post the introduction of the Act, quite a number of SSEs are people that have been promoted from the position of underground mine manager to SSE, as Damien, yesterday's witness, was.

Q. I think we saw yesterday from Mr Wynn's evidence that he does in fact hold a first class certificate?
A. He holds it, yes. And that's not unusual. There are a number of board members that hold a first class. They've been progressively moved up through the organisation.

Q. In your view, would there be any benefit in the introduction of a requirement that SSEs do hold a first class certificate of competency?
A. The position of the Mine Managers Association is to favour that. We have made a number of submissions to the minister, both in New South Wales and in Queensland, that that standard should be returned to. That was also a standard that was established at the 1902 inquiry into the Mount Kembla explosion in New South Wales, was reinforced in 1925 after the Mount Mulligan disaster in Queensland, where 75 people were killed, and most recently in Queensland after the explosion at Moura No. 4 in the mid 1990s and at Pike River in 2010. Whenever an inquiry is held, it seems obvious to those sitting on the inquiry that the competence of the mine manager is absolutely critical.

Q. I would like to turn now to the decline in the number of certificate of competency holders in Queensland. You refer to the decline in those numbers in your statement. We might go to the numbers as contained in the Board of Examiners' annual report. It is one of the documents attached to your statement. Mr Operator, could we bring up document MMA.001.001.013.0001, please. Mr Sleigh, you can see that document there on the screen in front of you?
A. Yes.

Q. You have provided that as an attachment to your statement because, as far as you are aware, the 2019/2020 report is not yet available; is that the case?
A. That's correct.

Q. So this, to your knowledge, is the most up-to-date information that you have about the current numbers of certificate holders in Queensland?
A. Yes.

Q. Could we turn, please, Mr Operator, to page 0017. If possible, could we zoom in to table 8, the middle table. Mr Sleigh, does this table here set out the Board of Examiners' details with respect to the number of applications received by the board for the various certificate of competencies in the years 2014 through to the end of 2019?
A. I understand that's the table, yes. They are the applications received.

Q. Yes, so if we can look at this first. We will turn next to the certificates that have in fact been issued.
A. Yes.

Q. Just looking at the number of people applying, the first row, designated by 1CC, sets out the numbers of people who have applied for their First Class Mine Manager's Certificate of Competency; is that correct?
A. Yes.

Q. We can see there that in 2014-2015 there were four people, and there has been a reduction in recent years, and in the year 2018-2019 there was one person who applied?
A. Yes.

Q. Similarly for the second class certificate, we can see

in 2014-2015 there were 16 applications. That number has decreased. There was a slight increase in 2017-2018, and the numbers fell again in the year 2018-2019?
A. Correct.

Q. In respect of the deputy's certificate, we can see a decline generally, although an uptick in 2018-2019, most recently?
A. Correct.

Q. The next two rows are not relevant, are they, to underground coal mines?
A. No. The 1MM is the first class certificate of competency for a metal mine, and the SSE is a legislation exam, not a certificate of competency. The applicants for the others need to have completed quite a number of steps before they get into that box as an applicant.

Q. I was looking at the rows dealing with the OCE and 1MM. Both of those relate to open-cut mines, don't they?
A. No. The OCE is an open-cut examiner. The 1MM is the mine manager for a metal mine.

Q. Thank you. And then as you have identified, the row relating to the SSE is in respect of the SSE's notice that we talked about earlier?
A. Yes.

Q. Can we move, then, please, to page 0019 and zoom in on table 13. This table, Mr Sleigh, sets out the actual numbers of certificates of competency issued in the financial years 2017-2018 and 2018-2019?
A. Yes.

Q. We can see, can't we, that there were no first class certificates of competency issued?
A. Mmm-hmm.

Q. In either year?
A. Well, there were no applicants, so that's not surprising, yes - or very few applicants.

Q. Yes. I think one.
A. Yes.

Q. For the second class certificate of competency, there are also small numbers of certificates issued?

A. Yes.

Q. And more in respect of the deputy's competency?
A. Yes.

Q. One effect of the declining number of certificates of competency that are being issued in recent years is that those who are holders of those statutory certificates of competency are in an ageing bracket, aren't they?
A. Yes.

Q. To get a good feel for what this looks like in real terms, we might turn to page 0020. I might ask, Mr Operator, if you could zoom in, please, on the top right-hand chart. Mr Sleigh, this chart sets out, doesn't it, the total number of first class certificates of competency that were apparently - and we will come to a qualification - held by people as at 30 June 2019?
A. Yes, it's based on their age when they qualified.

Q. We can see, according to this chart, that there were 227 holders of first class certificates of competency?
A. Yes.

Q. But I think it is the case, isn't it, that that number may in fact be a little bit less because the Board of Examiners doesn't keep a record, necessarily, of those who have become deceased?
A. Yes.

Q. So there might be people who --
A. Or who have retired or left the industry.

Q. I see. Those people, for example, in the age bracket over 80 are apparently 18 people, but they may be retired or otherwise not in the industry?
A. I would think that none of those are active in the - there is one - yes, I don't think he is managing a mine at the moment.

