

COMMISSION OF INQUIRY
INTO FORENSIC DNA TESTING IN QUEENSLAND

Brisbane Magistrates Court
Level 8/363 George Street, Brisbane

On Tuesday, 11 October 2022 at 10am

Before: The Hon Walter Sofronoff KC, Commissioner

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

1 THE COMMISSIONER: Yes, Ms Reece.

2

3 MS REECE: There is an application for leave to appear on
4 behalf of Lara Keller.

5

6 MR S HOLT KC: Good morning, Commissioner. I appear with
7 Ms Hughes of counsel. We're instructed by Holding Redlich.
8 I seek your leave to appear for and for Lara Keller to
9 appear in this Commission of Inquiry.

10

11 THE COMMISSIONER: Yes, you have leave.

12

13 MR HOLT: May it please the court.

14

15 THE COMMISSIONER: Ms Reece?

16

17 MS REECE: Commissioner, there have been some documents
18 provided overnight which are available on request through
19 the operator. They are not yet on our online system. They
20 have been made available to the parties. Other than that,
21 nothing further from me at this stage.

22

23 THE COMMISSIONER: Yes. Mr Hickey?

24

25 MR HICKEY: Thank you, Commissioner.

26

27 <ALICIA ANN QUARTERMAIN, on former oath: [10.01am]

28

29 <EXAMINATION BY MR HICKEY CONTINUING:

30

31 MR HICKEY: Q. Ms Quartermain, there are two issues, in
32 fairness, that I want to cover off with you arising from
33 yesterday's evidence that have become obvious to me on
34 reading the transcript you and I might have been at
35 cross-purposes. So in fairness to you and in assistance to
36 the Commissioner, I think I ought to go back to those
37 points.

38

39 The first is you will recall there was a passage
40 yesterday afternoon when I was asking you about with what
41 you compared what you described as the very high level of
42 control - do you recall that?

43 A. I do remember speaking about that, yes.

44

45 Q. In particular, the passage that might help you recall
46 is that I churlishly attempted to ask you to compare apples
47 with pears and the Commissioner, quite rightly, said that's

1 not helpful. Do you recall that exchange?

2 A. I remember that, yes.

3
4 Q. Upon reviewing the transcript it seems to me that
5 I misunderstood the effect of your evidence, which was that
6 I had thought you had said that you were comparing a QPS
7 work unit with a forensic DNA work unit. For the benefit
8 of anyone else, the transcript reference is page 988, from
9 lines 1 to 10. When I asked you the question, what you
10 said was:

11
12 *Well, compared with, for example, the*
13 *police services' stream consists of*
14 *forensic DNA and forensic chemistry.*
15

16 Now, what you were describing there, weren't you, is two
17 separate units within FSS?

18 A. That's correct.

19
20 Q. Thank you. I understand that. Having clarified that
21 point, it's not the case, though, is it, that you have ever
22 worked in the forensic chemistry section?

23 A. No.

24
25 Q. And so to the extent that you have knowledge of what
26 happens in terms of the administrative matters within that
27 unit, that's just based on what other people have told you?

28 A. Yes.

29
30 Q. And so you would accept, wouldn't you, that you might
31 be wrong about what you understand to be the case in
32 respect of the way the forensic chemistry section is in
33 fact administered?

34 A. I can only go by information that I have been
35 provided, so I don't - I haven't read their processes.

36
37 Q. Thank you. Now, the second issue that I wanted to
38 clarify with you, you will recall that I took you through
39 a chain of email and across the break yesterday afternoon
40 you were asked to review a chain of email?

41 A. Yes.

42
43 Q. And in the course of that line of questioning, you
44 will recall that I suggested to you that one of your
45 responses had been a snide response. Do you recall that?

46 A. I do.

47

1 Q. And you suggested to us that there was some other
2 context that you needed to understand that there might have
3 been additional emails before and after that exchange that
4 weren't presently available to us. Do you recall that?

5 A. Yes.

6
7 MR HICKEY: Could I ask the operator, please, to bring up
8 the first of the documents [WIT.0012.0028.0001_R]
9 I understand, Commissioner, there are two, and so I will
10 attempt to identify the beginning of the exchange as best
11 I can. Would you mind scrolling down, please, Mr Operator.
12 Is that to the very bottom of the - there we are. Sorry,
13 one more?

14
15 THE OPERATOR: That's the last page.

16
17 MR HICKEY: Is that the last page? Scroll up, please.
18 That's it. Perfect, thank you very much. I appreciate
19 that.

20
21 Q. So there we see you write to Ms Allen on 4 November?

22 A. Yes.

23
24 Q. And in particular, what you raise is you have been
25 thinking about a below email about Christmas Eve - and,
26 sorry, I should say the earlier email is about Ms Allen
27 communicating to the team that her expectation was that
28 75 per cent of people would be available to work on
29 Christmas Eve. Do you recall that?

30 A. Yes.

31
32 Q. You quite generously come back and say, "Well, I'm
33 working on Christmas Eve anyway. I think that we can
34 probably do with 50 per cent of the team. Isn't there some
35 way we could arrange it so that others can spend that time
36 at home with their families?"

37 A. It was just a suggestion, yes.

38
39 Q. Of course. And that's what you explain there?

40 A. Yes.

41
42 Q. And then if we can just scroll on, please, up,
43 Mr Operator, so here is Cathie Allen replying to you, and
44 if we scroll even further up, please - stop there - we can
45 see this is one of the emails, I think, that you were taken
46 to yesterday?

47 A. Yes.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

Q. This is her response?

A. Yes.

Q. If we continue to scroll up, please, Mr Operator, stop there, we can see your response to that - you and she are going backwards and forwards about the detail of the turnaround times and how they are measured, what particular metric it is that QPS uses for its purposes of ascertaining the number of samples that haven't been concluded?

A. Yes.

MR HICKEY: And then if we can scroll up, please, Mr Operator, we get to the top. Now, is there a second document, or is that it? Is there another one?

