COMMISSION OF INQUIRY

INTO FORENSIC DNA TESTING IN QUEENSLAND

Brisbane Magistrates Court
Level 8/363 George Street, Brisbane

On Friday, 14 October 2022 at 9.30am

Before: The Hon Walter Sofronoff KC, Commissioner

Counsel Assisting: Mr Michael Hodge KC
Ms Laura Reece
Mr Joshua Jones
Ms Susan Hedge

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<KYLIE DALE RIKA, on former oath: [9.34am]

THE COMMISSIONER: Mr Diehm, I think I interrupted you before you finished tendering.

MR DIEHM: Yes, the email chain that I was going to tender, that's quite so.

THE COMMISSIONER: Yes. You had tendered the draft report.

MR DIEHM: Yes, it was a 2022 email chain that I had just been asking the witness about. I'm just trying to lay my hands on those documents at the moment. It is the document in the Commission's website, or the portal, [WIT.0014.0147.0001].

THE COMMISSIONER: What is it?

MR DIEHM: It is a chain of emails.

THE COMMISSIONER: The date at the top of the facing page?

MR DIEHM: 23 July 2020, I should have said, not 2022. 23 July 2020 is the last email in the chain.

THE COMMISSIONER: Thanks. That's exhibit 87.

EXHIBIT #87 EMAIL CHAIN, THE LAST EMAIL OF WHICH IS DATED 23 JULY 2020, BARCODED [WIT.0014.0147.0001]

THE COMMISSIONER: Have you finished?

MR DIEHM: I have.

THE COMMISSIONER: It was you, Mr Hickey.

<EXAMINATION BY MR HICKEY:

MR HICKEY: Q. Could we start, please, Mr Operator, with document [WIT.0011.0024.0001]. It is exhibit IM-14 to the statement of Dr Moeller, which we were looking at yesterday. Thank you. Could we scroll, please, to page 2 of this document and could we scroll in, please, to the header of the email immediately below that signature panel in the middle of the page.

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Just to orientate you, Ms Rika, this is an email that you sent on 17 December 2020 to Ms Allen. Now, if we can scroll down, please, Mr Operator, to the text of the message itself, you can see here that you have written to Ms Allen in respect of "John's email" about some FSS survey results. I understand that to be Mr Doherty?
A. That's right, yes.

Q. I should say, perhaps just to short-circuit how many questions I need to ask you, do you happen to have seen this email recently or --
A. No, I haven't.

Q. I will orient you before I ask you the things I'm interested in. Perhaps the quickest thing is for me to ask you just to read that email to yourself to familiarise yourself with it?
A. Yes.

Q. This email, as I apprehend it, was sent in the context of the process of feedback being undertaken during the investigations by Workplace Edge; is that right?
A. No, this was in response to the annual Working for Queensland staff survey.

Q. In particular, I'm interested in the fact that in the second-last paragraph you say that you:

... note there was concern from staff (based on the survey) --

and that's no doubt the survey to which you have just referred --

about "my manager" and "my senior manager" and so staff may not feel safe to express their ideas on actions relating to these areas in front of their manager ...

So that's the first point that you take up with her?
A. Yes.

Q. You recall that correspondence?
A. Yes.

Q. Then if we can scroll, please, Mr Operator, back up to the first page, and at the bottom of the first page we see

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Ms Allen's response to you. We can't see when and at what time she sent that, but can I suggest to you it was shortly after you sent your email to her?
A. Probably.

Q. And she says some things in response to the issues that you had raised in your earlier email. In particular, she thanks you for your email and says that from her perspective she doesn't:

> *... think that Forensic DNA Analysis is mature enough in our journey to undertake the exercise that you've proposed.*

She's obviously, don't you agree, including herself among "Forensic DNA Analysis", when she describes "our journey"?
A. Yes, I would say so.

Q. And what she's really getting at, wasn't she, is that there were significant cultural issues that had been identified that were attempting to be addressed through various means at that time and that her response to you was she didn't really think it would be helpful to address them in the way that you were suggesting at that time?
A. Yes, that seems to be what she was indicating.

Q. Then she says in that same paragraph:

> *As Tess is working with us on a number of things, and one of those being interactions with each other and acceptable behaviours, perhaps in time, we will move to a place where behaviours improve, feedback is given and responded to positively, which will influence the scores.*

Can I just ask you, you were aware of the Tess to whom she referred?
A. Yes.

Q. Who was that?
A. Her name was Tess Brook from 1st Call Consulting, who was a cultural and communication - sorry, cultural change and communications consultant that was brought in to our lab to help us work through the significant cultural and communication issues.

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Q. Thank you. I think I had in mind 1st Call when I said "Workplace Edge" a few moments ago.
A. Oh, right.

Q. No, no, that's my mistake, not yours. You were aware of the fact that she was doing that work at that time?
A. Yes.

Q. You were aware that one of the things she was working on was interactions with each other and acceptable behaviours?
A. Yes.

Q. And it was the case, wasn't it, that that work was directed both at the staff in the laboratory?
A. Yes.

Q. But also at the management team, if I can put it that way?
A. Yes.

Q. It was concerned with the flow of communication between both directions?
A. Yes. I think Tess did try to - initially, Tess did come in to try to do some work on our whole forensic DNA Analysis Unit, including staff and managers. But as things moved forward, I got the impression that it kind of moved from all of us needing to work on this to a point where I felt that it became a thing where the problem really was with reporting staff. We - I felt that we were the ones - that indications from what Tess was doing, and moving forward later on down the piece, seemed to be that she had been influenced - this is my perception, that she had been influenced that, you know, management's fine; it's the reporting staff that we need to focus on.

Q. There is a lot to unpack in that. When you said your perception was that that had occurred, and you used the words "later on in time", just so I can identify where I am in the chronology, at the time this correspondence was going backwards and forwards between you and Ms Allen, had you already developed that perception or did it come later?
A. Oh, I don't recall when I - I don't recall, sorry, with that.

Q. That's all right. But, in any event, what Ms Allen says to you here in the first paragraph, in the second-last

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line, is - she says:

> *I also think that an important piece of work hasn't been completed yet, which is the Values and Behaviours piece that Paula is undertaking.*

A. Yes.

Q. You were aware that that was still being undertaken?
A. Yes.

Q. And you would agree with Ms Allen's suggestion that it was an important piece of work that hadn't been completed yet?
A. Yes.

Q. So, in all, can I suggest to you, what Ms Allen was saying there was, "Look, I recognise the things that you say need to be addressed" - the management, the senior management issues that you had identified in your first email?
A. Yes.

Q. "But there is this other work that needs to be done before it can be addressed in the way that you are proposing"; would you agree that that's a reasonable summary of the exchange to that point?
A. Yes, that is fair.

Q. Despite that, she then goes on to say in the next paragraph:

> *I think that there are a number of other areas that staff could suggest action items that they could do to improve the workplace, other than around Managers.*

Now, at the time she sent this, you understood, didn't you, that she wasn't saying, "We're not going to work on managers"; instead, she was saying, "There is this other work that is ongoing. Until that is completed, why don't you do suggestions around these other areas, because that will be a more positive approach"?
A. That's one way to look at it. For me, the context that I had, based on my history with multiple Working for Queensland surveys, was that I - for every single Working

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for Queensland survey that came through, I had staff members come to me and say, you know, they felt that there "continued to be issues with my manager or my senior manager, and why is it that that can't be a priority for action plan around what are the problems with those managers?"

Q. Could I suggest to you that what is the problem with that was what Ms Allen was explaining in her first paragraph?
A. That - so this was for this particular Working for Queensland survey. So at that time, we did have 1st Call Consulting, so I understand that. But, for me, reading this email in the context of remembering all the other times that we've tried to get - my staff have raised with me and then I've taken it up, trying to get management team members to acknowledge and be accountable for their own part in the negative Working for Queensland survey results, to me, in that context, this was another example of, "Well, we don't need to worry about managers."

Q. All right. But you accept, don't you, that she wasn't saying, "You don't need to worry about managers"? She was saying, "That's going to be addressed in a different forum"; that's the effect of what she was saying to you?
A. Potentially for this particular one.

Q. Well, this is the one we are talking about.
A. Yes, so that's fine, yes. But there is that background context that I just wanted to explain.

Q. I understand. You agree with me, don't you, that this was correspondence that was taking place between Ms Allen in her role as the managing scientist --
A. Yes.

Q. -- and you as a member of the management team?
A. Yes.

Q. You would agree with me that there are times when it's appropriate and, indeed, necessary for members of a management team to be able to speak to each other frankly and candidly?
A. Yes.

Q. And that there are times when it's inappropriate for one member of the management team to reveal to people who

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aren't members of the management team things that might have been said by another member of the management team?
A. There are occasions for that, yes.

Q. You would agree with me that ordinarily, in your experience as a member of the management team, conversations about administrative and management issues such as this are things which, at least at first blush, would be expected to be kept confidential between the members of the management team?
A. I don't consider this email exchange to be one of those examples.

Q. Can I suggest to you that in your email to Ms Allen, the first one we looked at on the second page, there wasn't anything in your email to Ms Allen which would have reasonably suggested to her that you intended to share whatever her response to you was with the rest of the team?
A. No, there wasn't.

Q. Can I suggest to you that given what you have written in that email, there was no reason for Ms Allen to think that whatever she said to you by way of response would be shared with the rest of the laboratory staff?
A. I don't know what Cathie may have assumed about the way that I would handle the situation. But, for me, this particular scenario was one that I felt needed full transparency with staff, because that was actually one of the main issues that came from that particular Working for Queensland survey, it was that staff needed more transparency around decision-making and other cultural issues.

Q. Do you agree that transparency is a two-way street?
A. Yes.

Q. As you have said, it was important to you that there be transparency around decision-making for the staff, but similarly Ms Allen was entitled to expect transparency from you, wasn't she?
A. In what way?

Q. In your dealings with her in respect of this particular issue.
A. Well, I think I was being transparent about how, basically, I had sent her a message saying, you know, "This is what my staff and myself are thinking about responses to

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and actions for the Working for Queensland survey", so I think I was transparent about my - what I was trying to achieve.

Q. You were transparent with Cathie, you suggest?
A. Yes, because I emailed her.

Q. Could we scroll then, please, to the top of the first page, Mr Operator. If we can just scroll down a little, what we see here is an email that you then send on 18 December, which is the next day, so shortly after Ms Allen's response to you --
A. Mmm.

Q. -- and we can see that you have forwarded her email to you to the members of RT2; that's right, isn't it?
A. That's right, yes.

Q. You say:

Please see below thread for context around an appointment I will send where we can discuss the WfQ staff survey results ... please have a look at the results I sent you the other day ...
Thanks
Kylie.

Then by way of postscript, you say:

... please keep the contents of the email string below within RT2.

A. Yes.

Q. Significantly, having regard to what you have said about transparency, you don't include Ms Allen in that email?
A. No, because this was an email to my team about the greater context of where we are at so far with trying to sort this situation out, so I didn't feel it was necessary to include Cathie on that, and I wanted to keep the contents of this whole email string to my team because I do understand that when we're talking about Working for Queensland survey results and cultural issues about "my manager" and "my senior manager" and things like that, that's contentious, so I didn't want my staff to be sharing

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that with everybody else, because that - that's - that could cause issues, because, you know, like, we were asked, each individual team was asked, to come up with action plans. So I was dealing with that for my particular team.

Q. Can I suggest to you that you knew at the time that you sent this email that Ms Allen had never intended that her remarks to you would be broadly distributed amongst the RT2 team?
A. I don't know what she might have - I mean, I can't really comment on what she - what her intentions were. I mean, I - like, right now, I'm happy - like, I don't see - I don't see that there's an issue. Like, if I've accidentally left Cathie off or anybody else off that should have known about it, that's fine, I'm happy for them to have that.

Q. Isn't it the case, though, that you were actively cultivating the impression among the staff of RT2 that Cathie Allen, as the senior manager, was not really interested in receiving feedback from them about her or other members of the senior management team?
A. I don't think I was cultivating - I don't think I was cultivating a negative view of Cathie as being senior manager. What I was doing was looking at the Working for Queensland survey results, listening to my staff about what they wanted to see as actions, and trying to manage that situation as best as I could.