Q. Can we look, then, to the part of the chart which indicates how many are in the age bracket 60 to 69, because it is apparent that that is clearly the largest cohort?
A. Yes, yes.

Q. If we move to the left-hand side of that chart, it becomes apparent, does it not, that numbers of those who

are first class certificate of competency holders in the younger age brackets get smaller and smaller?
A. Yes.

Q. According to this data, there are only 16 people aged 40 to 49 who are holders of that certificate?
A. Yes.

Q. Only two who are under 40?
A. Yes. Look, the under 40 - certainly the under 30 is not overly surprising, in that you need to have completed degree-level qualification and some competencies and have five years' experience and so forth. So it's not surprising. I got my ticket when I was 28. Gavin got his when he was 25. Generally speaking, it's not surprising that there are not a lot of under 30s, but it is alarming to the association that there are so few 30-year-olds or 40-year-olds that have qualified. These are merely to have qualified, not to actually hold the position.

Q. Can we talk, then, by contrast to what is in fact the dwindling number of holders of the first class certificate, about the benefits of a greater number of people holding those certificates. As I understand your statement, in your view there is a clear benefit to a greater number of candidates seeking to sit for that statutory examination, on one hand, because it requires a greater number of examiners?
A. Yes.

Q. Which means, in turn, there is a learning culture established throughout the industry; is that the case?
A. That's right. And also there is an incentive for an RTO to provide the competencies that need to be trained. Unfortunately, in the last six months, we've lost the two principals of RTOs that were providing those competencies, both to tragic deaths. Mark Harris and John Brady both died within the last six months. But an RTO is not going to set up for two candidates, which is what we had, I think, in the first class certificate of competency over the last two or three years. So we need a system to cope with that.

Q. It is the case, isn't it, that of course a greater number of people within the industry, operationally, who hold the first class certificate of competency lifts the general expertise across the industry itself?

A. Oh, absolutely, because you are talking to people about why does this happen. It's sometimes interesting to watch someone like Gavin explain to a counsel the particular circumstances. And that's the conversation that's happening at the mine, at the same level of being able to - "You've got to look at this and you've got to look at that." But it also refreshes your own knowledge, because, "Gee, I haven't looked at that for a while. Let me go and dig a book out", that sort of approach. I believe that we had a learning culture developing in the coal industry in the first half of the last decade - of this decade.

Q. Can we have a look at the process, then, for someone applying to sit the examination and going through the examination process. It is the case, as I understand it from what you said a little earlier - and let's just limit our discussion to first class certificates of competency - that someone wishing to apply to sit that examination must have five years' experience under their belt?
A. That's correct.

Q. In addition to that, they must also have completed a certain number of prescribed competencies?
A. Yes, which are aligned to the principal hazards - the outbursts and gas and ventilation, strata control, those sort of things, emergency response.

Q. Those two prerequisites will enable a candidate to sit for the legislation exam; is that right?
A. Look, I would need to have a look at the application form to see whether there is anything else. I think you have to have a first-aid ticket and it has always astounded me why that was critical, because you're not measuring the competency of the person in the role. I'm not against people having first-aid tickets, but it doesn't appear to me to be related to the competency role.

You need to do a gas testing certificate, which is a hangover from the days of oil lamps, where you needed to be able to read the gas test flame. That's no longer the test, but there is still a competency; you must have completed a gas testing course at the rescue station. I'm not against that, but that happens to be how it originated.

You need to have the competencies - you need to have a reference from a manager, from your mine manager, to say

that you are the sort of person that they would employ as a statutory official, so it's essentially a reference.

Q. Now, assuming one holds --
A. All of those.

Q. -- all of those prerequisites, the next step in the process is that they sit for a written exam, which is the legislative exam testing their knowledge of the legal framework; is that correct?
A. Yes.

Q. That has, I think, a 70 per cent pass mark associated with it?
A. That's correct.

Q. And only if one passes that exam is one then eligible to undertake the oral examination, which is the end of the process?
A. That's correct.

Q. The oral examination, as I understand it, usually takes between three or four hours but may take longer?
A. Oh, look, there have been exceptions where it has taken longer, but generally speaking, as an examiner, you know within about 45 minutes if the person is just not going to make it. You don't necessarily know they are going to make it. So there wouldn't be any point in going beyond four hours.

Q. They are presided over by three members of the Board of Examiners, aren't they?
A. Yes - oh, no, a panel selected by the Board of Examiners. The chair will probably be one of the inspectors of the Board of Examiners, unless an inspector is doing the exam, and your own employer doesn't sit on the panel.

Q. During the time that you were on the Board of Examiners, or otherwise, for that matter, how many people typically would constitute the pool of people from which that panel could be drawn?
A. I think we had somebody from almost every underground mine, because we had, at its peak, something like 70 or 80 deputies candidates. For a manager to get away for a couple of days to do exams was a big ask. They were basically managers and SSEs that were coming in, qualified

SSEs. I think there were something like 15 on the third class certificate panel and probably six of us on the first and second class panel. That was the same panel.