THE OPERATOR: There is.

MR HICKEY: Thank you. Could we scroll to the bottom, please. Are there only two pages of that, Mr Operator?

THE OPERATOR: Four pages.

MR HICKEY: Scroll on, please. That is the fourth page. Scroll up, please. All right. Pause there, please.

Q. Here we see again you having an exchange with Ms Allen about the turnaround times, the way the metric is measured. If we scroll up, we see you responding to her. That's a few more questions. You are sending on to the team to explain that you have been liaising with Cathie around the 50 and 75 per cent issue?

A. Yes.

Q. If we scroll up, this is the response that we have seen before?

A. Yes.

Q. And then you respond to her and that's the end of the thread. So having reviewed that overview, can I suggest, in fairness to you, what it appears as though, the first issue that you had said in the correspondence we saw yesterday, that you hadn't had a reply to your original point, was really this point about whether 50 per cent of workforce could attend on Christmas Eve rather than 75?

A. Yes.

1 Q. And so when you were circulating that message to the
2 team, you weren't intending to be snide about the
3 substantive response that Ms Allen had given to you, but
4 rather referring to the fact that you hadn't really got to
5 the bottom of whether people could go home on Christmas
6 Eve?

7 A. And it was my understanding that I had asked Cathie
8 this directly because the email about the 75 per cent had
9 come from her to forensic DNA analysis, but there were
10 discussions within the management team after this around
11 this particular issue.

12
13 Q. Yes, thank you.

14
15 MR HICKEY: Does that clarify the point, Commissioner?

16
17 THE COMMISSIONER: Yes. Thank you, Mr Hickey.

18
19 MR HICKEY: Q. Could I return then to the substantive
20 points that were left to address with you yesterday
21 afternoon. When we left off, we were talking about those
22 matters that you identified, which you said were the causes
23 of your suggestion that there had been very high levels of
24 control exercised at the lab. Do you recall that?

25 A. I recall us discussing that, yes.

26
27 Q. The one that I was about to move on to was your
28 concern that the stationery cupboard was locked, and in
29 particular you had said that by comparison to the forensic
30 DNA lab, forensic chemistry don't have a locked stationery
31 cupboard?

32 A. I didn't say that.

33
34 Q. Well --

35 A. I don't know whether they've got a locked stationery
36 cupboard or not but we do in forensic DNA analysis.

37
38 Q. I'm sorry, I'm just reading from the transcript where
39 you say:

40
41 *Well, compared with, for example, the*
42 *police services' stream consists of*
43 *forensic DNA and forensic chemistry, and as*
44 *far as I'm aware, forensic chemistry don't*
45 *have any rules as to when they - like,*
46 *specific hours that they need to call in*
47 *sick, they don't have locked stationery*

1 *cupboards, so compared to the other*
2 *department under Cathie's managing*
3 *scientist, under her as the managing*
4 *scientist.*

5
6 I don't recall saying that I knew that forensic chemistry
7 have locked stationery cabinets, because I don't know if
8 they do. I do know that they don't need to call in sick
9 between specific hours and that their work hours are
10 allowed to extend prior to 7am.

11
12 Q. All right. So again, I'm not intending to be
13 difficult about it, but you don't - contrary to the
14 evidence you gave yesterday, you don't know whether the
15 other team has a locked stationery cupboard?

16 A. I don't know whether forensic chemistry does or not.

17
18 Q. All right, thank you. Are you aware that the
19 administrative team has found that if they place a number
20 of pens or post-it notes out for general access, the stock
21 is exhausted within a day or two?

22 A. That's what stationery is for, isn't it?

23
24 Q. I'm asking you whether you are aware of that?

25 A. Not specifically, no.

26
27 Q. And so because of that, small amounts are placed out
28 on regular intervals to ensure that staff can gain access
29 to it. Are you aware of that?

30 A. Yes.

31
32 Q. Are you aware that Cathie Allen did not implement that
33 procedure?

34 A. I don't know who implemented that procedure.

35
36 Q. Have you ever asked anybody who implemented the
37 procedure?

38 A. No.

39
40 Q. Have you ever raised a complaint about the
41 inconvenience of the procedure?

42 A. I've spoken to people about it, but I've not raised it
43 as a formal complaint.

44
45 Q. Who have you spoken to about it?

46 A. My line manager, my team.

47

1 Q. Kylie Rika?

2 A. Probably lots of people over time. This has been the
3 case for quite a few years.
4

5 Q. You see, the thing is, Ms Quartermain, you point to
6 this issue by way of evidence of what you describe as
7 a very high level of control, and when I asked you
8 yesterday who do you say exerts the high level of control,
9 your evidence was it's Cathie Allen. What I'm trying to
10 understand is how you can lay the blame for very high level
11 of control in respect of stationery or access to it at the
12 feet of Ms Allen, in the circumstances that you have just
13 described?

14 A. Well, Cathie, being our managing scientist, if she
15 isn't the person who has exercised that control, then she
16 would know of the person that's exercised that control and
17 potentially these questions are best directed to her.
18 I don't know who's brought that in. I just feel that as
19 our managing scientist, it would most likely have been the
20 person in charge of our department. That's just my
21 perception.
22

23 Q. Do you suggest that the managing scientist of the
24 forensic lab would be concerning herself with pens and
25 post-it notes?

26 A. I am saying that our managing scientist - I would
27 expect that she would be concerning herself with all
28 aspects of the running of the laboratory.
29

30 Q. Including pens and post-it notes?

31 A. Including pens and post-it notes, yes.
32

33 Q. All right. That being so, can I assume, then that,
34 this lack of access to stationery is something that has
35 been an ongoing problem for you over a long period of time?