Q. You knew, didn't you, when you emailed Ms Allen initially in this thread that the staff that were answerable to you had some discontent about whether or not their feedback about senior management would be received?
A. Oh, yes, yes.

Q. And that was part of the reason you wrote to Ms Allen?
A. Yes.

Q. You accepted a minute ago that what Ms Allen said to you by way of response was, "I acknowledge that's a concern, and there will be an avenue for that to be dealt with" --
A. Yes.

Q. -- "in particular in respect of this Working for Queensland survey"?
A. Yes.

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Q. So it would have been open to you, wouldn't it, for you to simply have written to your staff and to have said something to explain to them that the Working for Queensland staff survey results had been assembled and that you were going to have a meeting with them and that you wanted them to look at the results that you had sent them the other day to think about one or two actions --

THE COMMISSIONER: I'm very sorry to interrupt you, Mr Hickey. Could you just give me a moment?

MR HICKEY: Of course.

THE COMMISSIONER: I just need to make a non-publication order, Mr Hickey. I'm sorry to interrupt your question.

MR HICKEY: Certainly. Shall I sit down?

THE COMMISSIONER: Not yet. I direct that all copies and versions of exhibit 80, document [WIT.0002.0096.0001], and subsequent pages to page 0038 that were downloaded or published before 12pm on 14 October be deleted by those who have them and not published and that any information or documents from these versions must not be discussed, published or made publicly accessible.

Yes, Mr Hickey, you can continue. Why don't you start your question again.

MR HICKEY: Thank you, Commissioner.

Q. If we have regard to the body of the email that you sent to your team at 8.05 on that Friday morning, it would have been possible, wouldn't it, for you to have conveyed everything that's in that email without going to the next step of sharing with them private communications that had been had between you and Ms Allen?
A. This is where perhaps myself and Cathie have different thoughts around what really needs to stay private. Like I said earlier in this piece of evidence, I don't see any privacy matters around this email string. This is all about finding ways to address the staff concerns, actions that we might put forward, because we were asked to do that, but also I did, like I said, mentioned earlier - I did say, "Keep this within RT2", because, you know, this was our team's task that we needed to do. Like I said

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before, each team was asked to do this. So, you know, another team might have a different approach or different feedback. And so Cathie, who oversees all of the individual teams - I can't see why there would be a reason for her viewpoints about how to manage Working for Queensland survey results to be a secret.

Q. Do you accept that against the background of staff discontent about their feedback about senior management being as it was - let me try it again. In circumstances where the staff were unhappy about the way their feedback about the management was received --
A. Yes.

Q. -- do you agree that sending them Ms Allen's email might have caused those people who held those views to feel as though she was being dismissive of their feedback around senior management?
A. It's possible that they may have felt that way, but all of these people in my - in that team at that time are highly intelligent, competent, capable staff members who can read an email thread and take from it what they need in order for us to do the tasks that we were asked to do. So I don't - I'm not quite sure that - I don't have power to manipulate their minds on what their own thoughts are, because they are highly intelligent, capable people.

Q. I'm not suggesting you have the power to do that, but you know, don't you, because they are all very well known to you, that notwithstanding their intelligence, they are human beings with emotions?
A. Yes.

Q. Indeed, in December 2020, emotions were high generally within the lab?
A. Yes.

Q. About all sorts of issues?
A. Yes.

Q. You knew, didn't you, that part of your job as a manager was to manage the team?
A. Yes.

Q. And that part of that job meant that you personally were responsible, within the scope of your particular role, to ensure that the broader team remained as harmonious as

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possible?
A. Yes.

Q. And it was part of your role, wasn't it, to act as a conduit between members of the senior management of the lab and the workers at the lab level?
A. Yes.

Q. That is to say, for instance, somebody like Dr Moeller's evidence yesterday was that she personally had very little to do with Cathie Allen?
A. Yes.

Q. And that would be true of many of the people within RT2?
A. Probably, yes.

Q. And so those people didn't have the benefit of the kind of proximity to Cathie Allen in terms of regular communication that you had by dint of your role?
A. I - that is true, although in saying that, I don't have as much communication or interaction with Cathie as, say, my supervisors, Justin and Paula.

Q. I understand that, but nevertheless you have far greater degrees of communication with Ms Allen than the likes of Dr Moeller and others within RT2?
A. Yes.

Q. And so you have the benefit, can I suggest to you, of a far greater degree of knowledge and information, through your dealings with Ms Allen, in order to properly give context to her remarks than does, say, somebody like Dr Moeller?
A. I don't know about that, but what I do know is that over the years I have definitely tried to be, like you suggested, a conduit, you know, and I have, over the years, protected my staff, and the other way, up to management - I've gone both ways with trying to protect everybody with contentious or sensitive issues, and that in itself has caused a great deal of disharmony because there is nothing worse than an unauthentic leader who is just following the party line because that's what's expected of me in my role.

Now, like I've mentioned in other evidence, I'm a manager, yes, I'm a middle, lower-level manager, but I'm also a court reporting scientist. So at some point in this

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whole me trying to be a conduit between the science of court reporting scientists and upper management, I got - there have been times where my integrity has not allowed me just to wrap things up in a nice fluffy bundle to give to either my staff or upwards, because, one, everyone's intelligent and should be able to handle the truth in whatever form it is; and, second of all, I don't want to be an unauthentic leader that people can't trust, because I knew from feedback through the Working for Queensland surveys and through feedback from all different staff to me, not just within RT2 but across all of forensic DNA analysis, staff have come to me and said things like, "You are the only manager who we can trust, and you're the only manager who seems to have both a brain and a heart."

And so, you know, to enable honest - honest - issues to be aired on the table so we can get to the bottom of them, they need an authentic leader who they can trust and go to. So for me to be authentic, sometimes there are occasions where you have to just say, "Here's everything as it stands. You know, I'm trying to do this part. You're trying to do this part. Cathie's trying to do this part." What's wrong with that, in my view?

Q. You willingly accepted the role of being a lower-level middle manager, as you describe it?
A. Yes.

Q. You are paid more for that role?
A. Yes.

Q. You could have removed yourself from that role at any time if you wished to do that?
A. No.

Q. Can I suggest if you had thought your integrity was so fundamentally conflicted by the responsibilities of that lower-level management role, you could quite easily have returned to simply being a reporting scientist?
A. Well, I have thought about the situation I'm in where I do feel stuck between a rock and a hard place. I've thought about that a lot. And I have thought about waiting for a HP4 reporting scientist position to become available; maybe I should just do that and leave all the politics and rubbish aside.

But then I think about - well, in the bigger picture

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of things, that's an easy way out, because, like I said, staff rely on me to bring their issues to the table, even if they are difficult issues and contentious issues and whatever. And so I'm like, I have an obligation to the science and to the staff and to the wider community to stay in a position where I have a voice - well, I try to have a voice in the management team as much as I can, because if I'm not going to do that, who within the reporting scientists is going to do that for them?

Q. It was open to you, wasn't it, at any time, if you felt your integrity was compromised by being a lower-level middle manager in the role that you now hold, to remove yourself from that role?

THE COMMISSIONER: But did Ms Rika say her integrity was being compromised?

MR HICKEY: Certainly she gave that evidence a few answers ago, with respect, Commissioner.

THE COMMISSIONER: Did she? All right, well, you continue.

THE WITNESS: Sorry, can you just say that again? So if my --

MR HICKEY: Q. If your role as the senior scientist of RT2 put you in a position where you felt as though your integrity was being compromised, it was open to you to remove yourself from that role?
A. Yes, but it was also - there were also other possibilities, like I just explained, which was I could remove myself, or I could continue to do the best job that I can to ensure that a wide range of voices are being heard, because that's also a level of integrity.

Q. Could I suggest to you that your primary loyalty at all times was to the people that reported to you rather than to the good governance and proper management of the laboratory?
A. No. My loyalty is around doing what is best for the casework, for the science, for my team and what they need to do to do their jobs properly, and for the wider community. That's the reason I'm in the job.

Q. Can I suggest to you that you must have known, when

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you sent that email on to your team, that it was inappropriate to forward Ms Allen's private correspondence to you without first checking with her whether she was comfortable with you doing that?
A. I don't think it was inappropriate at all.

Q. You must have known that doing that would have the effect of causing members of your team to doubt her concern for receiving their feedback about senior management?
A. Members of my team already had their own views about how Cathie would receive feedback, so me providing an email chain with all the relevant information and context - like I said before, these are smart people who can make up their own minds about the information in front of them. So I didn't see a need to filter - I mean, there's no need for me to insult my staff by filtering out the situation at hand, parts of the situation at hand.

Q. You would agree with me that part of your role as a middle manager was to, at the very least, maintain the level of culture within the lab, not make it worse?
A. Yes.

Q. And you would agree with me that there is nothing about sending this email to the staff which would be likely to improve their relationship with Ms Allen?
A. I - my concern wasn't about - at this time, based on years of experience, my concern wasn't about trying to make my staff have an excellent relationship with Cathie Allen. Cathie can do that for herself if she wants to.

My job was to help my staff through difficult times, as was displayed in the Working for Queensland survey results, because we were asked, as individual teams, to come up with action items. So I got my team together and said, "This is the task we've been asked to do. Here's the greater context around, you know, Cathie's thinking maybe we need to wait for the values and behaviours work, and all the rest of it. So with all of that in mind, let's have an" - I think I said, yes, "Please see below the thread for context around an appointment I will send where we can discuss this."

Now, at no point have I anywhere in the email said, "Oh, by the way, have a think about how all of this makes you feel about Cathie." Like I said, they are smart people. They have their own opinions about things. I was

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just trying to do my job, the task that was assigned to me and my team.

Q. Can I suggest to you that by forwarding the email in that way, against the background of what you have just said, their being intelligent people, and what you have previously said about their own positions, this was a deliberate act of passive aggression towards Cathie Allen?
A. No. I don't think it was passive aggressive.

Q. Could we then go, please, to the statement of Dr Moeller. Mr Operator, it is [WIT.0011.0010.0001 at page 0007]. This is some evidence that Dr Moeller has given to the Commission about raising some concerns about the changes to the process for sampling in June and shortly thereafter in July 2022.

What she says in paragraph 36 is that she had been away from work. In paragraph 37 she says that on the 17th she emailed Lara Keller raising some concerns about the process. In paragraph 38 she says that Lara Keller replied to her and asked her to speak to Justin Howes or Cathie Allen about it. In paragraph 39 she tells us about some concerns she had. But then in paragraph 40 she tells us that on 20 June she did in fact email Cathie and Justin telling them of her concerns, and then in paragraph 41 she says:

> *Cathie replied saying that Justin would speak to me in relation to the 15µL decision.*

Now, part of her evidence yesterday was to the effect that Mr Howes hadn't spoken to her. You're familiar with Dr Moeller's concerns around this issue, aren't you?
A. Yes.

Q. You were aware that she had some particular concerns?
A. Yes.

Q. And you were aware that she had approached Ms Allen and Mr Howes about that?
A. I can't remember if - I'm aware of it now, but I can't remember at the time if I was aware of it.

Q. Can I try to refresh your memory by suggesting this to

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you, that when Dr Moeller contacted Ms Allen and Mr Howes, Mr Howes spoke to you, being Dr Moeller's line manager, and that you offered to speak to Dr Moeller about this issue?
A. I don't - I don't remember that.

Q. And that on 21 June, you wrote to say that you were only getting to the email thread on that day, after Mr Howes had called you to check that you had passed on the information?
A. I - it's hard to know the context of that without seeing the email. Are we able to - am I able to see the email?

Q. No, not at present.
A. Oh, okay. So - okay, so say that again, sorry?

Q. I will put the whole suite of suggestions to you collectively, in fairness. It's this: Mr Howes, against the background of Dr Moeller's concerns, spoke with you about them, and you offered to speak to Dr Moeller about those issues in your capacity as her line manager?
A. I mean, I may have. I don't - I don't actually remember, but maybe I did.

Q. And that on 21 June you wrote to Mr Howes to say that you were only getting to the email thread that day, when Mr Howes contacted you to see whether you had actually followed up with Dr Moeller?