Q. Ultimately the decision about whether or not a first class certificate of competency should be issued to the candidate came down to the collective decision of those three people?
A. They make a recommendation and complete a report to the board, and the administrative area of the board looks for any reasons why they would preclude them. But basically, yes, it's a judgment call.

Q. Can we talk about any potential barriers thrown up by the process itself to increasing the numbers of actual holders. Firstly, in your view, is there any risk that there is a level of subjectivity built in to the oral exam, which might preclude someone who ought to be given their first class certificate of competency, based on the view of those three people?
A. Look, the oral exam concept is one we took from the employment process. I think probably most of the people in this room were given their job as a result of an oral examination by employing people, so it's not an abnormal circumstance.

What it allows is practical operators to actually see how people are going to go under a situation, because working as a mine manager is very much an instantaneous decision-making process versus - and there is a book called Thinking, Fast and Slow, which I recommend, and I wish I could remember the name of the author, but he is a Nobel Prize winner for economics. It talks about the need sometimes to think fast and sometimes the need to think slow, and an oral examination is a particularly good way to see whether the person has those skills.

The people on the board are the sorts of people that are going to employ this mine manager in the future, anyway. So we take subjectivity out of it by, for example, you don't go on the panel - this is why we had six on the first class panel. You don't go on the panel if you have worked with the person, if you work for their employer - there are a number of conditions like that to remove preferences. So I think it's probably as objective as employment selection generally.

Q. It is the case, isn't it, though, that not everyone performs well or to their best in an oral examination. Do you see any value in potentially building in to the process a written technical exam to complement the oral exam?
A. I've been through both, because the New South Wales system, in the days when I did it, was three consecutive days of written exams, and if you got through that, then you did your oral. They have watered that down considerably, so I think it is now one full day of written exams and then a much shorter oral, a 45-minute to one-hour oral, that's based on the information that you left out in the written exam.

There are a number of managers who have chosen to do the New South Wales exam and then do the legislation for mutual recognition with Queensland, and that suited perfectly. That's a choice that has been taken, and I can think of one person in particular that has taken it, was working in Queensland, did the exam in New South Wales, and came back to Queensland. There was no problem with that.

Q. Can I just ask, Mr Sleigh, the exam in New South Wales is a written exam, is it?
A. It is a written exam in technical subjects, followed by a 45-minute to one and a half hour oral exam, so it still has the oral exam.

Q. What about the desirability of inspectors within the inspectorate holding first class certificates of competency? You have spoken in your statement about the fact that in the MMAA's view, it would be desirable and beneficial for there to be an increased number of inspectors who hold the first class certificate.
A. Yes.

Q. Can I ask you this: given that we understand that a number of inspectors have more than five years' experience in coal mines and therefore would meet that aspect of the prerequisite, can you see any benefit in inspectors going through the process of studying for and sitting that examination whilst working as inspectors?
A. I think it would probably increase their credibility. It's the experience as the manager that will increase their knowledge, but certainly their credibility would be increased if they did that. Now, a number of inspectors have been employed over the years, or promoted over the years, on the promise that they would sit for the exam.

But --

Q. A promise by the department or a promise by the inspector?
A. A promise by the inspector to the department that they would sit for the exam. Unfortunately that promise - I don't know, perhaps it was workload that made it impossible for them to complete that, so it didn't happen. I certainly do believe that experience as a mine manager puts you at a different level as an inspector.

Now, the inspectorate understands this. When I was an inspector, there was a 20 per cent bonus for holding a first class certificate of competency, and I was paid a 30 per cent attraction and retention allowance to take up the position. So, essentially, I was getting more than 50 per cent of the base rate for an inspector because I held a first class ticket.

There were probably other things that went into the attraction and retention, but I think that was pretty standard for the first class tickets. So, you know, that's the experience. The department used to feel that way. I don't know what the current pay arrangements are.

Q. Can I turn now to competencies held by SSHRs and ISHRs, because we have heard in this inquiry from some SSHRs, who have spoken about their competencies and training that they have had either before taking on that role or whilst having that role, and we're interested in your view as to whether or not the competencies currently required to be held by SSHRs are sufficient.

Can I have put up on the screen, please, Mr Operator, the document MMA.001.001.017.0001. Mr Sleigh, the document that has come up there is the list of competencies recognised by the Coal Mining Safety and Health Advisory Committee, isn't it?
A. Yes.

Q. If we could zoom in to row 7, that row sets out the competencies required to be held by somebody who wants to nominate for or at least before they take up the role of an SSHR at a mine; that's right, isn't it?
A. That's right.

Q. Those acronyms or labels indicate that the

competencies required are the competencies to apply risk management processes, conduct safety and health investigations, and communicate information. In your view, are those competencies sufficient for someone holding the SSHR position, or ought there be any increase to them?
A. Those competencies are exactly the same as - if you look at line 2, there are requirements for a supervisor to have certain competencies. They are the same competencies. I would like to see an improvement in the standard for the supervisor that would then flow through to the SSHR. But currently I think it's appropriate that the SSHR have the same sort of qualifications as we expect a supervisor to have.

Q. Turning briefly to ISHRs, and if we could zoom in to row 6, we can see there the competencies required for those who hold that position are that they have the deputy's certificate of competency and, in addition, the competency called "carry out the risk management processes"; is that right?
A. Yes.