36 A. Yes.
37

38 Q. And you've raised it with your line manager?

39 A. Well, there's been discussions over time about the
40 inconvenience, yes.
41

42 Q. With your line manager?

43 A. With my line manager, with my work colleagues, with
44 other reporting staff members.
45

46 THE COMMISSIONER: Sorry, Mr Hickey, just so I understand
47 it.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

Q. If you want to get a new pen or a few more post-it notes, what do you have to do?

A. So as Mr Hickey stated, there is limited stock that's sitting on the shelves available for us to grab, but not all of it is always available. So if I wanted to go and get, for example, the size post-it notes that you are holding because I'm reviewing a statement and I need to tab things along the way, sometimes that's not available and I would have to go to an administrative staff member.

Q. Who? Anybody we know? I'm aware of the people who occupy particular positions --

A. Yes.

Q. -- Ms Brisotto, Mr Howse, Ms Allen, Ms Rika, Ms Johnstone?

A. Yes.

Q. Who do you have to approach to get a pen or a --

A. So our admin staff who are the staff members who send statements for us and do a lot of our administrative tasks, including checking our leave forms and things like that, those staff --

Q. I see, so like the secretarial staff, the secretariat staff?

A. Yes.

Q. So you approach one of them and say, "I need some stickies and they're not available" and they go to the locked cupboard, unlock it and get it for you?

A. That's correct.

THE COMMISSIONER: I see. Thank you, Mr Hickey.

MR HICKEY: Q. Ms Quartermain, can I suggest to you that, really, this is a trifling issue in the grand scheme of things.

THE COMMISSIONER: I think that's her point, Mr Hickey.

MR HICKEY: Q. What I'm suggesting to you, Ms Quartermain, is that this isn't any serious disruption to your ability to perform your work?

A. It's no disruption to the ability for me to perform my work; it's an inconvenience on occasion and it's just the

1 general feeling of not being trusted to only take what
2 I need from a stationery requirement perspective.

3
4 Q. But you have never communicated to Cathie Allen, being
5 the person that you say exercises the very high level of
6 control, that you perceive that control over stationery to
7 be an example of her doing that?

8 A. No, I have never spoken to Cathie about stationery.

9
10 Q. And you'd expect, wouldn't you, that if you had, she
11 would address that issue?

12 A. I can - I can ask her. I've never asked her so
13 I wouldn't know what to expect from her to be honest with
14 you.

15
16 Q. But you'd agree with me that might be one way of
17 solving that particular problem?

18 A. I agree with that.

19
20 Q. All right. Now, could we turn then, please, to
21 Ms Quartermain's second statement, the document is
22 [WIT.0012.0028.0001_R] and the relevant page we need to go
23 to is 0004_R. Could we zoom in, please, on paragraph 20.

24
25 Now, this is the final paragraph in a section where
26 you are talking about the exchange that you had with
27 Ms Allen around the turnaround times and the current sample
28 list of figures. The exhibit is AQ-01, that's the email
29 exchange that you had with Ms Allen in November 2020, and
30 that's part of that suite that I asked you about this
31 morning and also yesterday afternoon. Do you recall that?

32 A. Yes.

33
34 Q. And you will recall that the exchange that you were
35 having with Ms Allen was about the manner in which QPS and,
36 by consequence, the lab, measured its turnaround times, do
37 you recall that?

38 A. That was one of the things, yes.

39
40 Q. And what you say in paragraph 20 is:

41
42 *Ms Allen's lack of understanding around the*
43 *number of outstanding samples and how our*
44 *work output KPIs are tallied concerns me.*

45
46 Can I just ask you some questions about that. Did you ever
47 put to Ms Allen that, in your opinion, she did not

1 understand the number of outstanding samples and how the
2 work output KPIs are tallied?

3 A. I think that I did put that in my emails to her and
4 she responded to that.

5
6 Q. We can bring the email up but can I suggest to you
7 that one does not see in that email you plainly suggest to
8 her that she doesn't understand it?

9 A. I wouldn't have used the words that I didn't think she
10 understood it but I think I made it clear that the
11 information she had been - she had provided to forensic
12 DNA, the figures weren't added up correctly.

13
14 Q. And then you go on to say:

15
16 *... the emails that [she] has sent to the*
17 *DNA analysis staff outlining outstanding*
18 *data is technically incorrect --*

19
20 A. Yes:

21
22 Q.
23 *-- and causes concerns within the reporting*
24 *team.*

25
26 Again can I suggest that you didn't squarely suggest to her
27 that her understanding, her analysis, was technically
28 incorrect?

29 A. Again, I don't think I used that terminology but
30 I think I made it clear that Cathie had incorrectly quoted
31 the amount of outstanding samples in my emails to her.

32
33 Q. Now, could we go, then, please - I'm sorry to do this
34 out of order but these things arise from the tail end of
35 your evidence-in-chief yesterday afternoon. Could we
36 return, please, to Ms Quartermain's first statement, the
37 page reference is [WIT.0012.0025.0001_R at 0018_R] and if
38 we could zoom in, please, at paragraph 107 at the foot of
39 the page. You say here that Kylie once mentioned that she
40 had had discussion in a management team meeting about the
41 MS Teams form acting as a deterrent to reporting. Do you
42 see that - deterrent to the reporting scientists to rework
43 the samples?

44 A. Yes.

45
46 Q. I think you gave some evidence yesterday afternoon to
47 similar effect, to say, look, it's a bit of a nuisance to

1 have to fill in the form, it acts to deter the reporting
2 scientists from doing that step?

3 A. Yes.

4
5 Q. Do I understand that the evidence you give in
6 paragraph 107 is entirely based on what Ms Rika said to
7 you, not from any personal communication that you had with
8 Ms Allen?

9 A. Yes.

10
11 Q. And so you've never personally raised this issue with
12 Ms Allen?

13 A. No.

14
15 Q. Now, it's the case, isn't it, that these requests have
16 to go via Mr Howse and then ultimately they go to Ms Allen?

17 A. That's my understanding.

18
19 Q. You've never raised this particular issue - that is,
20 that it acts as a deterrent to reporting scientists, with
21 Mr Howse?