MS HEDGE: I object to that question. The witness said she couldn't answer without seeing the email, so either she should be shown the email or --

THE COMMISSIONER: But it's not an objectionable question.

MS HEDGE: Well, she said she couldn't answer it, and it has been asked again.

THE COMMISSIONER: Yes, but it's cross-examination. He can ask again.

MR HICKEY: Q. Do you recall corresponding with Mr Howes after he followed you up to see whether you had spoken to Dr Moeller?
A. From my memory, I do remember Justin and I having conversations about the 15 microlitre decision, but I can't remember anything about who was supposed to get back to

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Ingrid about it. I don't remember any of that part.

Q. If, in fact, there had been that discussion between you and Mr Howes, it wouldn't have been inappropriate for that to have been a subject that you would liaise with Dr Moeller about, would it, as her line manager?
A. Yes, yes, definitely, I would have said to Ingrid, you know, "Justin's asked me to talk to you about this 15 microlitre decision. Here's the information that I have" - yes, we would have had a conversation like that.

Q. Given the work environment, it wasn't inappropriate for Mr Howes to delegate that kind of task to you, was it?
A. No, but bearing in mind that I - even to this very day, I still don't really understand the whole 15 microlitre decision. I don't understand how the decision was made. I don't understand the basis for it. It doesn't make sense to me. So if he's going to delegate that to me, which he can do, and that's fine, I still - it's hard for me - it would have been hard for me to then - like, I can tell Ingrid what Justin said, but on my own two feet, I still don't really understand all of the information around it, so - and I don't know if Justin did or not, I don't know if Cathie did or not, but somebody who made that decision - it would have been better coming from the horse's mouth, really, because I still don't understand it.

Q. Could we go then, please, to paragraph 46 of Ms Rika's statement.

THE COMMISSIONER: Dr Moeller's statement?

MR HICKEY: No, I'm moving back to Ms Rika's statement now, Commissioner.

THE COMMISSIONER: Have you moved on from the matter that you were asking about?

MR HICKEY: Yes.

THE COMMISSIONER: Q. Do I understand you to be saying that you might well have been asked by Mr Howes at some point to convey information or an explanation to Dr Moeller about the decision that was the subject of paragraph 41 of Dr Moeller's statement but that you are not aware now of how you could have done that, because you don't have the

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information to explain it?
A. That's right, yes.

THE COMMISSIONER: Thanks. Yes, Mr Hickey.

MR HICKEY: Q. Now, in paragraph 46, if we could zoom up on that, please, Mr Operator, you tell us some things about the example that you have given demonstrating:

> *... the danger in moving important [questions] of testing to the implementation phase, as it can easily be missed.*

You say:

> *In my view, the management team wanted a quick sign off on the verification ...*

And so on and so forth. Now, if you need to scroll further back up in the evidence to locate yourself, we can do that, but here you are talking about the verification of ProFlex, do you recall that, Project #199?
A. That's right, yes.

Q. Now, isn't it the case that you signed off on the ProFlex final report on 20 December 2021?
A. Yes, probably.

Q. And so in those circumstances, it was open to you, wasn't it, to not sign off on it if you felt the process had been rushed?
A. With the information that - with the information that I had at the time, I was assured that even though I - even though I didn't want the Model Maker to be - well, I wasn't sure if the Model Maker should be part of verification or implementation, but I did say at some point that, "I can't see - what's the downside in putting it into the verification", because I didn't understand the rush to verify it and then leave parts for implementation stage.

However - sorry, getting back to your question, the information that was presented to me through the form of all of the project documentation, it showed me that the STRmix trainers group, their advice was - and I trust their advice, because I'm not an - like, they are the subject matter experts with that, with Model Maker and STRmix -

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their advice was that it's okay to do it as part of implementation.

So - but, and as you can see from my statement, basically the reason that I say, "This example demonstrates the danger in moving important components of testing to the implementation phase" is because I later discovered, when I was going through the minor change register, that the Model Maker work that was supposed to be done for implementation phase hadn't - it didn't appear to have been done, and I raised that immediately with Justin.

Q. You make reference to the management team in that paragraph.
A. Yes.

Q. You were a member of the management team, weren't you?
A. Yes.

Q. And so to the extent that that decision, with the benefit of hindsight, might have been a wrong decision, it was a decision which you, in part, were responsible for?
A. Like I've just said, with all the information that I had at the time to sign off, I made very clear the exception to my sign-off was that the Model Maker work was actually going to be done and that the STRmix trainers group were happy with that going into the implementation phase.

THE COMMISSIONER: I'm not following the science of this at the moment, Mr Hickey. Are you going to extract that or --

MR HICKEY: I'm not myself so interested in the science, Commissioner. I'm interested in the process around decision-making and the degree to which Ms Rika is involved in that and willing to take responsibility for it.

THE COMMISSIONER: I understand that.

MR HICKEY: So if that's something the Commission is interested in, I can't assist with that.

THE COMMISSIONER: All right. Just excuse me a moment.

Q. Do you have a copy of your statement there?
A. Yes.

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Q. Do you have the exhibits attached to it?
A. Yes, I do.

Q. Would you go to exhibit 5, please. I just want to understand what it is we are talking about, and then Mr Hickey can ask you about the decisions you took in relation to it. Exhibit 5 is an email chain, KR-05, and at the top of that page is 12 January 2022, Mr Howes to you. Have you got that?
A. Yes.

Q. If you go, then, to the second-last page of that bundle, which is an email from you to Mr Howes, 12 January 2022 --
A. Yes.

Q. -- and read that, would you, to yourself?
A. Yes.

Q. So the ProFlex verification had been achieved about a year earlier?
A. Yes.

Q. Now, on 12 January 2022, some months afterwards, you are writing to say that you "noticed with Project #199 ProFlex", which you had signed as approving, in relation to that, "there appears to be a gap" in something called "finalisation re Model Maker"?
A. Yes.

Q. What is that?
A. Model Maker is a component - well, is a component that is necessary to be completed to allow STRmix to understand our biological model within the context of all of our instrumentation and processes.

Q. STRmix, as we have learned, is a software program --
A. Yes.

Q. -- that is used to, in a way, analyse profiles by performing certain calculations upon it, and the work that it does then assists those who interpret the profiles in interpreting the profiles?
A. Yes.

Q. But in order to do that reliably, it needs to be

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informed of certain parameters that pertain to the particular lab in which it is doing its work?
A. That's right, yes.

Q. And you're telling me that Model Maker --
A. Yes.

Q. -- is that part of STRmix which takes that information and creates the model of the lab in which it's doing the work?
A. Yes. That's right, yes.

Q. All right, go on. So what were you talking about here:

> *... there appears to be a gap in finalisation re Model Maker.*

What's that? I'm looking at your email of 12 January 2022, 9.56am, on the fourth sheet of KR-05.
A. Yes, so I said to Justin, "There's a gap in the finalisation of that", so I directed him to the location of the project documentation, including the feedback, and I said:

> *You will see some [communications]/advice from our STRmix trainers about doing [Model Maker] at implementation stage.*

And I said:

> *I can't find this documented anywhere. I am also unsure if it was done or not.*

Q. So what are you talking about there? What wasn't done in finalising Model Maker?
A. What wasn't done in finalising Model Maker?

Q.

> *... there appears to be a gap in finalisation re Model Maker.*

A. Yes, well, then Justin said, "Oh, okay, we'll look into that."

Q. But what wasn't finalised? What was it that you were concerned about that wasn't finalised?

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A. That I was - first of all, I wasn't sure if the Model Maker work had been done as part of implementation, and, if it was --

Q. That is, the Model Maker work is the completion of the entry of parameters into Model Maker so STRmix understands the environment it is working on?
A. That's right, yes.

Q. You were concerned whether the final work of setting the parameters had been completed --
A. Yes.

Q. -- before ProFlex was introduced?
A. Was being used, yes, yes.

Q. Because ProFlex was a parameter that had to be introduced into Model Maker?
A. Yes, because STRmix and Model Maker - if you are changing a part of our process or instrumentation that has an effect on how STRmix understands the variables or the variances, you need to actually assess that whole chain of work.

Q. So I think I'm understanding it now. ProFlex was being introduced --
A. Yes.

Q. -- and had to be validated, and work was done to validate it, that it was working correctly?
A. Yes.

Q. But as part of that, what you're saying is that the way that ProFlex is working must be part of the information that STRmix receives through Model Maker so that it can take into account this new instrument that is being used in doing its work of interpretation?
A. Yes.

Q. And you didn't know whether the ProFlex validation had or had not taken into account the necessary variation to Model Maker in STRmix to give that information to the software program?
A. That's right, and so - sorry.

Q. That's all right. At the bottom of that email of 12 January at 9.56am, you refer to communications "from our

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STRmix trainers about doing Model Maker at implementation stage", so I take it that you're referring to people who are familiar with STRmix, those responsible for it --
A. Yes.

Q. -- having said that the necessary work to Model Maker to take into account the introduction of ProFlex after its validation --
A. Yes.

Q. -- would be done when ProFlex is finally implemented into the system and starts being used?
A. Yes, that's right.

Q. And they can introduce parameters at that point?
A. Yes, that's right.

Q. So you are raising the question there, has that been done, if I have understood correctly?
A. Yes, yes.

THE COMMISSIONER: Yes, Mr Hickey.

MR HICKEY: Q. Can we go then, please, to paragraph 9 of this statement. The Commission has received some evidence about the work procedure that existed prior to the introduction of the work list system?
A. Yes.

Q. You yourself have given some evidence about that in paragraph 9 of your statement, the second statement that we've been dealing with this morning.
A. Yes.

Q. In paragraph 9 you tell us that:

Prior to the introduction of the work list system ... The scientist would often case conference with other relevant experts ...

It is not the case, though, is it, that case conferences happened in every case?
A. With the old system?

Q. Yes.
A. Not for every case.

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Q. They only happened in major crime cases?
A. Yes, major crime, yes.

Q. But even then, not in all major crimes?
A. Not all of them, no.

Q. Usually murders and cold cases?
A. And some other serious matters.

Q. But even then, not in all of those cases, either?
A. No.

Q. You would agree, wouldn't you, that there are a large number of volume crime and other major crime - in particular, sexual assaults, for example - where case conferencing rarely or didn't happen under that old model?
A. Yes.

Q. Now, in paragraph 35 you give us some evidence about your having been on maternity leave when PP21 in combination with STRmix was validated and implemented, and you tell us that when you returned you did not receive any formal training. At the time you returned from maternity leave, your line manager was Ms Caunt; that's right, isn't it?
A. Yes.

Q. Can I suggest to you that you in fact received the same training on PP21 and STRmix as everyone else in the lab?
A. Yes.

Q. That is to say, you did receive formal training?
A. Oh, so I actually don't know what everybody else received, but when I came back, like I say in my statement, I was given some PP21 profiles and was told to have a look at them and that it would take me some time to adjust, and I was also assigned a mentor to help me navigate the case management processes as part of refresher training.

Q. Who was your mentor?
A. I think it was Penelope Taylor.

Q. Could we go then, please, to exhibit KR-05 to Ms Rika's statement. The document number is [WIT.0006.0152.0001]. Here is some correspondence that you have exhibited to your statement. If we can zoom in,

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please, to page 4 of this document, and zoom in to that email in the centre of the page. Now, this, helpfully, is the one that the Commissioner took you to a moment ago.
A. Yes.

Q. And so I need not refresh your memory about that. You are familiar with what it was you were asking Mr Howes?
A. Yes.

Q. Then if we scroll up, please, Mr Operator, to the bottom of the previous page, page 3, there we see Mr Howes responds to say, "Okay, thanks, I'll look into this through Paula/Kirsten"?
A. Yes.

Q. Who was Kirsten?
A. Kirsten is our lab's quality manager.

Q. Then if we scroll up to the top of that page and zoom in, please, on the email so it is a bit easier to read, here is Mr Howes coming back to you, and he is copying in Sharon. Presumably, is that because she was the team leader of the other team?
A. Yes.