Q. In your view, is that adequate for someone to discharge their functions and powers as an ISHR?
A. I think the functions and the powers of the SSHRs [sic] as they stand at the moment, they are appropriate qualifications.

Q. Thank you. Can we turn, then, to the --
A. Can I make the point, I understand there is somebody with a first class certificate of competency operating as an ISHR in New South Wales, and I certainly wouldn't be against that, either. But, no, for the ISHRs, that's an appropriate - relative to the - with all of the limitations I have on the RTO-issued competencies and so forth.

Q. Let's move to the RTO issue, as you say, because in your statement you talk about concerns that you hold that the training competencies being offered by RTOs in Queensland might not be optimum. Can you explain why it is that you hold the view that training currently available and provided to coal mine workers in Queensland is not of a particularly high standard, if that is your view?
A. Right. Look, it is. During the time I was with the inspectorate, we issued a document called "Recognised Standard 11". It was actually written, or predominantly written but with group input, by Kylie Ah Wong. Ms Ah Wong

spoke as a witness last week. So somebody with authority in the industry wrote that standard.

One of the things it does is highlights the need for assessors to have a high level of competence. Progressively, through the work of Greg Dalliston, in his role as the - I'm not sure what the title is now, but the director of the MITAB concept, the national competency mining training advisory board, and Greg Dalliston, who will be here tomorrow, has had a very significant role in that, representing Queensland, both the inspectorate and the companies as much as the union, because he was respected as somebody that was right across those areas.

They have put into the training competencies that an instructor for training-related competencies has to have at least three years' experience - three years' current experience - doing the sort of work that is being assessed, and it is my impression that that is not true, and nobody is auditing that aspect of the RTOs.

Q. If I could just check one aspect of your concern about the quality of training provided by RTOs, it is that the trainers and the assessors might not actually have the relevant experience in the industry that they ought to; am I right?
A. Not only the trainers and the assessors, the training designers and the assessment designers, and I have a real problem with some of the assessment design, the questions that are asked in assessments.

Q. If we might, then, to highlight that concern and to round out this topic, turn to one other of the documents attached to your statement. It is MMA.001.001.001.0001. While this document is coming up, Mr Sleigh - no, that's not what I want, sorry. I must have the wrong number. That is the number I have on the top. Mr Operator, apparently there are two documents with that number stamp. If it is not easily locatable, I can do without it.

Mr Sleigh, you were mentioning a concern that you have that perhaps the design of the assessment is not adequate or appropriate, either. This document that I was going to bring up contains some sample questions taken from actual RTO assessments.
A. Yes.

Q. And, next to it, some comments of yours about the desirability of those questions.
A. That's right.

Q. Mr Operator, I'm told the number might be MMA.001.001.021.0001.
A. That's the one.

Q. Could we zoom in, please, Mr Operator, perhaps to the box with the number 1 on the left-hand side. It's towards the top of the page. On the left-hand side there, Mr Sleigh, can we see under the heading "Question" an actual question that you encountered on an assessment for a generic induction, that is, for a mine starter going to work at a mine?
A. Yes, can I clarify, all of these 10 came from the one assessment, but I have to say that a number of mines have comments in mine record entries about "the questions I was asked at mines", and most of the RTOs I have ever done anything with have a similar flea in the ear. It's something that I am really passionate about.

Q. Can we use this as an example to demonstrate some of your concerns?
A. Yes, this is a good example.

Q. What we have on the left-hand side is an actual question taken from an actual exam from one RTO provider; is that right?
A. Yes.

Q. In the middle - it was a multiple choice question, it seems - we have the answers that a candidate could select from?
A. Yes.

Q. On the right-hand side, we have your comment on the appropriateness of the question?
A. Mmm-hmm.

Q. As I understand it, using this as an example, one of your concerns is that, for example, in respect of generic induction assessments, mine starters are being asked questions which are really more appropriately geared to perhaps someone in the role of an SSE about the principles to govern a safety --
A. Absolutely. The person designing the legislation

needs to be able to answer that question, not the mine starter. If you go back to the Australian Qualifications Framework hierarchy of knowledge, that's probably at about level 8, right, above the 6 of the SSE.

Q. So there is a disconnect, as I understand it, between --
A. Totally.

Q. -- the actual content required in these assessments and what is being delivered?
A. Absolutely.

Q. Can we just use one other example, if we turn to the next page and perhaps go to the first box and bring that one up, Mr Operator. Can we see there a question of a mine starter, in this particular exam, related to what temperature is unsafe for a coal mine worker to work at, and the answers set out a range of temperatures between 29 and 30 degrees?
A. Mmm-hmm.

Q. And your view is that a question like that is simply neither appropriate nor necessary?
A. I wonder if I was to ask the people in this room whether the temperature was above or below 26 degrees, or 23 degrees, what sort of an answer we would get. That's exactly the same sort of thing. How does somebody working in an underground mine know whether it is 29.4 or 29.3?