22 A. I don't think so. I don't think so.

23
24 Q. So you were entirely reliant upon Ms Rika having
25 escalated that issue in an appropriate way?

26 A. I never raised it to Kylie as an issue, as such, just
27 that it was an extra step that sometimes led to a statement
28 release date being pushed back, and that could be seen as,
29 if we're unable to meet court dates, not favourably by the
30 court.

31
32 Q. So focusing again on paragraph 107, you say that Kylie
33 mentioned in a reporting team 2 meeting, when you were
34 still in her team, that she had once commented that the
35 form may act as a deterrent to reporting scientists. Is it
36 the case then that that view was not one that you held but,
37 rather, one that she held?

38 A. That was a discussion that had been had, again, just
39 within the reporting team area in general. I may have had
40 conversations in general with people, but my statement here
41 says that she had once - Kylie had once commented in a
42 management team meeting that the MS Teams form may act as
43 a deterrent to reporting scientists to rework samples at
44 statement stage if they think this is appropriate, and
45 I recall Kylie saying that Cathie acknowledged that to be
46 the case. That's my recollection of the discussion that
47 was had.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

Q. And when was that, do you recall?

A. No.

Q. Was it a long time ago or more recently?

A. Oh, more than 12 months ago but not more than three years ago.

Q. Now, in paragraph 108 you say in your experience - perhaps if we just scroll down a little, thank you - Ms Allen does not turn around MS Teams requests for rework authority promptly and can take up to a week. Can I suggest to you, you've never raised that particular issue directly with Ms Allen?

A. I don't know if I've raised it with respect to how I've written it there, but I have followed up after I've sent a request asking if she's had a chance to look at it because I had a court date that I had to meet for a statement. I do remember having email communication with her around how much longer she thought it might take for her to get to my request.

Q. Is there implicit in what you say in paragraph 108 a criticism of Ms Allen?

A. It's more that if I've submitted one of these requests, which as I've said yesterday I haven't done frequently, it's something that I expect to be turned around as quickly as possible, given that there may be an impending court date that can't be changed because there's an upcoming trial and it's important to get this information back as soon as possible so that I can undertake any reworking that I need to do, and I feel like if I have to follow that first request up with a second email, that I would hope that Cathie would understand the importance of requesting these things and having them turned around quickly is important to us as reporting scientists.

Q. That's a helpful explanation. Can I suggest to you, you have never explained that in those terms to Ms Allen?

A. Again I don't know the words I would have used but if - when I've needed to follow one of these up with Cathie, I've emailed her to say that - whatever the reason is that I need to get this turned around quickly and would she please prioritise it for me.

Q. But again, to the extent that you describe it here in

1 108, and you have just explained it by the second-last
2 answer to me, you have never explained to Cathie in those
3 direct and clear words the problem that it presents when,
4 in your view, she doesn't promptly return the form?

5 A. If I - I haven't said to Cathie, "Cathie, can you
6 please turn this around faster because you are delaying the
7 output of my work?" I have said to Cathie, "Could you
8 please prioritise my request. It's important to me that
9 I meet a court deadline", something along those lines, so
10 that she understands the urgency around the request, and
11 that I need her authority to do further work, and even once
12 I get that authority, the work starts then. So I'd still
13 then have to rework a sample, interpret the result, report
14 the result, all before I write it into the statement. So
15 it's important to get these things turned around quickly,
16 and in an email conversation with her I may have requested
17 that she prioritise looking at one of these requests from
18 me because there is urgency around getting the statement
19 out to the court.
20

21 Q. You see, the thing is, Ms Quartermain, each member of
22 the team has a responsibility for fostering the team's
23 culture, don't they?

24 A. Yes.
25

26 Q. It's not something which can be placed only at the
27 feet of the management; the rest of the team have to
28 contribute?

29 A. Everybody - everybody is responsible, yes.
30

31 THE COMMISSIONER: Just so I understand the significance
32 of this, Mr Hickey, is it going to be your submission at
33 the end of the day that there was an obligation on
34 Ms Quartermain or her colleagues, if they struck the same
35 problem, to explain to the managing scientist that there
36 were time pressures?
37

38 MR HICKEY: What the submission will ultimately be,
39 Commissioner, is this: you have heard a lot of evidence,
40 both in the last module and already in this one, which fall
41 within the broad umbrella of culture.
42

43 THE COMMISSIONER: Yes.
44

45 MR HICKEY: What was suggested by a witness in the last
46 module, and I anticipate will be said again, is that there
47 was a toxic culture, and what has been said by

1 Ms Quartermain is that there were very high levels of
2 control, and what the Commission has heard lots of evidence
3 about is perceptions and feelings.

4
5 THE COMMISSIONER: Yes.

6
7 MR HICKEY: The ultimate submission that may be advanced
8 is it's all well and good to expect that managers might
9 know certain things, and indeed, time pressures might be
10 one that the Commissioner would assume a manager would be
11 aware of, but insofar as a specific complaint about a very
12 specific thing, which is here a request for work to be
13 done, a form to be returned, it acting as a deterrent to
14 certain steps being undertaken, the submission which
15 I anticipate may well be advanced is that the lack of
16 communication goes in two directions - that is to say,
17 unless people express their concerns to the right person,
18 and indeed if the person to whom they have expressed it to
19 as an intermediary between somebody like Ms Quartermain and
20 somebody like Ms Allen, ultimately, does not occur
21 effectively, then that's not something that can solely lie
22 at the feet --

23
24 THE COMMISSIONER: I understand, and it is a substantial
25 point that you raise, that when somebody has a complaint
26 about something, if you don't voice it, you shouldn't
27 assume that the person with whom you are engaging is aware
28 of it and is just ignoring you or is doing something
29 deliberate to create - for some purpose.

30
31 MR HICKEY: That's the point.