Q. Sorry, the senior scientist is the right language, isn't it?
A. Yes, yes.

Q. So he tells her that he had "spoken to Paula about it", yes, identifies that it wasn't added to the implementation plan in the way that you had identified. So you would agree with me, wouldn't you, that he has responded to the issue that you've raised with him?
A. Yes.

Q. He discussed with her ways to improve the implementation process. Now, again, that's that issue that you have given evidence about in that paragraph that I have taken you to a few moments ago --
A. Yes.

Q. -- which is separate to the validation/verification. This is an example, isn't it, of the kind of responsiveness that you had come to expect from Mr Howes in particular?
A. Yes, at this particular time, Justin and myself had done a lot of work on our professional relationship and

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communication and all of those things, and I felt like in a really good space with our professional relationship at that time.

Q. You would agree with me that in the same way that you had done a lot of work, your impression was that he had similarly done a lot of work to repair whatever difficulties there might have been between the two of you?
A. Yes, he may have. I don't know what he's done, but --

Q. That was your impression?
A. Yes, he was being very collaborative with me at that time.

Q. And you had no reason to think he was insincere in his wish to improve his working relationship with you?
A. At that time, no.

Q. Then we can see examples, can I suggest to you, of his attempts to encourage you to be frank and fearless in the advice that you were providing in the language that he uses in his sign-off. He thanks you expressly for remembering the issue. Do you agree with that?
A. Yes.

Q. And then if we scroll up, we see you respond to him, telling him some things that are going to happen, at the bottom of that page, and then again --
A. Oh, yes.

Q. Sorry, did someone say something to me?
A. Oh, sorry, I just said, yes, I can see that.

Q. Sorry. Then if we scroll to the top of that page and zoom in, please, to that email, you can see there he is promptly responding in the back-and-forth with you, engaging on the substantive issues, and again gives you effusive praise, can I suggest, in the send-off to the email?
A. Yes, I remember this, because I actually felt really proud because he was praising me, and, like, I don't - I haven't had many emails like that, so I was very happy with that.

Q. And then if we scroll up to the bottom of the next page, and unfortunately there will be some redacting for you, Mr Operator - oh, you beat me to it. We can see that

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you have suggested to him in the bottom line that his actions and reply had eased your anxiety instantly?
A. Yes.

Q. You sent him a smiley face?
A. Yes, yes, because we were in a - I was trying so hard at that time, and I could see that he was trying as well, to have a good professional relationship.

Q. Then if we scroll to the very top of that page, we see that he then comes back and says, "Here is some more anxiety-reducing stuff" and makes a deliberate attempt to even tell you some more things that might be of assistance to you?
A. Yes.

Q. In the course of my taking you through that chain of correspondence, you said that you had done quite a lot of work on improving the relationship; that's right, isn't it?
A. Yes.

Q. Can I suggest to you that the reason the relationship was, and indeed appeared to be, so effective at this point in time was because you yourself had finally taken steps to address the problems in your own behaviour towards Mr Howes?
A. Sorry, I'm laughing because this - at this point, I refuse to - I understand that you're acting for Justin Howes and Cathie Allen, and I refuse to take any more moments of feeling gaslit. And so part of that gaslighting that I feel that I've experienced over the years is messages that I have received from Justin, Cathie and other management members of, "Oh, it's - well, very good, Kylie, that you're working on yourself, because, you know" - basically, it's just this whole feeling that I've had over the years of, well, yes, I'll definitely come to the party with being the best self that I can be, but the messages just keep getting rammed home to me that, "Oh, well, it's good that you can acknowledge that about yourself", and, "It's good that you're working on yourself."

It just - to me, constant messages like that have been a form of emotional gaslighting, for me, because it's made me go, "Hang on, these people think that the problem is just me." So when you said that to me just now, it's another example, for me, where, "Okay, so you're acknowledging that - you know, that you needed to do a lot

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of work on yourself for this relationship", but relationships are a two-way street. So, you know, I was very - throughout our cultural change journeys, with the management team in particular, I was very vulnerable by putting out exactly what I was willing to do, asking for their feedback about me so we can put it on the table and work through it, all of these things, and somehow that still wasn't enough.

So I'm sorry that I've kind of gone off on a tangent with that, but that type of question, to me, is just - triggers me, because it's a gaslighting tactic and I'm not - I'm not standing for that anymore.

THE COMMISSIONER: Mr Hickey, I must say, I was going to interrupt and ask you about that question, because you had been asking questions to the effect that it takes two to make a relationship and that each person in a relationship where there are difficulties has an obligation to consider the position and compromise and adapt. But that last question of yours put to Ms Rika whether she had at some point realised that she had to work on her own behaviour.

Now, I haven't heard any evidence, apart from that email that Ms Rika sent to her team communicating Ms Allen's earlier email that you cross-examined about that you said should have been kept confidential - apart from that instance, I haven't heard any suggestion, and I haven't seen any evidence, relating to any behaviour of Ms Rika that could have justified your question.

MR HICKEY: Well, with respect, Commissioner --

THE COMMISSIONER: Correct me if I'm wrong.

MR HICKEY: There is still evidence to come, of course.

THE COMMISSIONER: Yes.

MR HICKEY: The Commissioner understands I'm obliged to put an alternative view that inevitably --

THE COMMISSIONER: Of course you are, and of course you have instructions, and you have your brief, which - it's your brief and you have to execute it, and you have information I don't have and you know what is going to come in the future that I don't know yet.

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MR HICKEY: Yes.

THE COMMISSIONER: But when you ask a question of a witness which seemed to me to be a question that was a culminating question, "So you realised you had to do this to be fair, Ms Rika", you put to her as though it had been accepted that there was behaviour that had to be altered, but I haven't seen anything said about that.

MR HICKEY: With respect, Commissioner, it seemed to me to be implicit in the evidence that Ms Rika gave about her doing lots of work on the relationship, and perhaps I misconceived the effect of that evidence. I am happy to ask some clarifying questions about that.

THE COMMISSIONER: Certainly. You go ahead.

MR HICKEY: Q. You said to me during the course of the exchange we had before your last answer that you, in order to get to the position where the communication between you and Mr Howes at this point was so apparently collegiate and cohesive and cooperative, had done a lot of work, and I rather assumed what you meant by that - and explain to me if I am wrong - that that had included your reflecting on your own contribution to the relationship with Mr Howes and improving aspects that might have been your responsibility for the dysfunction between the two of you. Am I wrong about that?
A. Part of that is correct. Part of the work that I was talking about, going into improving Justin and my relationship, was - when I say "work", yes, I'm constantly asking people for feedback about, you know, "Did that come across okay?", you know, "What do you think of this, about how I handled that?", those sorts of things, definitely.

But also, in the sense of work going into that, I learned that what I was hoping or expecting to get from Justin was a level of self-awareness and reflection on his own shortcomings that I personally didn't feel there was much capability in that from him. So what I mean by extra work was I almost had to, for want of better words, kind of - not pander, but I had to find ways to talk to him and deliver my information to him in a way that would make him feel comfortable so that he didn't get defensive or think I was unduly challenging him or anything like that. So I had to kind of become a contortionist to appease, for

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want of a better word, his ego, so that we could maintain a professional relationship.

Q. Could I suggest to you that what you have just said, in almost identical terms, is what Mr Howes is likely to say about his relationship with you?
A. Okay.

Q. Is he wrong in thinking that?
A. He - like, there's - I don't think there's any right or wrong in what people think about other people. That's their perceptions, and we've talked about that before. I don't really know what else to say about that. I mean, I - if he has felt that he has had to do what I've done to him, that's - he can talk about that, that's fine.

Q. Were you aware that he felt that way?
A. Which way, sorry?

Q. The way I've just described to you, that he would describe his relationship with you - that is, the converse of the way you have just described your relationship with him?
A. No.

Q. And might that be because he'd never directly said as much to you?
A. Yes.

Q. Would it have been helpful if he had done that, do you think?
A. Yes, and I asked him on a number of occasions, "Let's just talk about it, you know. What are the problems?", and I didn't get very far with that.

Q. And similarly, can I suggest, he was never given the benefit of that clear explanation that you have just given us here today in order to learn what your problems with him were, either?
A. I - no, I have spoken to him, I have spoken to him about how I feel, that when I raise issues, that, you know, I feel like he's - I have said to him, "Sometimes I feel like you're not considering them as seriously as I am", like, I feel like, you know - what's the word? - almost like a defensive but also dismissive response to me.

THE COMMISSIONER: Q. You mean as a reaction to

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professional issues you have raised?
A. Yes, yes. And so I have spoken to him about how I like - like, I've spoken to him about these things and I've spoken to him about how I like to receive feedback, I like positive and negative feedback, constructive, face - like, directly to me. I don't like to hear about his feedback about me to another staff member who then - that gets back to me. I don't like that. I've had these conversations with him.

MR HICKEY: Q. Finally, were you aware, Ms Rika, that members of the reporting team 2 referred to themselves as the "FRIT fuckers"?
A. Yes.

Q. Is that something - when did you first become aware of that?
A. I don't remember when, but what I do recall about that was one of my staff members confiding in me that they felt that there was a negative view of FRIT - so forensic reporting and intelligence team - by Cathie because - and the staff member that came to me said that - I'm trying to remember the details, but either they heard - they either had a conversation with her or they overheard her say, you know, something about, "I'm going to take away that photocopier, the multifunction printer, from over in that block, because those FRIT fuckers keep printing in colour", and - and so I don't know when that was, but I do remember a staff member coming to me with that concern that they - because of that conversation - well, what they had heard from Cathie, that, you know, basically, "What chance do we have as a forensic reporting and intelligence team when she's referring to us as that?"

Q. Is it the case that that occasion when that suggested comment was overheard was some time ago rather than more recently?
A. Yes, probably, yes.

Q. That must have alarmed you when you heard that it was alleged that Ms Allen had said that?
A. It wasn't great, but based on other experiences that I had had over the years, I wasn't really surprised, either.

Q. You didn't, though, think to raise it with your line manager, Mr Howes?

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A. Well, it's one of those things that, you know, at that time, to be honest with you, I didn't feel - the way that I feel like I've been put on the outer with the management team, I don't feel I have support in complaining about other members of the management team to other members of the management team, because I feel like - you know, like, I don't - I don't feel like I have support, basically. So I don't think that it would have been a helpful exercise for me to go to Justin and say, "Hey, this is what I heard Cathie has said", because I've raised issues about Cathie before to Justin, and either he may have done something, I don't know, but I've also had comments back from him along the lines of, you know, "Well, you know, she's going through a rough time", and, you know, all these sort of defending her things. So I - you know, it probably, in my mind, was a pointless exercise.

Q. You would agree that describing other members of the team in that way, if indeed that's what occurred, is an entirely inappropriate way to speak within the workplace?
A. Yes.

Q. And could I suggest to you that if, in fact, that is something that you had become aware of, the correct thing for you to have done, if you didn't feel comfortable raising it with Mr Howes, was to press the issue in writing with the human resources representatives at the lab?
A. Oh, I have spoken about probably that issue but also a million other issues to do with inappropriate behaviour and culture in our lab with very high-up people within Queensland Health, so I've done that part.

Q. You say you've spoken. My question was you didn't put this concern or any of those concerns to which you have just referred in writing?
A. Oh, no, I have put some concerns in writing. I don't think I put that "FRIT fucker" concern in writing because - and I think I've mentioned, I don't know if I have or not, but, you know, when you go to the level above Cathie, which is the executive director - and at that time in my mind I'm thinking about John Doherty - and you say, "I'm really concerned about these behaviours. I'm concerned about how I should raise issues. I'm concerned about how I'm feeling on the outer with the management. I'm concerned about all these things", and he said to me, "Well, you can consider putting in a grievance", and I said, "Well, I'm really scared because I feel like that's all just going to get

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turned around on me because of all the gaslighting and the manipulation that I can see happens."

And he said to me, yes, in his experience, a grievance process is a very stressful process for people, especially the person putting the grievance in, and in his experience, most of the time they come back on the side of the manager. In this case, it would have been Cathie if I did the "FRIT fucker" grievance. So I've gone to the executive director, who's Cathie's boss, and basically he said to me, "Chances are it's going to come back on Cathie's side." So what else do I do?