Q. Can I ask you this, then: have you got any suggestions as to how the level of training and assessment being offered by RTOs could be lifted?
A. Look, the sort of thing that could well happen - I wonder whether the inspectorate or the Board of Examiners should be doing audits in addition to the RTO audits that are done by the training competency authority. They are looking at records and they are looking at competency of trainers and they are looking at a whole bunch of things and do a thorough audit on an RTO. But we are asking them to train people ready for the mining industry and to give a certificate to say, "This person is ready to go and work in a mine". Should the inspectorate - and it is probably more a function of the Board of Examiners, whether they should have an auditing function to make sure that RTOs that are approved to train people for the coal industry actually have: (a) people with experience in the mining

industry to the standard that is required by the national competencies; and (b) are using the materials that are appropriate.

Q. Can we turn to one final topic, then, and that's the question of CPDs. You spoke right at the beginning about the fact that the MMAA runs effectively a CPD program for its members and associate members, and in your statement you talk about the fact that I think towards the end of this year it will become mandatory in New South Wales for those who hold certificates of competency to maintain their knowledge by engaging in CPD programs?
A. Yes.

Q. Can I ask whether you are of the view that there would be any benefit in it being a requirement in Queensland, as opposed to a discretionary matter, that holders of certificates of competency undertake CPDs each year?
A. I have to say that the requirement in New South Wales has become overly burdensome and it is highly unlikely, I understand now, that they are going to be able to proceed with their requirement, because they have put all sorts of complications around it.

The Mine Managers Association decided - well, in 1942 initially, and scaled it up in 1975, and then in about 2004 introduced the actual CPD program - that it was necessary. So without any regulation, the mine managers have actually taken on the responsibility, through their own association, of making sure their members are kept up to date.

Q. And I take it that you think that is a good thing. What I'm asking is whether or not you think it would be beneficial if certificates of competency weren't tickets for life, but if there was a requirement mandated across the board that those holders had to engage in some CPD each year?
A. Provided that the mandating is not a matter of hours spent in a room or so forth, but that there is actual evidence of competence - and I would put a much higher credit for making a presentation than for attending one. But there are a couple of things that are required by the legislation in Queensland. Before you start second workings you need to submit a plan to the inspector. Now, that has to be done by either the SSE or the underground mine manager, there will be a specific responsibility in the Act or in the regulation. The people involved in doing

that should get credit for strata control competency. There is a requirement that before you seal a section of the mine that has been worked out by a longwall that you put in a sealing plan, and that goes into all sorts of issues around spontaneous combustion and gas management and inertisation, and it would be great if the people who actually prepare that plan got credit for their input into it, rather than doing, as happens in so many professions, "Oh, I've got to go to the Gold Coast this weekend; it is CPD time again."

If we actually measure the things that are valuable - and certainly the presentations that are given at the managers association should have four times the credit, because they take ten times the time for somebody to present it, and in many cases there are two or three people that are contributing to the presentation - one stands up the front. All of those people should get credit.

So, yes, there is value in a CPD program. Yes, perhaps some people will need to have it mandated. All I say is that the Mine Managers Association is proof that the quality of people holding those positions have taken it on off their own bat and value the end result of it.

MS O'GORMAN: Thank you, Mr Sleigh. Mr Martin, those are the questions that I have.

THE CHAIRPERSON: Thank you. Ms Dann?

MS DANN: Thank you, Mr Martin, I have no questions.

THE CHAIRPERSON: Mr Roney?

MR RONEY: I have no questions, Mr Chairman.

THE CHAIRPERSON: Mr Trost?

MR TROST: I have no questions, thank you.

THE CHAIRPERSON: Mr Crawshaw?

MR CRAWSHAW: No questions, Mr Chair.

THE CHAIRPERSON: Thank you. Ms Holliday?

MS HOLLIDAY: Hopefully I'm not wrong in my estimate, but

I think I will only be 10 minutes.

<EXAMINATION BY MS HOLLIDAY:

MS HOLLIDAY: Q. Mr Sleigh, you have prepared a statement?
A. Yes.

Q. And submitted it to the board?
A. Yes.

Q. That was done as representing the Mine Managers Association of Australia?
A. That's correct.

Q. Not meaning any criticism of you, but it is important that the factual basis for that is correct, isn't it? In other words --
A. Absolutely. I mean, that is the position - as a result of discussions, that's the position. But there is certainly every possibility that I have made an error in representing their views or that I've made an error of fact, they have a misunderstanding.

Q. Mr Operator, if we can bring up Mr Sleigh's statement, it is SLJ.001.001.0001 - is there also a hard copy to give to Mr Sleigh? No. We are also going to bring up a statutory declaration of Mr Newman, so it might have assisted you in terms of having a hard copy just to compare the two.

In relation to paragraph 33, Mr Operator, if we can go to it, you state there that the association believes that the SSE and a large proportion of mining inspectors should hold a first class certificate of competency. It would take you as no surprise that in an ideal world that is clearly the position of the inspectorate also. But you would have to recognise, Mr Sleigh, that there are a number of limitations to that occurring in reality?
A. In view of the way that people were unwilling to accept the reality of some of Mr Taylor's evidence, I wonder. I think that's an interesting concept. So let's have a look at the reality that is being expressed. I wonder, is it really unrealistic to expect? For example, in the United Kingdom in the National Coal Board days, they had no difficulty attracting inspectors because they used to pay them 20 per cent more than mine managers. Right?