32
33 THE COMMISSIONER: But in relation to this, it's the
34 managing scientist we're talking about, one of whose
35 concerns is about maintaining as short turnaround times as
36 is reasonable, and what is being put by this witness is
37 that when she makes a request pursuant to protocol for
38 permission to advance the processing of a sample, the
39 managing scientist may take up to a week to respond, and
40 that this irritates her and frustrates her, is the
41 substance of it, and what you are putting is, "Did you ever
42 tell the managing scientist that it was unreasonable to
43 take a week to respond?"

44
45 MR HICKEY: Yes.

46
47 THE COMMISSIONER: So what I'm asking is, are you going to

1 be submitting at the end of the day - and I guess leading
2 evidence from Ms Allen - that she didn't appreciate that it
3 was unreasonable to take a week to respond.
4

5 MR HICKEY: I apprehend that there are two things that
6 might follow from that, particularly in respect of
7 Ms Allen. The Commission has already heard that there are
8 two steps between somebody like Ms Quartermain and
9 Ms Allen, so in terms of there being a delay by Ms Allen,
10 it doesn't necessarily follow that the delay is entirely
11 attributable to her. So it may well be, for instance, that
12 for reasons that are presently unclear on the evidence that
13 the Commission has received, there may be a delay at
14 Mr Howse, and so Ms Allen can't action it until it makes
15 its way through him. And so it may be, for instance, that
16 in fact the problem lies with Mr Howes, but if Ms Allen is
17 never made aware of it by somebody like Ms Quartermain how
18 can she act on it?
19

20 THE COMMISSIONER: That doesn't make sense. If on
21 1 February a request for approval goes to Mr Howse, he
22 delays it for six days, Ms Allen then receives it and
23 responds within 24 hours, she would see that it sat with
24 Mr Howse for a week.
25

26 What I'm getting at is I don't understand the
27 significance of this questioning when it should be - I had
28 thought it would be apparent to everybody in the chain,
29 Mr Howse, Ms Quartermain, she should make her request
30 promptly, they should deal with it promptly, I would have
31 thought, and that if it doesn't come back to her promptly,
32 it would be apparent to the people above her that they are
33 not dealing with it promptly, and what you are putting to
34 her is, "You didn't tell them they weren't dealing with it
35 promptly", as though this would be news to them, the
36 significance would be news to them. Do you see my trouble?
37

38 MR HICKEY: I have put my instructions, Commissioner, and
39 I will happily move on.
40

41 THE COMMISSIONER: Thank you. I understand. But I'm
42 putting to you that what I'm trying to grasp is the
43 significance of what you are putting.
44

45 MR HICKEY: I understand.
46

47 Q. Now, can I return, then, to the evidence you gave

1 yesterday. I'm reading from page 909 of the transcript at
2 line 46. In response to a question by the learned counsel
3 assisting, Ms Reece, who asked you a question about how
4 certain things make you feel, you said:

5
6 *It makes me feel like - I've been here for*
7 *17 years. I like my job. I enjoy what*
8 *I do. I want to do what I am doing to the*
9 *best of my ability, and when I have people*
10 *who stop me from being able to do that it*
11 *becomes a problem for me because then*
12 *I feel like I'm not doing the best that*
13 *I can do in my job ...*
14

15 Can I ask you to clarify precisely who it is you say is
16 stopping you from being able to do that to the best of your
17 ability?

18 A. Well, currently, the fact that I have to request
19 permission to exhaust a sample, and that permission may or
20 may not be granted, given that the current process for
21 microconning a sample, the default is to microcon the
22 sample to 35, that's done prior to me having the
23 opportunity to even look at that sample.
24

25 So based on current process, if police decide to
26 rework a sample and submit a rework request, that request,
27 my understanding is that it comes through to the analytical
28 team, and the senior scientist at the analytical team
29 orders the rework, being a microcon to 35. Then once that
30 sample has been through the analytical processes and a DNA
31 profile has been generated and is available for me to
32 interpret, what's done is done. I can't then go back and
33 say, "Oh, ideally, I wouldn't have microconned this sample
34 to 35, I would have microconned it to full because I think
35 that that's the best way forward for this sample to get
36 a good useable DNA profile". Current processes prevent me
37 from doing that.
38

39 Q. Thank you. One other point that you made yesterday in
40 your evidence - for the benefit of others I am reading from
41 page 912 of the transcript at line 23 - here you were
42 talking about professional development and, in particular,
43 about reading journal articles - do you recall that?

44 A. I do recall the Commissioner asking me something about
45 journal articles.
46

47 Q. I will read you the relevant part. You say:

1
2 *...everything is so time - high time*
3 *pressure that reading journal articles or*
4 *doing anything outside of the scope of your*
5 *normal day-to-day work is almost viewed*
6 *like you are not doing the core work that*
7 *should be done.*
8

9 Now, when you say "almost viewed", by whom do you suggest
10 it's viewed?

11 A. Well, the expectation of Justin is to - he's put to us
12 before in reporting that if we're able to case manage one
13 sample per hour, review one sample per hour, then for
14 a full-time employee, you're case managing 38 samples per
15 week and reviewing 38 samples per week.
16

17 Depending upon the types of samples that you're case
18 managing and reviewing, you may do more or you may do less,
19 but in order to attempt to meet that goal, it's almost
20 impossible, on occasion, to do that and then have time put
21 aside to read relevant journal articles that might have
22 been emailed to the department that day.
23

24 Q. Right. Let me just break that down, then. Is your
25 answer to my question, then, that it's Mr Howse who views
26 it like you are not doing your core work?

27 A. No, I don't - I don't think it's viewed as not doing
28 our core work, but given the time pressures that we feel,
29 and we're communicated each week when we receive an email
30 from one of the managers around the plan for the following
31 week being, "Please prioritise this, it's important to
32 focus on this", that there's never anything in there that
33 says, "Please ensure you take an hour to read a relevant
34 journal article to keep your knowledge up to date." So the
35 priority always comes across as the case management and
36 review and statement output, never on anything outside of
37 that.
38

39 Q. In the same way that a manager might be expected to
40 have implicit understanding of time pressures, for
41 instance, might it not also be the case that a scientist
42 would implicitly understand that part of their job was
43 reading journals and keeping themselves scientifically up
44 to date?