Q. You were aware that the staff within RT2 were referring to themselves in that way?
A. I may have heard a couple of - what's the word I'm looking for? - flyaway comments around the place.

Q. You did hear them talk about themselves in that way, didn't you?
A. Like I said, I can't remember exact details, but I probably have heard them talk about it like that.

Q. You didn't admonish them for using that term to describe the team?
A. I can't recall the conversations I've had around that particular - those particular conversations.

Q. You didn't discourage them from using that term?
A. I don't know about that particular term, but I always encourage my team to follow the code of conduct and I always say to them, "If you have an issue about something or about someone, take it up the line."

Q. You enjoyed the fact, didn't you, that your team felt they had greater rapport with you than with Mr Howes and Ms Allen?
A. Enjoyed it? I wanted all of us to be on the same page.

Q. You took personal satisfaction from the fact that the staff came to you with their concerns rather than going to Mr Howes or Ms Allen?
A. No, I actually feel very sad that my staff feel that they can only come to me. So that's why I'm always there for them. Now, it would be wonderful if my staff felt that they could go to any of the managers - Justin, Cathie, any

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of them - but the reality is, based on what they have said to me, they are too scared to, because they fear retribution, but also they don't think anything will come of it.

Q. And you didn't discourage that view in your subordinates, did you?
A. The view of?

Q. That if they raised concerns, nothing would come of it?
A. No, I've constantly continued to say to my staff, "Raise concerns. You can raise it with me, you can raise it with anyone, and we will do the best that we can within the constraints of what we're working within", which, in my view - and I'll be completely honest, I have said it to the Commission before, it's a toxic culture at our lab. So we do the best that we can.

Q. Can I suggest to you that to the extent there is a toxic culture in the lab, that's squarely the responsibility of the management team?
A. They've got a huge part to play in it, but as per our values and behaviours work that we did with 1st Call Consulting and Paula, we - a message that came through that was everyone has a part to play in that.

Q. And to the extent that you, throughout, have been a member of the management team, you have had a big part to play in the toxic culture within the lab?
A. No, I don't think that anything that I have done, said, implied - anything - has been to encourage a toxic culture at all. Now, I will explain that by saying that - and again, I understand you represent Cathie and Justin - you know, if their view of me is that I am divisive or encouraging a toxic culture or anything like that, that - they can have those thoughts about me, I don't care.

What I care about is the fact that, you know, I have raised issues and - along the entire part of my time at Queensland Health, I have raised issues, scientific issues, and some of those the Commission has heard, and we've also heard from other world-renowned forensic scientists, Professor Wilson-Wilde and I think it's Dr Bruce Budowle - we've heard from these other world-renowned forensic scientists, who, with the issues that I've raised or spoken about in this Commission at least, and there are others,

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that these experts have, in their evidence, said that my concerns were valid.

So I guess the bigger thing for me to think about, and maybe for everyone to think about, is if these issues that I've raised have been validated by forensic - world-renowned forensic experts, why were they not validated by Cathie and Justin?

Q. Do I take it then, from that answer, that to the extent that you yourself have been involved in endorsing or otherwise bringing to a conclusion decisions made by the management team of which you were a part, and which have now been criticised by others, independent experts, you refuse to accept any degree of personal responsibility for those shortcomings?
A. Oh, no, I can take some responsibility, because in the context of - okay, so this is how it works: so when I first started at the lab, the process for signing off on projects and validations and implementations and things like that, the process was, the decision-making group was the management team. So as a manager, I was part of that team. That was the process, so I had to do that process.

Now, wherever I can, when I'm looking at what's in front of me in terms of a project or a validation, if I don't know something - because I will put my hand up and say, "I don't know" - like, my strength is I know where to go to get the information that I need to make an informed decision. So I will go to Emma for STRmix, I will go to Rhys for stats, I will go to Angelina for bones, whatever, because that's how it should be. The decision-making and sign-off on things should be made - have the input from subject matter experts, not just because you are sitting in a management position.

So I have tried my very best, and like I said, I put my hand up, like, I don't know everything. I know where to go to get the information I need. And I have tried my best to do it that way in terms of my responsibility to do the process of management signing off on things. I don't actually agree with the process, but that's the process.

I think a better process would be to have subject matter experts or a scientific advisory board set up, and they are the ones that should be looking over projects and validations and implementations and experimental designs.

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But I followed the process as a manager.

So, yes, I do take responsibility for signing off some things that maybe are going to be criticised by other people, but I think that's - I have done the job, my job, as per that process, the best way that I can. And I think that's actually a bigger issue for the lab to consider moving forward, is do we have the right people in the right positions making decisions on the science when, just because you are a manager, doesn't mean that you are a subject matter expert in a particular component of our work. And like I said, I put my hand up, I know that I have my areas where I don't know everything.

Q. You said a moment ago that it's important to have the right people in the right positions. You are covetous of promotion within the lab, aren't you?
A. What - sorry, "covetous"? What does that mean?

Q. You wish to have Mr Howes' position or, indeed, Ms Allen's?
A. Oh, gosh, no. No, I'm happy where I am. I just want to be able to do my job. I just want to be able to have the tools to do my job the way that I think it needs to be done. I don't want Justin's job or Cathie's job. I don't want that extra - those extra layers of stress in my life.

Q. Their jobs are stressful, are they?
A. I would say so, the higher up you go.

MR HICKEY: Those are the questions, Commissioner.

THE COMMISSIONER: Thank you, Mr Hickey. Any re-examination?

MS HEDGE: No, none. Might Ms Rika be excused?

THE COMMISSIONER: Thank you, Ms Rika. You are free to go. Thank you for your assistance.

<THE WITNESS WITHDREW

THE COMMISSIONER: We will adjourn until 25 to 12.

SHORT ADJOURNMENT

THE COMMISSIONER: Yes, Ms Hedge.

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MS HEDGE: Thank you, Commissioner, I call Dr Duncan Taylor.

<DUNCAN TAYLOR, affirmed: [11.39am]

<EXAMINATION BY MS HEDGE:

MS HEDGE: Q. You are Dr Duncan Taylor?
A. Yes.

Q. You are the chief scientist of forensic statistics at the South Australian laboratory; is that right?
A. That's right.

Q. You have produced a report for the Commission, which is dated 7 October 2022, titled "Review of the validation material from the Queensland Health Forensic and Scientific Services"?
A. That's right.

Q. We've already tendered that report. Could we have it on the screen. It is [EXP.0003.0001.0001]. You can see that, can you, Dr Taylor?
A. Yes, I can.

Q. That's your report?
A. Yes.

MS HEDGE: Commissioner, could I tender, by providing a list of documents, the key documents that underpin Dr Taylor's report.

THE COMMISSIONER: Yes.

MS HEDGE: We have a list prepared, which I have provided to all of the parties, of 35 documents, which include all the validation reports and other key materials.

THE COMMISSIONER: The list of 35 documents relied upon by Dr Taylor is exhibit 88.

EXHIBIT #88 LIST OF 35 DOCUMENTS RELIED UPON BY DR TAYLOR

MS HEDGE: Would the Commissioner like us to provide the individual exhibit numbers later on this list, or will they be tendered as a bundle?

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THE COMMISSIONER: The list is exhibit 88. Are the documents annexed to Dr Taylor's report or not?

MS HEDGE: No, they are not.

THE COMMISSIONER: Why don't you prepare a bundle of the documents, and that will be exhibit 89 when you have done that. I will give it that number now.

MS HEDGE: Yes, that can be done electronically. Thank you.

EXHIBIT #89 BUNDLE OF DOCUMENTS LISTED IN EXHIBIT 88 RELIED UPON BY DR TAYLOR

THE COMMISSIONER: I will mark Dr Taylor's report exhibit 90, shall I?

MS HEDGE: It was already tendered during my opening.

THE COMMISSIONER: All right.

MS HEDGE: Q. Could we turn to page 94 of that report, please, operator. These are your qualifications, Dr Taylor, on the screen?
A. Yes, that's right.

Q. They include, in 2001 to 2005, a PhD in biological sciences?
A. Yes.

Q. And in 2016 to 2019, a PhD in statistics?
A. Yes.

Q. In particular, that PhD in statistics is in the statistical valuation of forensic DNA evidence?
A. That's right.

Q. Could we turn, then, to page 115. At the bottom of this page, we have your current employment, chief scientist in forensic statistics in the biology group?
A. Yes.

Q. If we scroll down further, please, operator, this sets out your expertise in forensic DNA and particularly the statistics of forensic DNA; is that correct?

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A. Yes, that's right.

Q. It says there that within Forensic Science SA, you validated certain items. Approximately how many validations would you have been involved in in your career, just as an estimate?
A. I suppose it would be --

Q. Are we talking hundreds or tens --
A. Maybe not hundreds. Tens, tens.

Q. Could we now turn to page 113. At the bottom of the page there, under the heading "Positions held", this shows your recognition as an expert in this field from your positions in a number of research councils and boards and so forth; is that right?
A. Yes.

Q. Thank you, operator. Could you tell us in a general sense to start what the role of a validation is within a forensic DNA laboratory?
A. Validation is carried out on an instrument or a process or a particular method or statistical software that a laboratory wishes to use within their routine casework or as part of their operations, and before any process can be implemented, you need to know how well it works and under what circumstances it works and, I guess, the limits of where it could be used. So you carry out a validation firstly to ensure that the instrument or the method or the process is working and is fit for purpose in the way that you wish to use it, and then also to generally understand the limits of the use of that method and the functioning of the method in general.

Q. To lead to your report that you have prepared for the Commission, you were asked to review and assess a number of validations of current instruments used in Queensland's laboratory?
A. Yes, that's right.

Q. Can I just list them for you, so we can identify them: the QuantTrio instrument, the Quant Studio 5 software, the 3500 Genetic Analyzer, the Hamilton STARlet machine, the ProFlex machines, the bone crusher cleaning method, and the QIAsymphony for bone extraction?
A. Yes.

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Q. Across those seven instruments or processes, there were in fact approximately about 15 validation reports that you had to review?
A. That's right.

Q. The reason for those two numbers being different is because the Queensland laboratory, for some instruments, validated things in a number of steps or produced a number of reports leading to the validation of a number of different particular machines; is that right?
A. That's correct.

Q. Can we deal first with the question of statistics. In five of the reports - that is, the validation reports that you reviewed - there was some inappropriate use of a statistical test?
A. Yes, that's right.

Q. Can we turn to page 52 of the report, please, operator. Under that heading "6.1.10 Experiment 9", the first two paragraphs, so from lines 1715 to 1729, is this an example of a difficulty with using appropriate statistical tests?
A. Yes, that's correct. This particular test that has been carried out is seeking to look at whether or not there is a significant difference between two sets of values, and the test that has been used hasn't been used appropriately.

Q. This was on the 3500xL machine number B?
A. Yes, that's right.

Q. So a student's t-test was used, but instead you suggest the Wilcoxon rank sum test would have been more appropriate?
A. Yes, that's right.

Q. Can you just tell us as briefly as you can, or as simply as you can perhaps, why that was a problem for that validation, to use that test?
A. When you're using - I suppose I should start off by saying that this is quite a common issue that you see, the use of this, what's called a student's t-test on data, that perhaps it might not be best suited for use on the - the student's t-test is a test to determine - in this particular instance, a test to determine whether or not there is a difference between the means of two groups of numbers. And in order to use that test, there are a number

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of underlying assumptions about the data. I suppose one of the assumptions in this particular case is that the underlying data is at least reasonably close to being normally distributed - that is, it has a nice bell-shaped curve, if you were to plot out the distribution of the data points. I can go into the reasons for that, I think, although they are rather technical, or we can just leave it as saying this is one of the assumptions of the test.

Q. Yes, that's fine.
A. There are other tests that don't have those particular assumptions, and those tests are called non-parametric tests, which I have listed in lines 1717 to 1720, and when your data doesn't have that nice sort of bell-shaped curve, then these other tests are generally more appropriate.

The second aspect to using the student's t-test - and it's sort of exemplified here in this particular example - is that when you carry out a t-test, comparing the means, you typically will designate a probability or a significance level beyond which you are going to say that there is a significant difference between the means of these groups, and like with all probability, there is a chance that even having made the designation that there is a significant difference between the groups, there is a chance that there is actually not a significant difference between the groups, but just through sampling effects, it appears as though there is a difference between the groups. So this is called a type 1 error.