So they didn't have to ask for applicants, they tapped people on the shoulder and applicants weren't looked for.

So, you know, I don't know whether that is inconsistent with the reality. I've read Mr Newman's statement, so I guess I'm aware of what you are talking about of "reality".

Q. When you talk about Mr Newman's statement - just to make sure that we are talking about the same document - in relation to Mr Newman's statement, it is NPE.001.002.0001. If I can take you to paragraph 10 - this statutory declaration was only sworn this morning, so it might not be the one that you are referring to?
A. Yes, it is. I saw a copy of it this morning.

Q. You have read it? Okay. In relation to paragraph 10, Mr Newman expresses the fact that, as I have just articulated, in an ideal world, the large proportion would hold First Class Mine Manager's Certificates of Competency?
A. Well, I agree with that statement.

Q. And then going through, at paragraph 11, some of the following factors of the reality, first of all - and Ms O'Gorman has already just taken us to some material in relation to the Board of Examiners - there is a very limited pool of persons holding that first class certificate in Queensland?
A. No, actually, that question wasn't put to me. We were looking at the age and the fact that the numbers are dropping off over a period, but the number, I think, of 40 to 50 year-olds was something like 49. There are 11 or 12 underground mines. So it is not as though there is an absolute shortage of underground mine managers, it is the proportion of underground mine managers who are over 50 that is alarming. But a number of people do, as I did and as Mr Taylor did, spend the last - and I think in Mr Newman's evidence he made the point that they - I mean, I hesitate to say "give back to the industry", but take on a role that is of interest to them during that period of 50 plus.

Q. The difficulty, of course, is an inspectorate can only appoint from the persons who apply for a position. You accept that, Mr Sleigh?
A. Oh, and I think the number of people applying for the positions would go up if the salary was appropriate.

Q. We will get to that in terms of the factors, but in terms of a pool --
A. Well, okay, so there is a limited pool, but the pool is not totally taken up by the 10 operating coal mines.

Now, we've got one mine that is under review that - the point has been made a number of times - has four first class certificate holders, and another couple of candidates, as I understand it.

I work for a contracting company that has - the chairman is a first class certificate holder, the New South Wales general manager is a first class certificate holder, the Queensland general manager is a first class certificate holder, and they have engaged me and another first class certificate holder to look at a project. So there is no shortage of first class certificate holders in the world.

Q. Sorry, in the?
A. In Queensland.

Q. In Queensland? Well, if you add up the numbers --
A. So there are five, in that particular project, having input into that project. So it's not as though we're totally rare beings.

Q. No, that's not the suggestion, it is the fact that --
A. Yes, there is a limited pool. There is a limited pool --

THE CHAIRPERSON: Sorry, Mr Sleigh. Ms Holliday had better ask her question, I think.

THE WITNESS: Yes.

MS HOLLIDAY: Q. In terms of the factors that are present reality for the inspectorate, it is suggested that one of those is the fact that there is a comparably limited pool of persons holding that. I mean, we can add it up, it adds to about 130-odd in Queensland that hold that certificate.
A. Right. Okay.

Q. And that there is an ageing demographic of those persons?
A. Which may be to the advantage in terms of experience and level of exercise that is required to hold the job.

Q. And if we look at the third point that is made, that's in terms of the ability or challenges that are faced by the inspectorate to attract and retain those persons with the existing remuneration structure. That was the purpose for the original question, Mr Sleigh: in an ideal world, there would be a large proportion of coal mining inspectors, but the reality is, do you accept, that the remuneration of an inspector was at one stage in the order of 60 to 80 per cent of industry remuneration, but it is now at around 30 to 40 per cent? Now the government has budgets that it has to meet, so it is not the answer that the government can just pay the same as industry. Just like in any other role in government, on occasions, it cannot meet the remuneration that is being offered in the private sector.
A. The government's funding of the Mines Inspectorate is paid for by a levy on the mining industry. So the mining industry is paying the wages of the inspector, and if they are paying significantly higher wages to their operators, I'm sure they would be quite happy to be paying the same sort of levels of remuneration to the department.

Q. And the fourth factor is that, in terms of the roles, they are generally located in regional centres where you have the issues that, at a certain age, people reach the position that they no longer wish to do that fly-in - sorry, that they are doing the fly-in/fly-out work rather than having to be located in a regional centre?
A. You have probably asked the wrong person that question, because for the time I was an inspector I flew in and flew out from Sydney. I flew home every Friday evening and flew back every Sunday evening. So, you know, it's not - yes. I don't accept any of those four propositions.

Q. You just say that because it is funded by a levy on industry, the government should just pay whatever the amount of remuneration is that should attract a first-class certificate holder?
A. The minister has been very straightforward in saying he would do whatever he could to improve the quality of the inspectorate. But it is not about numbers. It is about the quality of the inspectorate.