45 A. I'm sorry, can you ask that question to me again,
46 please.
47

1 Q. Might it not be that you don't need to be told part of
2 your responsibility as a professional scientist is to read
3 journals and to keep up to date - that's something that you
4 should know you ought to do as a professional scientist?

5 A. Sorry, the point that I was more making was spending
6 time doing anything other than case management, review,
7 statement writing and statement review as our priority each
8 week. Because there's so much work to be done and so many
9 results to be output, we're often getting emails from our
10 line managers to: "Could you please focus on this
11 particular case, police are chasing these results", they
12 come through frequent enough that sometimes my core work of
13 getting on to a review list or a case management list
14 doesn't even happen in a day.

15
16 Q. Thank you. I understand that. Could I ask you, then,
17 please, and I'm getting to the end of my questions, which
18 I'm sure you and others will be grateful for, do you
19 participate in yearly performance reviews?

20 A. I think they - I think they're supposed to be yearly,
21 but they don't happen that frequently.

22
23 Q. And when they do happen, who conducts those?

24 A. My line manager.

25
26 Q. Kylie Rika or Sharon Johnstone?

27 A. Presently Sharon Johnstone.

28
29 Q. Does anybody else participate in those?

30 A. No.

31
32 Q. You gave some evidence yesterday - for others it is at
33 page 883 of the transcript, line 24 - you were asked again
34 by my learned friend Ms Reece:

35
36 *And what kind of working relationship did*
37 *you have with him --*

38
39 "him" being Mr Howse --

40
41 *at that time?*

42
43 And I can tell you at that time was April 2020, and you
44 said:

45
46 *Good working relationship. We started at*
47 *forensic DNA Analysis I think it was the*

1 *same month of the same year.*

2

3 So your view in April 2020 was that you had a good working
4 relationship. It remained the case, didn't it, that you've
5 continued to have a good working relationship with
6 Mr Howse?

7 A. Yes.

8

9 Q. You'd describe him as somebody who is approachable?

10 A. Yes.

11

12 Q. And courteous?

13 A. Yes.

14

15 Q. Hard working?

16 A. Yes - oh, well, Justin does a lot of tasks that
17 I don't see, so I don't - I see him in his office a lot so
18 yes, I assume that he is hard working.

19

20 Q. You've no reason to think he isn't?

21 A. No, of course not.

22

23 Q. And he's professional in his relationships with you at
24 all times, isn't he?

25 A. Yes.

26

27 MR HICKEY: Those are the questions, thank you,
28 Commissioner.

29

30 THE COMMISSIONER: Thank you, Mr Hickey.

31

32 MR HUNTER: Commissioner, a couple of matters have arisen
33 overnight, I wonder if I might ask some further questions.

34

35 <EXAMINATION BY MR HUNTER:

36

37 MR HUNTER: Q. I want to ask you about the procedure for
38 reworking samples that were reported as DIFP?

39 A. Yes.

40

41 Q. I'm interested in the process that applied prior
42 to June of this year. Was there, at the laboratory,
43 a procedure for concentrating samples to not 35 microlitres
44 but to full?

45 A. So we've always had the option of microconing samples
46 to full. If, as a scientist, I order a microcon in our
47 system and I don't put any specific instructions in there

1 to state anything other, it will be microconned to 35. If
2 I order a microcon and I put a specific note in that sample
3 and say, "Please microcon to full", then the analytical
4 scientist will microcon that sample to full.

5
6 Q. And there has always been a procedure - that is,
7 a formal procedure - for microconning to full?

8 A. Yes.

9
10 Q. And if you are asking for a sample that had already
11 been reported as being DIFP to be micro- concentrated --

12 A. Yes.

13
14 Q. -- was it possible for you to ask that that sample be
15 micro-concentrated to full?

16 A. Yes, although in the current climate we - it's still
17 my understanding, and I haven't checked emails recently,
18 but we would have to get Queensland Police permission to do
19 so because that would potentially exhaust the sample.

20
21 Q. I'm concerned with what occurred prior to June of this
22 year?

23 A. Okay, yes.

24
25 Q. So prior to June of this year?

26 A. Yes, we were able to microcon to 35, or microcon to
27 full, samples that were DIFP or no DNA detected.

28
29 Q. And there were procedures for that that have been in
30 place for years; correct?

31 A. Microcon procedures, I've been microconning samples
32 for years, yes.

33
34 Q. To full?

35 A. Yes.

36
37 Q. The other question concerns --

38
39 THE COMMISSIONER: Of course, Mr Hunter, before 2018, the
40 DIFP samples were being automatically microconned to 35, as
41 I understand it; is that right?

42
43 MR HUNTER: I should make that clear, yes.

44
45 Q. That's the position, isn't it?

46 A. That's my understanding, yes.

47

1 Q. I'm talking about after 2018, you could ask for
2 a sample to be microconned to full?

3 A. Yes.

4
5 Q. But even before 2018, microconned to full was
6 something that was happening?

7 A. Yes.

8
9 Q. And it has been happening for really as long as you
10 can recall; is that right?

11 A. Yes, yes.

12
13 Q. The other question is whether microconning to 35 would
14 exhaust the sample.

15 A. So microconning to 35 won't exhaust the sample given
16 the goal volume is 35 microlitres. So if you take away
17 2 microlitres for the quant and then 15 microlitres for the
18 amp, then you've got enough volume remaining to amp at
19 15 microlitres a second time.

20
21 Q. So it's completely wrong to suggest that
22 micro-concentration will result in the sample being
23 exhausted?