Now, if you do lots and lots and lots of t-tests on different aspects of the data, it increases the chances that just by pure chance, you are going to see a significant difference in one or more of those tests when none exists. So when you have a lot of different datasets or a lot of different groups of data all relating to the same general comparison, you generally try not to carry out multiple t-tests. You tend to try and group those results so that you are only carrying out one test of significance.

Q. Thank you. Is this an example that's similar to the other statistical problems you found in other reports - that is, applying the wrong statistical analysis or an inappropriate statistical analysis?
A. Yes, and in particular the use of the student's t-test, there was a number of instances where it was probably not the most appropriate test to have been used or

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it was not used in the most appropriate way.

Q. Can we turn, then, to page 81 and to your recommendations about statistical expertise. In recommendation 4, you recommend that for every validation carried out that requires a statistical analysis, an individual with formal training or qualifications should be involved?
A. Yes.

Q. And you posit some options for how that might occur. Is that recommendation directly referable to those errors that you saw?
A. Yes, so this recommendation is designed to cover off on those issues that I saw, so someone that has a knowledge of the tests, when they should be used and the assumptions underlying those tests should be advising or be involved if those tests are going to be used.

Q. And so is it implicit, then, that a person with a biology degree and a masters of forensic science wouldn't necessarily have the statistical skills to do this, and that's why you recommend formal training or qualifications in statistics rather than in those fields?
A. Yes, that's right. You will find that in many university degrees, forensic science, even forensic biology, there is usually a small component of statistics within that training, but often that is only a small component, and for people carrying out work in a forensic lab, that can be many, many years having been done in the past. So someone with contemporary and more extensive training in statistics would preferably be involved in these sorts of validations.

Q. Recommendation 3, which is above that, relates to acceptance criteria being objective rather than related to a previous instrument?
A. Yes.

Q. Then recommendation 5 says that that criteria should be set by professional statisticians --

THE COMMISSIONER: Those criteria.

MS HEDGE: I'm sorry.

Q. -- that those criteria should be set or devised by

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a professional statistician. Do you see that?
A. Yes.

Q. And so that also is directly referable to concerns that you found in the validations; is that right?
A. That's right. And can we just, whilst we're on this page - on line 2670, the first word there says "less", it's saying "less than". It should actually say "greater than" in order for that example I've given to be consistent. That's just a small note that I found the other day.

Q. Thank you. I should have asked you whether you had any other corrections. Do you have any other corrections to the report?
A. No. That was the only - the one that I found.

Q. Thank you. Can I ask you now a little about experimental design. Can we turn to page 10 of the report. At the bottom of the page, looking at that "3500xL Genetic Analyzer Validation for Reference samples Amplified with Powerplex21", you say:

> *There are a number of aspects of this validation that have not been carried out in an appropriate manner.*

Do you mean by saying that that what has been done fell below best practice?
A. Yes, that's right.

Q. You identify:

> *In particular the assessment of sensitivity, repeatability and reproducibility have not been carried out appropriately.*

Could I ask you to briefly explain what those three terms or issues mean?
A. Yes. Sensitivity is when you are testing the limits of the instrument with regards to whatever analyte it's testing. So in this case, it would be amplified DNA product. A sensitivity test would determine when you have generated different levels of amplified DNA profiling product, so in this case using PowerPlex 21, at what point do you reach a lower concentration where those analytes are no longer detected, so you will no longer see peaks

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appearing in a DNA profile, and at the other end, as you generate more and more DNA, at what point do the peaks become so intense that they start to saturate the instrument with the detection levels of the instrument. So the sensitivity analysis looks at how sensitive that instrument is to different concentrations of the analyte of interest.

Repeatability is a test generally that looks at how repeatable results are when an analyst runs them multiple times, so one analyst runs them multiple times typically on the same day. Reproducibility extends that to see the amount of variation there is between results when - the same results run by different analysts on different days and potentially on different instruments.

Q. Then at the top of page 11, if scroll down, your conclusion on that particular validation was that while there was no evidence of unreliable DNA profiles being produced, there are aspects of the validation that warrant revisiting; do you agree with that?
A. Yes.

Q. For this particular validation, how it was done fell below best practice, but you're not concerned by unreliability of output?
A. That's right.

Q. I'm sorry, go on?
A. I was just going to say that that is - in general, a lot of my findings fall into that sort of category, where perhaps the data could have been analysed in a more appropriate way or more extensively, but there's no indication that unreliable results are being produced.

Q. In fact, there are two more examples of exactly that immediately below that, that one and the next one that you can now see on the screen from line 329 to about 350 - those two validations also had aspects that had not been carried out in accordance with best practice, but no evidence of unreliability?
A. Yes.

Q. Does that suggest that as well as the need for expertise in statistics, there is a need for expertise in experimental design in the Queensland laboratory - an increase in that expertise?

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A. Yes.

Q. How would that be obtained? How would the skills of the staff there be increased to ensure that there are no such experimental design errors in the future?
A. There are courses and training that can be undertaken which deal with aspects of experimental design. Often courses that fall under the umbrella of biostatistics will deal with experimental design.

Q. So is that the same sort of formal qualifications you are recommending for statistics, or are they separate?
A. I would imagine that an appropriately targeted training course would include both aspects of experimental design and the properties of formal statistics. You could probably find training courses that concentrated on those aspects as individual aspects, but a properly targeted training course I imagine would cover both.

Q. Thank you. By way of summary, there were three validations that you considered fell below best practice and there was some risk of unreliability, is that right: there's the QuantTrio and Quant Studio that work together, and then there's the ProFlex machines?
A. Yes.

Q. Can we deal with the QuantTrio and Quant Studio first. As I understand it, the QuantTrio is the machine or instrument, and the Studio is the software that works along with it; is that correct?
A. QuantiFiler Trio is the quantification kit that's used to carry out the quantification, so the reaction mixture itself, and the Quant Studio is the hardware, the laboratory equipment that runs that QuantTrio reaction.

Q. Your conclusion on those two together - can we turn to page 32, please, operator, and zoom in on that middle paragraph - was that while the general part of the validation may have been acceptable, the determination of the limit of detection was not best practice?
A. That's correct.

Q. In particular, at line 1067 you identify that there was no analysis of solutions that had a concentration of DNA below 0.001 ng/µL?
A. Yes, in that limit of detection section of the validation report, they tested the DNA between 0.09 and

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0.001 ng/µL.

Q. Can you just explain for us why that means that you don't know what the limit of detection is if you only test in that range?
A. I believe from their validation report, in all of those samples, they detected DNA. So a limit of detection, in a sort of formal statistical way when you are determining that for a quantification instrument, it's usually set at a level whereby your probability of detecting DNA is less than a predefined value, so typically 95 per cent, so your limit of detection is defined as the concentration of DNA which you won't be able to detect DNA in your instrument more than 95 per cent of the time.

In this particular validation, DNA was detected all the time, including the values of 0.001 ng/µL, so they haven't technically found the limit of detection. They have found some value just above that limit of detection, and to fill out and formally determine the limit of detection would require some additional steps between 0.001 and going down to zero, so blanks, and then using all of that data, I suppose, and formally analysing all of that data to find the point at which you reach that 95 per cent chance of detecting DNA, so the concentration that corresponds to that value.

Q. If we can turn to the recommendations to resolve that issue, if we turn to page 82, looking at recommendation number 9, this is the testing that you say should be done to appropriately determine the limit of detection; is that right?
A. Yes, that's right.

Q. And then recommendation 10 is what should happen in the meantime, before that - on the assumption that work is done, what should happen between now and when that work is done, and you say that:

If a LOD value for QuantiFiler Trio is going to be used as a decision threshold, then until its value has been appropriately calculated ... all quantified DNA samples should be treated (with respect to decision making or laboratory processes) as though they have exceeded the LOD.

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A. Yes.

Q. I just want to put that in some practical terms around how the Queensland laboratory operates. You understand that the Queensland laboratory uses the LOD, being 0.001 ng/µL, to determine that samples will be reported as no DNA detected and not further processed?
A. Yes, I understand that.

Q. So is the practical outcome of recommendation 10 that, in your view, until the work is done that is in recommendation 9, the Queensland lab should not report any sample as no DNA detected and should process all of them?
A. Yes, or they should treat them as they would treat other samples with a low quantification value.

Q. So they should treat them as though they have a quantitation value above 0.001 ng/µL, however it is that they treat those other things?
A. Correct.

Q. Thank you. Can we turn, then, to the ProFlex machines. Can we turn to page 72, please, of your report, and the middle section under "11.9 Overall conclusion". These are your conclusions in relation to the ProFlex validation?
A. Yes.

Q. Now, as I understand it, you identify three reasons why the ProFlex validation was not conducted in accordance with best practice, the first being that STRmix was not used in the validation but was included after implementation?
A. Yes, that's right.

Q. The second being the number and variation of the samples that were processed?
A. Yes.

Q. And the third being the pooling or grouping of all of the ProFlex instruments as a group rather than looking at each of them individually for the generation of Model Maker parameters; is that right?
A. Yes. Ultimately it may be fine to pool all of the results from the ProFlex instruments, and it's likely that that will be the ultimate outcome from - and I say that with other research in mind where the differences between

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different instruments of the same model have been tested. But until they show that some of those instruments are performing similarly, then best practice would be to test some of those instruments, or test those instruments against each other or individually to ensure that they can be pooled safely.

Q. Can you just explain for us what is involved in generating Model Maker parameters, just what that concept means?
A. Sure. If you think about this from a very high level about the way that STRmix works, you have DNA profile data and you have models and you have results, and you can think of these as like three points of a triangle. When you are using STRmix in everyday casework, you give it your DNA profile data, and you have the models within STRmix and it uses those two points to complete the third point of the triangle, in that it gives you the results.

Model Maker is a system of STRmix which calibrates STRmix for data produced in your lab, and in order for Model Maker to run, you provide it the profiles and you provide it the results, in that you tell STRmix what the DNA profiles you are providing it should be, and it uses those two points of the triangle to complete the third, which is the models. So it really informs STRmix of what models it should be using to be best suited to your laboratory.

What you would need to do in order to run a STRmix analysis is to provide it some profiles, and the best practice is to provide - well, the recommendation is to provide approximately 100 samples, or at least 50 but preferably 100 samples, of a range of DNA concentrations, and these are single-sourced DNA profiles, so DNA from a single contributor, and they can be used to generate these Model Maker settings that are ultimately then used in STRmix.

Q. If those Model Maker settings are wrong or incorrect in STRmix, would that affect the likelihood ratios that STRmix outputs?
A. That is a possibility. Studies have shown that STRmix is reasonably robust to small changes in these settings, but if you had dramatically different settings or dramatic changes in those settings, then that's going to affect the likelihood ratios that are produced.

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Q. At line 2370 that we see there, you conclude that you cannot say that it's unreliable, but equally there is limited ability to demonstrate reliability?
A. Correct.

Q. So at this stage, it is just unknown yet whether the settings are reliable or unreliable?
A. Yes, and this is largely based on this ProFlex validation which didn't involve STRmix. It mainly looked at the average peak heights or compared the average peak heights across the ProFlex instruments, because, as I understand just from perhaps testimony a couple of days ago and an email received a couple of days ago, STRmix has been used to generate Model Maker settings for the ProFlex, but there was some error with the way that that was carried out.

Q. We will come to that. Can we turn to page 13, please, operator. This is part of your executive summary about the same validation for ProFlex. At the bottom of the page, at line 418 you say that same or a similar thing, that there is a risk of unreliable results being produced and reported, ultimately reflected in the likelihood ratio produced to QPS, if there is an undiagnosed divergence in performance - and we just don't know whether there is or not yet. However, you say at line 422 you do not believe a suspension of laboratory functions is required while this additional validation work is carried out, and your opinion is based on three matters, which include three factors - the current STRmix settings, the robustness that you just described, and number three is the ability of well-trained and expert scientists to identify issues?
A. Yes.