Q. Moving on to that point, at paragraph 35 of your statement - so we're going to have to flick back to SLJ.001.001.0001 at 0011 - do you remember I said,

Mr Sleigh, that I wasn't intending any criticism, but it is more to ensure that it is factually accurate, what is being put forward in your statement. You say at paragraph 35, in relation to the level of competency - you set out the AQF levels and you say that some current inspectors are educated to the level "apply and monitor", which is the 4 level, and then you set out 5 and 6. You have actually set out numbers at paragraph 65 and paragraph 66 of your statement in relation to who holds first class tickets, and so on.

The position actually - and I can take you to Mr Newman's statement if necessary - is that 11 out of the 13 mining inspectors are at 5 or 6 on the AQF level of competency, and he swears to that in his statement.
A. Mmm.

Q. And that the remaining two have a significant deal of experience in industry.
A. I'm sorry? You are saying 5 and 6. Does he separate 5 from 6?

Q. He does. If I can take you to, again, the statement of Mr Newman, which is NPE.001.002.0001, he states at paragraph 8 of his statement that six have AQF level 6, and he sets out their competencies, and five with AQF level 5?
A. Okay. Now --

Q. And in relation to 8(c), the remaining two are mines inspectors. So my proposition to you is, only to ensure that your statement is accurate, do you accept that those, as per the sworn statutory declaration of Mr Newman, are actually the levels of experience held by the mining inspectors in the inspectorate?
A. I don't dispute Mr Newman's numbers. However, can I take you back to 2014 --

Q. The question was just whether you accepted the numbers as accurate, Mr Sleigh?
A. I don't dispute Mr Newman's numbers.

Q. You then at paragraph 37 of your statement talk about the Board of Examiners and that some of those hold qualifications at level 4, and later on in your statement you state that that causes concern.
A. Yes.

Q. If I can take you to paragraph 15 --
A. That's consistent with Mr Newman's statement.

Q. Paragraph 15 of Mr Newman's statement speaks about the fact that, of the board - there are 12 members of the board - eight of them hold first class tickets and three hold either deputy or open-cut examiner certificates of competency?
A. Which is level 4.

Q. Are you suggesting that the competency of the board is in question here, Mr Sleigh?
A. The role of the board, the functions of the board - and I don't have the wording from the Act in front of me, but it is in my statement - is very high level on the AQF knowledge hierarchy. It is not a representative organisation, it is actually a policy formulation organisation and a qualifying organisation. It is very different to, for example, the Coal Mine Safety and Health Advisory Council, which is quite deliberately there to represent the various bodies in the industry.

So in the history of the board up until the last two boards, there have only been two people that I'm aware of who didn't have a first class certificate of competency that were on the board. One was the president or chair or something of the MITAB and the other one was Greg Dalliston.

Greg Dalliston's role - he has an incredible body of knowledge in relation to the national competency process.

Q. But he is an example, isn't he, Mr Sleigh, of the fact that you might not technically hold your First Class Mine Manager's Certificate, but, nonetheless, you have such a depth of experience that you can bring to the board critical importance?
A. Just a moment. I'm not giving Mr Dalliston - I'm a great respecter of Mr Dalliston. I'm not giving him the credit of being equivalent to a mine manager. His contribution was in relation to his outstanding knowledge of the competency system. The AQF hierarchy of knowledge also deals with, if you read the details on it, the subject matter, and around the subject matter of units of competency, Greg Dalliston was exceptional and probably the most knowledgeable person in Australia on the subject. But that doesn't make him equivalent to a mine manager.

The concept of the board - we used to have, certainly in the higher-age range of the first class ticket qualified gentlemen, Brian White, who was a professor, an adjunct professor now, of mining engineering at a number of universities, but has spent a career in academia but has experience as a mine manager. He brought a great contribution in terms of the university sector to the board. And we had a couple of guys whose contribution was the knowledge of the job of a mine manager, and the job of a mine manager covers the under-manger and the deputy and also the open-cut examiner.

Q. So, Mr Sleigh --
A. So we had all of the skills. But now we have an OCE to represent OCEs. That's not the same level for a policy formulating body.

Q. Are you saying that the Board of Examiners needs to be constituted, without exception, with 12 members holding first class certificates?
A. I don't believe it needs to have 12 members for a start. So the answer to that question is no.

MS HOLLIDAY: I have no further questions.

THE CHAIRPERSON: Q. What proportion do you think there should be of whatever number of members there are?
A. Look, for 15 of the 20 years that the board has existed, there was one of the eight, I suspect - just off the top of my head, I think there would have been eight on the board - one of the eight didn't have a first class certificate of competency.

The important thing to recognise with the Board of Examiners is it is a policy formulation as much as an authorising body. It is not a data gathering body in the sense that the Coal Mine Safety Advisory Council is.

Q. I think before when Ms Holliday was questioning you about paragraph 8 of Mr Newman's statement you started to go back to 2014; you wanted to raise something about that?
A. Yes.

Q. What was that about?
A. Okay, at the time when I was the regional inspector we had three qualified managers in the Mackay office and I was

the only qualified manager in the Rocky office, but I was supported by somebody who lived in Brisbane and flew in and flew out from a base at Simtars, but flew in and flew out to do inspections.