24 A. If you are just saying it as micro-concentration - you
25 would need to specify. So I would say if you're
26 microconning a sample to full, there's the potential that
27 there will be zero sample remaining after that
28 amplification. However, if you're microconning to 35,
29 unless there is some procedural issue that happens during
30 that microcon process, there will always be volume
31 remaining to amp a second time.

32
33 Q. When you submitted your requests via the - I think you
34 called it the Teams form; have I called that by the right
35 way?

36
37 THE COMMISSIONER: MS Teams.

38
39 THE WITNESS: For reworking at statement stage?

40
41 MR HUNTER: Q. Yes, for reworking the sample at
42 statement stage, would you, in that form, specify the
43 volume to which you wanted the sample to be
44 micro-concentrated?

45 A. No. So my understanding is that that form is used -
46 that MS Teams form is used if I want to rework a sample
47 that already has a final result reported. So I have been

1 told by Justin that DNA insufficient for further processing
2 and no DNA detected are result lines that are considered
3 interim, so I don't need to request permission from the
4 managing scientist to rework those samples at statement
5 stage.

6
7 MR HUNTER: Those are the further questions, thank you.

8
9 THE COMMISSIONER: Ms Reece?

10
11 MS REECE: Thank you, Commissioner.

12
13 <EXAMINATION BY MS REECE:

14
15 MS REECE: Q. Ms Quartermain you have been asked some
16 questions about wording in statements. I will just take
17 you to a document [WIT.0012.0027 --

18
19 THE COMMISSIONER: Ms Reece, I'm sorry, I have a question
20 to ask and I should ask it before you begin, I think.

21
22 MS REECE: Certainly, Commissioner.

23
24 THE COMMISSIONER: Q. Ms Quartermain, yesterday, you --

25
26 MS REECE: Commissioner, I might just read the final
27 digits of that document so the document can be recorded.

28
29 THE COMMISSIONER: I'm sorry, I stopped you. Go ahead.

30
31 MS REECE: It is 0027.0001_R] thank you, Commissioner.

32
33 THE COMMISSIONER: Q. Yesterday, Mr Hickey asked you
34 whether you had - put to you, rather, that you had never
35 been reprimanded for making a suggestion or asking
36 a question, and you responded that you have never been
37 reprimanded, but you bring things up and then - and things
38 can take a bit longer, or words to that effect. You said
39 that your belief that you referred to in paragraph 17 of
40 your second statement that if you challenge or ask
41 a question made by management, you put a target on your
42 back, that that belief or perception was based upon
43 perceptions of various events over time. Do you remember
44 saying that?

45 A. Yes.

46
47 Q. Can you help me with what various events there were

1 that led you to that perception, or any of them?

2 A. So if I give you an example, perhaps, I've, since
3 2015, I think, applied for some flexible work arrangements.
4 Most recently when I applied for one, I went through all
5 the right channels and the executive director signed it
6 off, no questions asked, approved, and returned it to me in
7 a timely manner. Previously, I've had the complete
8 opposite of that, that I've waited up to 60 days when our
9 HR manuals say that a response should be delivered within
10 21 days. I've waited up to 60 days to hear anything. I've
11 had to chase it up multiple times. When I've received it
12 back it's been partially approved, partially refused with
13 lots of different reasonings and things in there, and then
14 I have had to renegotiate, and I feel like sometimes things
15 seem to be made difficult for me because I have questioned
16 things over time, not necessarily had bad responses, like
17 with Cathie's emails, they're always very polite and very
18 matter of fact, and it's more the fact that I've questioned
19 the managing scientist. I get the feeling that she
20 potentially doesn't like that - and this is just my feeling
21 and my perception of that. And then I feel that's somewhat
22 in a way with my flexible work arrangement kind of
23 a punishment for me questioning authority and that's just
24 a feeling that I've had over the years.

25
26 Q. And in relation to the delayed response to your
27 request for a change in working hours, who had to authorise
28 that on that occasion?

29 A. So I submit my - I discuss my application with my line
30 manager. I then submit it to - I've been sending it to my
31 line manager, Justin, Cathie and the executive director,
32 because all of those people need to lay eyes on that
33 document at some point. It's my understanding that the
34 executive director is the person who signs my final
35 documentation with the authority, or approves, rejects,
36 refusal, whatever, but that is done as a result of
37 consultation with forensic DNA management around
38 departmental requirements and what - whether this
39 arrangement will fit well with what the department requires
40 of me as an employee.

41
42 So when I previously have spoken - I've applied for
43 a flexible work arrangement and spoken to John Doherty
44 about it, he has said to me that he would recommend I put -
45 I be very explicit in what I'm asking for in my request,
46 because he had seen other requests get knocked back,
47 effectively, because - or portions of them refused because

1 the applicant wasn't explicit in what their request was.
2 So that's just been a big thing for me, and it's ongoing,
3 because every six months I've had to - since 2015, I've had
4 to reapply for a new flexible work arrangement and it's
5 just an ongoing thing that continues to happen.
6

7 Q. For new arrangements or to renew the old arrangements?

8 A. At the start it was - because I wasn't allowed to
9 start work before 7 o'clock, I was willing to come back
10 from - I had a period of leave and I wanted to come back
11 full time, but I had to drop my children at school every
12 second week every day, so in order for me to be able to
13 come back full time, I would need to start work at 6.15, in
14 order to be able to finish in time to pick them up, and
15 there was a time there that I was refused to do that. So
16 for that 12-month period, I effectively lost five hours of
17 pay and five hours of work per fortnight because I wasn't
18 allowed to start work prior to 7am.
19

20 Q. How did you lose the pay?

21 A. By not being able to work the hours.
22

23 Q. I see. So you had to quit early to pick up your
24 children?

25 A. Yes.
26

27 Q. So you were docked that pay?

28 A. Yes. So effectively, even though I was willing to
29 work a 38-hour work week, I was only working a 32- or 33- -
30 32-point-something-hour work week because of my - the
31 department's inability, reporting team's inability to start
32 prior to 7am.
33

34 Q. So rather than let you start at 6, you were compelled
35 to choose to cut your work hours and do less work?

36 A. Yes.
37

38 Q. And whose decision was that?

39 A. I can't remember the executive director at the time.
40

41 Q. That's the ultimate - so I take it Mr Howse was then
42 in the position above you, oh, Ms Rika, of course,
43 Mr Howse, Ms Allen and then the executive director of the
44 day who has the final official obligation to decide one way
45 or the other?