Q. Now, after this report, were you provided by the Commission an email from Ms Emma Caunt, which I will have up on the screen, [WIT.0004.1245.0001]. There might be a redacted version. Thank you. Ms Caunt, through this email - the Commission provided you this email yesterday, I believe?
A. It may have been the day before yesterday, yes.

Q. All right, yesterday or Wednesday. It explains that although the laboratory did run a Model Maker experiment, there was some error found and they didn't implement those results?

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A. That's right.

Q. So you now understand that the settings in STRmix relate to the instrument that existed in the laboratory before the ProFlex, which was the 9700?
A. Yes.

Q. So going back to page 13 of your report, does that extra information change any of those three factors in your mind - number 1, 2 or 3?
A. Yes, it does. It changes - most significantly it changes the first of those factors, because obviously that first factor is now no longer the case. The results from the pooled ProFlex instruments are not being used in STRmix; they're using the 9700. So the first factor is discounted.

I suppose it also then plays partially into the second factor, because we now are in a state where we have STRmix settings produced on the 9700, and there are a series of ProFlex instruments, as I understand it, which have not had any valid Model Maker analysis carried out on them, so we simply don't know quite how well they do align with the 9700 STRmix settings. So if we were to still accept that everything that is being produced is being produced reliably, it requires an alignment of the 9700 and the new ProFlex instruments, which we simply don't have that information about. So it affects the first and second points.

The third point it doesn't affect so much, because still if there were dramatic differences in the data being produced to the results, the DNA profiles being produced to the likelihood ratios, you would expect that, again, well-trained experts, expert scientists, would pick up those dramatic differences. I suppose that the risk lies that there might be mild differences, systematic mild differences occurring that are not so easily picked up, particularly when profiles are complex.

Q. Thank you. You have also had the opportunity, in the context of Ms Caunt's email, to review both the January 2022 Model Maker results for Project #199 and the March 2022 Model Maker results for Project #199, which are numbers 16 and 17 on the list that we have provided?
A. Yes.

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Q. Is that right, you have re-looked at those two documents in the last day or two?
A. Yes, that's right.

Q. Taking into account those documents, what you have been told by Ms Caunt and your knowledge of these validations, what is your view now as to whether a suspension of laboratory functions is required?
A. I suppose I might start just by saying that the March minor process change report that you're referring to does set out the type of analysis that would be required to have faith in the reliability of the results being produced. That particular validation report is quite well carried out and has quite rigorous statistics in it and does give some comfort to me about the fact that the results - it gives some indication that the results of the ProFlex instruments and the 9700 are probably performing quite close together.

However, there is still the issue that the Model Maker results that that report relies on, that have been produced, have some error, and I'm not sure what that error is, but it casts doubt on the reliability of those ProFlex Model Maker results that that report relies on.

So still we're somewhat left in a state where we have Model Maker settings being used for a previous instrument and we have a series of ProFlex instruments where we don't have any valid Model Maker results to which we can compare values between those instruments and the previous instrument.

So I think that the best practice solution to this particular issue would have to be that as a matter of urgency, the ProFlex instruments, the data produced on those instruments, is put through Model Maker, and that can be done initially in a pooled manner and that wouldn't take too long to carry out that sort of analysis, and those settings are compared to the 9700 instrument and then adopted in STRmix. And that should be done really, as I say, as a matter of urgency and before further work is produced by the laboratory.

Q. When you say "further work is produced by the laboratory", that would affect only the running of STRmix; is that right?
A. Correct.

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Q. So it would be open to the laboratory, while that work is being done, to continue to use the ProFlex, but just not to use the ProFlex results through STRmix?
A. Yes, that's right, until we know that those ProFlex instruments are behaving in a similar manner to the 9700 or until results are adopted - or have been produced or adopted that reflect the performance of those 9700 instruments. That would be my recommendation.

Q. In that last sentence you said then "if they have adopted results for the" - and you said 9700. Did you mean ProFlex then?
A. I meant ProFlex.

Q. Thank you. And you just said that that work, that is, to identify the Model Maker parameters for the ProFlex machines in a pooled way as an urgent fix before the longer-term, more thorough fix - that interim thing you described, you said it wouldn't take very long. Is that because it is effectively a statistical exercise or --
A. Yes. So they should be able to use the same data that they have already generated and already used in the March report, the minor change report that you have highlighted, and they even already have a framework of how to carry out the statistical analysis of that data, so it's really just a matter of rerunning those results, these laboratory results that they already have, through Model Maker without whatever the error was that was originally the cause of invalidating that Model Maker result. And Model Maker runs generally will take less than a day to complete, so this work could be done relatively quickly.

Q. I suppose the caveat on that view is what the error was - that is, if the error that was made relates to the results, then there might need to be new results created; is that fair?
A. Yes, my understanding is that the error was in the way that the Model Maker analysis was set up. But if the error was in the operation of the ProFlex instruments, then, yes, you would have to regenerate the data in the ProFlex instruments.

Q. Thank you. Could I turn to the final validation I will raise with you in the oral evidence. It is page 14 of the report, please. This is the QIAsymphony, at the bottom of the page there, for bone extraction. It starts right at the bottom of the page, and if we can just scroll

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on to the next page, there was some inappropriate use of statistical tests there, but in your view - this is at line 472:

> *... the methods chosen were done so appropriately and there is no evidence to suggest that unreliable results would be produced.*

Do you see that?
A. Yes.

Q. There were two reports that came together for the validation. There was the original Project #192 report and then the supplementary repeatability and reproducibility report, which are April 2018 and then March 2020, items number 19 and 20 on the list which is exhibit 88. You have reviewed both of those reports?
A. Yes.

Q. In the first of those, could we turn to [FSS.0001.0025.5114], and could we go on about four pages, I believe. These are the 10 bones that were used to conduct experiments in this validation?
A. Yes.

Q. We see there their original quant range, which was, as you understand it, what they were tested to have in terms of quantitation well before this experiment, so outside of the experiment, in normal casework?
A. Yes.

Q. Can we turn to the next page now. One issue that has been raised is that in table 2, some of those numbers are quite different to the numbers we saw on the previous page, particularly, for example, sample 2, which on the previous page was 10 to 20, and is here 1.883, although others are of course close - number 1 was more than 50 and is 53 or 47 on this page. So there are some close and some not. Can you tell us your view about whether that variability is a concern?
A. There are a few different points here that we need to look at. I suppose immediately, just looking at these results, I'm not overly concerned, and I say that for a few reasons. One is that DNA extractions can be quite variable, and in particular for bone samples it can depend on the exact method that the samples were taken. So if the

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samples were - if you have taken multiple samples from multiple different areas, even from the same bone, there can be differences in the amount of DNA that you are going to retrieve from those particular samples. So it depends a little bit on how the experiment was set up and whether the bones were powdered and the powder was homogenised or whether the samples were kept separate, as to how much variability you are going to see.

The other aspect to consider here - and this goes a little bit towards experimental design - is that with these quantitation results from experiment 1, there is only a single extraction that has been carried out, and that's not unusual for bone DNA extraction validations, but it doesn't give any indication of the amount of variability you might expect from the data. So whereas sample 2 here has given a quantitation result of around 2, whereas previously it was 10 to 20, we don't know the variability and, in fact, it could be that upon re-extraction it gave a result of 15 or 25. So it's hard to say from a single point whether or not to be concerned.

I suppose my - when you have that sort of a situation, it's hard to look at isolated samples or isolated results to draw a conclusion. What I personally tend to do is try to look at the data more in a holistic way and say with large quantitation results, still generally large quantitation results upon re-extraction and were the mid-range ones still generally mid-range and were the low ones still generally low - as long as that general relationship is there, then I'm generally not too concerned.

Q. And that relationship is there in this particular validation?
A. In general, yes. There are one or two that are a little bit divergent, but in general that is the case, yes.

Q. Now, you said that that's often the case in bone validations, that there might only be one run of each sample through the extraction. Is that because of the rarity or scarcity of bone samples?
A. Yes, typically with bone sample validations, one of the difficulties and one of the limiting factors to how much experimental work can be done is the availability of bone, and that's either - that can be availability in

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a physical sense, as in you don't have much bone to test; it can also be an availability issue for legal reasons, or legislation, and how much you are allowed to use human bone samples for validations or research purposes.

Q. So if this validation had not been for bones but had been for some other sort of samples, would you say extracting each of the samples once would have fallen below best practice?
A. Typically, if you are going to carry out an evaluation of different DNA extraction techniques and you had a much easier to obtain sample, such as cigarette butts or tape-lifts or swabs or those sorts of things, the size of the study would be much larger, because the availability of those samples would have been much easier.

Q. So do you say, then, that the reason that one run doesn't fall below best practice is because it is a bone validation?
A. Yes, and that view is formed from a small literature review I carried out in the last few days to look at other published studies of bone extractions and to see what sort of level of experimentation was done in those published studies.

Q. Thank you. Now, you have been provided by the Commission an email from Mr Parry, [WIT.0009.0022.0001_R]. You have seen this email?
A. Yes.

Q. I understand you have also read some parts of Mr Parry's transcript of evidence?
A. That's right.

Q. Is it the case that you agree with Mr Parry that there is some variability in the data, but in your view, it's not so significant as to need the validation to be redone?
A. There is definitely a large degree of variability in the data, and particularly some of the reproducibility and repeatability results show quite a large range of variability. I suppose my stance is that I don't have a good feeling for how much variability you do tend to get from these types of bone extraction validations. And I did try to find, in the last day or so, again, some published examples of validations where I could increase my knowledge insofar as how much variation to expect, as that would be my sort of standard fallback when I don't have knowledge

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about something, is to look to see in literature what others have done.

I couldn't really find any studies that showed these reproducibility or repeatability studies, so I don't have a good feeling for how much variability you might expect in bone samples.

Mr Parry does express concerns about the level of variability, and from what I have seen of Mr Parry's testimony and his reports, he has quite a high level of knowledge about these types of tests and about statistics, and so I would, I suppose, defer to his comments in this regard.

Q. Can I just deal with one final thing. Page 81 of the report, please, operator. Recommendation 7 that you make, amongst a number of other recommendations that we haven't gone through orally, to improve the general process within the laboratory of doing validations - recommendation 7 is that:

Of the members that sign off validation reports, at least one should be external to the group who is carrying out the validation.

A. Yes.

Q. I just wanted to confirm that by "group", does that mean that someone from the reporting team might sign off on a validation done by the analytical team, or do you mean someone entirely external to forensic DNA?
A. I was thinking of perhaps someone external to forensic DNA, so perhaps someone - Queensland Health is obviously quite a large organisation; they might have other groups - people in other groups outside the forensic group that could sign off on these sorts of validations as them being valid, or of course you could look for this external person to be outside the state, in another forensic laboratory, to sign off the validation. That would just, I suppose, provide some level of consistency between laboratories or groups and stop any, I guess, siloing of the way that validations are done or thought processes that can sometimes develop within a small group that's constantly working together.

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MS HEDGE: Thank you. Those are my questions.

THE COMMISSIONER: Ms Hedge, it occurred to me that Dr Taylor's evidence in relation to the ProFlex and 9700 issue has a connection with exhibit 5 to Ms Rika's statement. Would you mind looking at that?

MS HEDGE: Yes, I will just do that. This is the email trail in January 2022?

THE COMMISSIONER: Yes. She was concerned that --

MS HEDGE: They hadn't done that work?

THE COMMISSIONER: -- that the Model Maker issue had not been resolved, and that culminated in the email from Mr Howes informing her that the validations demonstrated that the ProFlex machines were comparable to the 9700 and that - in any event, you see the email. Is that something Dr Taylor should comment upon or not?

MS HEDGE: I don't believe so, for this reason, that after this email, they did the January 2022 report and then the March 2022 report, trying to set the Model Maker parameters, and so he has reviewed those two reports. I'm happy to show him and see whether it does affect his opinion. Why don't we do that, in case I'm missing something.

THE COMMISSIONER: Yes, yes.

MS HEDGE: Q. It is [WIT.0006.0152.0001_R]. In January 2022, Dr Taylor, Ms Rika, who was a senior scientist in the reporting team, wrote an email saying that they hadn't done Model Maker, and this is one of the responses from the team leader of the reporting and intelligence team.
A. Okay, I will just have a read through. Okay.