Progressively, that person that flew in and flew out was promoted to chief inspector, and one of the people from the Mackay office was promoted to deputy chief inspector and still holds the position, and the other two had their contracts - the other three of us had our contracts terminated for various reasons. As a result, we no longer have qualified managers in Rockhampton or Mackay office, and that's important.

Now, we do have a qualified - Mr Newman's statement is true, we have a gentleman who was an open-cut mine manager in New Zealand, and under mutual recognition is entitled to have a first class certificate of competency in Queensland, but he doesn't have experience managing an Australian high-production coal mine, which all of the other people that I'm talking about have had.

So we no longer have the "establish and maintain" level of competence in the offices in Rockhampton and Mackay. That's restricted to the head office. Really, their philosophy is not so much establish and maintain, but to postulate and hypothesise and strategise - a different level of application of knowledge. That has been lost.

So it was great. For example, I made a rule when I was the regional manager that the only person that could handle a second workings application or a sealing plan application was somebody with a first class ticket, and we had no difficulty handling that with our level of competence.

We currently have two mines other than Grosvenor that are no longer in operation, one because of an inundation, the other one because of a spontaneous combustion leading to an explosion. One of those would have been covered by the sealing management plan, the other one by the second workings plan. Now, I don't know the details of any of those, but that sort of concern was the reason that I had first class certificate holders managing those sorts of documents.

I have to say, the Act worked, because the object of

the Act is to stop injury to people, as set out in section 7 or 8 of the Act, and nobody was injured in either the inundation or the explosion and spontaneous combustion. So that part of the Act worked. But the strategy that preceded it concerns me deeply. I am sorry, I feel myself getting emotional about this. I don't want it to come across as disrespect. This is a very important issue to me.

THE CHAIRPERSON: Thank you, Mr Sleigh. Ms O'Gorman?

MS O'GORMAN: Mr Martin, I don't have any further questions, if there is nothing further from the board?

MR CLOUGH: Q. Mr Sleigh, just a couple of quick ones, because we haven't touched on it: do you have any familiarity or exposure in what the New South Wales Mines Rescue Service does in terms of training?
A. Yes - oh, no, well, I have superficial knowledge. They have done some wonderful work in relation to setting up virtual reality units so that, essentially, you could walk in to a room and feel the conditions that are there, yes.

Q. So the obvious question is, are you aware of any similar arrangement in Queensland?
A. Look, I understand work was being done to bring something of that order to Simtars. I don't know how far it has got. It was happening at the stage when my contract was terminated with the department.

Q. And notwithstanding that the Queensland Mines Rescue Service may have a different operating model than New South Wales, would you see any merit in engaging with Queensland Mines Rescue to provide more training to industry?
A. Look, I see a tremendous amount of value in using rescue stations as a training place, because, yes, they are dealing with the day-to-day problems.

I spent three years working at a rescue station in the south coast. Now, I used it as an opportunity to study, but at the same time, I learnt more about learning, about how adults learn, during my time at the rescue station because I was also instructing, and that was incredibly valuable to me in my early 20s.

MR CLOUGH: That's great. No more questions from me,

thank you.

THE CHAIRPERSON: Mr Sleigh, thank you for your evidence. You are excused.

<THE WITNESS WITHDREW

THE CHAIRPERSON: Are they the only witnesses for today?

MS O'GORMAN: That is the last witness for today. Perhaps if we adjourn until tomorrow morning, Mr Martin?

MR CRAWSHAW: Mr Chair, just before you adjourn, I understand Mr Lewis is going to give evidence tomorrow. There was a question from you earlier in the week about a statement, and Mr Roney yesterday was cross-examining on the basis of evidence that might be forthcoming.

THE CHAIRPERSON: Yes.

MR CRAWSHAW: We haven't yet seen a statement.

THE CHAIRPERSON: No, you are not alone in that.

MR CRAWSHAW: It makes it very difficult to get instructions, never mind comply with the practice guideline which requires us to work out which documents to notify will be required for cross-examination.

THE CHAIRPERSON: Yes. Mr Crawshaw, the statement was coming on Monday evening, and then, as you heard yesterday, it was coming last evening. The most recent one, Mr Roney, is it very shortly coming?

MR RONEY: That's the information I have, yes.

THE CHAIRPERSON: So we're comforted by that. That's the information that Mr Roney now has, that it is shortly to arrive, and it will be sent to you as soon as it does.

MR CRAWSHAW: Thank you, Mr Chair.

MS O'GORMAN: Mr Martin, just before we do adjourn, might I submit tender list J. It is from yesterday, 19 August.

THE CHAIRPERSON: Yes. Thank you.

MS O'GORMAN: I ask that those documents be admitted as exhibits.

THE CHAIRPERSON: Thank you. The documents listed on tender list marked J will be admitted into evidence.

MS O'GORMAN: Thank you.

THE CHAIRPERSON: 10 o'clock tomorrow, thank you.

AT 1.14PM THE BOARD OF INQUIRY WAS ADJOURNED TO FRIDAY, 21 AUGUST 2020 AT 10AM

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