Q. Does that affect your opinion about what needs to be done on the ProFlex and Model Maker settings before further use of STRmix?
A. No, my same opinion would stand.

THE COMMISSIONER: Thank you.

MS HEDGE: Thank you, Commissioner.

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THE COMMISSIONER: Q. Dr Taylor, I just want to ask you a couple of things. One is that I get the impression from your evidence that when one is contemplating a validation process, what one is doing is designing an experiment which will produce results which will undergo statistical analysis in order to arrive at the answer whether the instrument can begin to be used without affecting the reliability of results, or, rather, to ensure that the results obtained are still reliable - that is, there is a process of experimental design with a view to producing data for statistical analysis. Would that be right?
A. Yes, that's right, and a part of that is to show that the instrument is performing reliably, and that may be to some predefined criterion or it might be by comparison to some other instrument, if it's particularly important to show that, and then also to show the limits of use, so at what point do the results perhaps become unreliable.

Q. So because numerical data are produced and because those data are going to be analysed using statistical techniques, it's inherent in the experimental design that one has to have a knowledge of statistics, because you are generating something that you want to render amenable to valid statistical analysis?
A. Yes, I would agree.

Q. So you would expect that those people who formulate these experiments, design these experiments, have adequate training in statistics?
A. Yes.

Q. The other thing I wanted to ask you is this: I gather that in your professional work, you from time to time speak to your colleagues in other labs in other jurisdictions?
A. Yes, and overseas as well.

Q. Have you yourself ever been instructed by management in your laboratory not to consult with scientists in other labs who are seeking your advice?
A. No, they have never expressed that opinion or that desire.

THE COMMISSIONER: Thank you. Anything arising out of that, Ms Hedge?

MS HEDGE: No, thank you.

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THE COMMISSIONER: Thank you, Dr Taylor, for your assistance and for your very detailed report.

THE WITNESS: Thank you.

MS HEDGE: There is still cross-examination.

THE COMMISSIONER: Did somebody want to cross-examine? Yes. I'm sorry, I thought I was told that nobody wanted to cross-examine. That's why.

MS HEDGE: I understand it is not going to be very lengthy, but I expect there is some.

THE COMMISSIONER: No, that's fine. Go ahead. I was told the contrary. Please, go ahead.

<EXAMINATION BY MS CARTLEDGE:

MS CARTLEDGE: Q. Dr Taylor, my name is Sarah Cartledge. I represent the Queensland Police Service. I just have a few clarifying questions for you.

It is the case that you have reviewed multiple of these validation reports and instruments, and you provided evidence that in general your opinion is that although the data could have been analysed better, in all of your conclusions, putting to one side this ProFlex issue, in all your other conclusions, the case is that there is no indication that unreliable results were being produced?
A. That's correct.

Q. And that is that the DNA profiles that are being obtained from these machines and using these instruments - there is nothing to suggest they are unreliable?
A. Yes, that's right. So whether it be a quantitation value or whether it be a DNA extract being produced or a DNA profile being produced, there was nothing in the validation reports that made me think that the instruments themselves weren't performing.

Q. I just want to clarify some points in relation to this issue surrounding the ProFlex machine and some information you were provided by Ms Caunt which ultimately changed your conclusion in relation to the reliability of results. Is it the case that STRmix assists with the deconvolution of mixed profiles?

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A. Yes, that's right.

Q. That is, it assigns the various alleles to the various contributors in the mix?
A. Yes, you can think of it like this: if you have a complex DNA profile with DNA from multiple people in there, ultimately what you would like to know is the reference profiles of all the people who have individually contributed to that mixture. So what STRmix will do in this process, typically referred to as deconvolution, is try to detangle that mixture and it will give you the lists of all the possible reference profiles that could have made it up and it will weight those according to how well it describes the mixture.

Q. Then is there any risk that an inappropriate setting could result in an incorrect assignment of alleles?
A. Yes. It depends on which setting we're talking about and it depends on how incorrect we're talking about. So in general, we've found that STRmix is quite robust to changes, mild changes in settings - that is, you can change settings to some mild degree and it doesn't really affect the ultimate output very much. But of course you could change the settings to a large degree, and it would have a dramatic change on the output, and if the settings that you chose were quite badly misaligned to the way that data is being produced in the laboratory, then ultimately the results produced by STRmix are not going to be reliable.

Q. In terms of the issues we have discussed in relation to the Model Maker and STRmix, is that something that is likely in this case - a likely concern?
A. My general feeling is that the - whatever the error was in using Model Maker, my general feeling, and this is based largely on that March minor changes report to do with the ProFlex instrument, is that the error hasn't dramatically affected the results of the Model Maker analysis. However, I am saying that somewhat in a bit of a data vacuum, and best practice would be to generate those results without whatever the issue was present so that you could be sure that those Model Maker settings were appropriately set.

Q. Would it be your expectation, then, that an individual could be incorrectly included as a contributor to the mixture as a result of this Model Maker issue?
A. It's a possibility. I mean, just to outline - or to

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be exhaustive here, it's a possibility that an individual could be more strongly included to a mixture than perhaps what the data warrants; it could be that that person is more strongly excluded to a mixture than what the data warrants; or it could be that there is no change or very little change.

Q. But is it safe to say that your view, though, is that it's likely it's not as dramatic a change as that, and therefore it's unlikely that such a significant inclusion or exclusion would occur?
A. That is my impression, yes.

Q. It's also the case that STRmix is used to assign a likelihood ratio that we've discussed to the proposition that an individual contributed to the mix? Sorry, that's the case, isn't it?
A. Yes, that's the case.

Q. You may have touched on this in your previous answer, but what impact, then, could a setting have on the likelihood ratio calculated?
A. It depends a lot on the setting and how it was changed and how ultimately Model Maker dealt with that change, but, again, it could be that the likelihood ratio is increased or it could be that the likelihood ratio is decreased or it could be no change as a result of changing one of those settings. It is very setting dependent and it is very profile dependent.

Q. Is it likely in this case, however, that if the likelihood ratio was adjusted, it would be only by a small amount of no real consequence?
A. I suspect, if we follow on from my previous answer where I suspect that there's not going to be a dramatic change in the settings, that that would follow on to be that I don't suspect there would be a dramatic change in the likelihood ratio, either. But I would just echo the previous comment that I made: really, this should be checked as a matter of urgency by carrying out that Model Maker analysis where the issue hasn't occurred, because we don't really know what effect whatever the error was has had on the Model Maker analysis.

Q. Just in relation to that point, and you have recommended a suspension of testing until that is resolved, what is your recommendation, then, in relation to results

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that have already been reported that would be impacted?
A. At this stage, my recommendation would be - well, my recommendation would be to carry out this analysis as a matter of urgency to see whether or not there is a large difference in the pooled ProFlex Model Maker results to the 9700 results, and if you found that there was no dramatic difference between those two sets of results, then there's no consequence to any profiles that have been previously reported. If you found for some reason there was a dramatic divergence of the correctly run Model Maker settings from the ProFlex instruments to the previous 9700 results - and just to reiterate, I don't think that this will be the case, but if you did find that - then you would potentially have to go back and revisit previous analyses that had been done.

Q. Are you able to qualify at all, when you speak of a dramatic divergence, the parameters of what you mean by "dramatic"?
A. I can't - the best way I could probably define it would be that when you carried out tests of the likelihood ratio for a number of mixtures where you know the answer and you compared those likelihood ratios produced using your current settings and then using the new, appropriately generated ProFlex settings, if there were large differences in those likelihood ratios, so perhaps many orders of magnitude shift in the likelihood ratio, that would be a dramatic change.

MS CARTLEDGE: Yes, thank you. Thank you, Commissioner.

THE COMMISSIONER: Thank you, Ms Cartledge. Mr Rice?

<EXAMINATION BY MR RICE:

MR RICE: Q. Dr Taylor, I represent Queensland Health. I just want to ask you a couple of questions also about the ProFlex instrument. To recap, a day or two ago, you were provided the information that Ms Caunt identified about an error with respect to the Model Maker settings, and I think you made a recommendation in response to that; correct?
A. Correct.

Q. I understand your recommendation, which I think you have also repeated today, was that the laboratory determine what the correct Model Maker settings or parameters were as soon as possible using data pooled from all of the ProFlex

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machines?
A. Yes.

Q. If you would assume, as I'm asking you to assume, that that work is being done now with the involvement of Ms Caunt, with an estimated completion sometime Monday, firstly, is that estimated completion realistic, according to the time frame you have mentioned earlier in your evidence?
A. I believe so. Running a Model Maker analysis itself doesn't take a very long time. It would typically take less than a day to complete that analysis. You then have to do your comparison of that Model Maker analysis with your previous generation of settings, so on the 9700 instrument. From the March update to that validation report, it appears that Queensland - the forensic science centre there has a framework already for carrying out that comparison, so it's really just a matter of rerunning those same analyses to ensure that nothing dramatic has changed. So I think Monday would be a reasonable possibility.

Q. If we further assume that that work that you have recommended and just described is successfully carried out, could we expect by sometime Monday that the laboratory will be effectively returned to the position as you described it originally in your report at pages 13 going over to page 14, when you mentioned those three factors in combination?
A. Yes, it would then sit at that particular point at which I was comfortable that work could proceed.

MR RICE: Thank you.

THE COMMISSIONER: Anybody else?

MS COOPER: No, thank you.

THE COMMISSIONER: Thank you, then, Dr Taylor.

MS HEDGE: I'm sorry, I have a little bit of re-examination.

<EXAMINATION BY MS HEDGE:

MS HEDGE: Q. You were asked at the start of Ms Cartledge's questions about whether, other than ProFlex, there was any evidence of unreliability of results?

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A. Yes.

Q. And when you were using the word "results" in your answer, you were using "results" in the sense of what the output of the instrument is, as in, for a quantitation machine, the result is 0.005 or whatever; is that right?
A. That's correct.

Q. So you weren't using the word "result" in the sense of results that are reported to the Queensland Police Service?
A. No, that's right. I suppose, when you are talking about those sorts of results, results that are reported, in order for those results to be reliable, it perhaps requires more than just the understanding of the validation work; it also requires that the people who are relying on that validation work to make decisions or report opinions have understood the validation work and are applying its findings correctly to the way that the results are being reported.

Q. As an example, using the QuantTrio/Quant Studio 5 issue, if the limit of detection turns out to be less than 0.001, then there will be a large amount of no DNA results that have been reported that are not accurate?
A. Well, they wouldn't meet the definition of how that has been - of how the limit of detection has been properly calculated at that point.

Q. And can I ask another question: the way it was put to you by Ms Cartledge was that other than ProFlex, there is no evidence of unreliability; is that right - you agreed?
A. Yes, yes.

Q. Is it the case, though, that if the experimental design is substandard or deficient, then in fact, as well as there being no evidence of unreliability, there is also no evidence of reliability, and you just don't know whether it is reliable or not?
A. Yes, that would be a fair way to summarise it.

Q. So for all of those validations where you are concerned about experimental design, as opposed to statistical analysis, if the concern is experimental design, there is no evidence of reliability or unreliability?
A. Correct.

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MS HEDGE: Thank you.

THE COMMISSIONER: And I repeat my expression of gratitude to you, Dr Taylor, thank you very much. You are free to cut the link, if you wish.

<THE WITNESS WITHDREW

THE COMMISSIONER: Mr Hodge?

MR HODGE: That's the end of today, Commissioner. I was just asking Ms Hedge what time we will start on Monday. We will start at 9.30 on Monday. We have an expert at 9.30 on Monday, if that is convenient to you, Commissioner?

THE COMMISSIONER: It is certainly convenient to me. Does that suit the rest of you, 9.30 Monday? All right. And you will tell your colleagues what the timetable, the list of witnesses, so far as we know it is.

MR HODGE: Yes, I believe it will be Mr Cochrane first. We will let the parties know.

THE COMMISSIONER: Thank you. We will adjourn until Monday at 9.30, then.

AT 12.54PM THE COMMISSION WAS ADJOURNED TO MONDAY, 17 OCTOBER 2022 AT 9.30AM

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