46 A. Yes.
47

1 Q. And you said more recently you got a quick response
2 from the executive director. How recently was that?

3 A. It was - I think it was in May. In May I applied for
4 a flexible work arrangement, which is still working
5 full-time hours, just a portion of my time from home, and
6 I sent that through the proper channels and Lara Keller
7 approved that in its entirety, and actually approved it for
8 12 months, which is the first time I've had a flexible work
9 arrangement approved for 12 months rather than six.

10
11 THE COMMISSIONER: Anything arising out of that,
12 Mr Hickey?

13
14 MR HICKEY: No, thank you, Commissioner.

15
16 THE COMMISSIONER: Anyone else?

17
18 MR HUNTER: No.

19
20 MS REECE: Q. Ms Quartermain, as a professional woman,
21 why is it important to you to have flexible work
22 arrangements?

23 A. It's important for me because I want to maintain my
24 career. I want to maintain - I want to be current in my
25 job and be present. I want my children to see that I go to
26 work and I do a good job and I love what I do, and I talk
27 to them about that. I want to be able to balance being at
28 home and seeing them while they're little with being able
29 to come to work and enjoy my job and spend time with my
30 work colleagues and do the tasks that are important at
31 work. But I want that balance, it's important. To be able
32 to spend time with my family while they're still in primary
33 school, it's such a short period of time that that lasts,
34 that when they start high school, that time is passed, so
35 I'm trying to maximise the time I get to spend with my
36 family while they are young but also be able to work full
37 time as a forensic scientist, because that's what I want to
38 do.

39
40 Q. Do you feel you are supported in that in your
41 workplace?

42 A. More so recently, since Lara Keller has been the
43 acting executive director, and I've always had the support
44 of Kylie Rika, and most recently now that I'm in Sharon's
45 team, I've got Sharon's support as well with those flexible
46 work arrangements.

1 Q. Was May the first time you spoke to Lara Keller about
2 flexible work arrangements?

3 A. No. I've spoken to Lara prior to that about flexible
4 work arrangements and the concerns and issues that I have
5 had in the past. May was the first time that I'd submitted
6 a flexible work arrangement to her and had it approved for
7 12 months.

8
9 Q. Had you previously submitted applications via other
10 channels which ultimately led to her?

11 A. There was one previous flexible work arrangement,
12 which must have been in the November of the year before
13 when Lara had not been there long, that I submitted to
14 her - as per the previous executive director's
15 recommendation, I submitted my application to my line
16 manager, Justin, Cathie and the executive director, because
17 all of those people needed to be involved in that process.
18 So that was the November prior.

19
20 Q. And what, if anything, was Cathie's response to that
21 application?

22 A. As far as I could tell, Cathie didn't have anything to
23 do with it. Cathie's signature is never on any of my
24 flexible work arrangements; it's always the executive
25 director who signs them off.

26
27 Q. Did you at any stage take concerns about your
28 interactions with Cathie about flexibility to Lara Keller?

29 A. Yes.

30
31 Q. And what was that?

32 A. I discussed a few issues with Lara around flexible
33 work arrangements and the fact that there are quite a few
34 of us in reporting that have them and it's quite stressful
35 to have to go through this process every six months, having
36 to justify again why we consider them to be necessary and
37 having to submit them and then wait for a response, not
38 knowing what that response will be. And Lara's opinion on
39 that to me was, "I believe that management should support
40 their staff, they should trust their staff, they should go
41 out of their way to do whatever they can to meet the needs
42 of the business and meet the needs of the employee."

43
44 Q. So just on that point of meeting the needs of the
45 business, if, for example, you are giving evidence in court
46 one day, who do you actually liaise with about giving
47 evidence in court? Who is your direct contact?

1 A. My --

2
3 THE COMMISSIONER: You mean outside the lab?

4
5 MS REECE: Yes, sorry.

6
7 THE WITNESS: Oh, outside the lab?

8
9 MS REECE: Q. Yes.

10 A. I liaise - well, we have a liaison unit on campus, so
11 they're not part of forensic DNA analysis, but my
12 communication is with them. So anyone - like our
13 statements that we issue have a phone number at the bottom,
14 and that phone number takes anyone who has any inquiries
15 about witnesses or court or anything to that liaison unit
16 and then they liaise with us around court requirements.

17
18 Q. So those communications don't come via Kylie Rika, for
19 example, or anyone in that chain of management upwards?

20 A. Not usually, no. Only if, say, for example, I'm on
21 leave and the day I come back from leave I'm required for
22 court, then Kylie might have to step in and do something
23 about that or Sharon might have to step in and do something
24 about that.

25
26 Q. Mr Operator, if you could show that email I read the
27 reference out for before. Yes, it's on the screen,
28 thank you. [WIT.0012 .0027.0001].

29
30 Ms Quartermain, this email is from Justin Howse, you
31 are included in the address list, and it's from August of
32 2016. He talks about a few instances which have been
33 brought to his attention where the collective agreement on
34 statement wording hasn't been used, and it's not about the
35 DIFP process, obviously, it's long before that. It's about
36 the wording for STRmix statements?

37 A. Yes.

38
39 Q. He goes on to talk about the fact that there were many
40 reasons for a standardised approach and apart from the
41 important point for standardisation, it was to help any
42 scientist to pick up any statement at any time and be
43 comfortable with the wording and to help reviewers
44 efficiently perform their task with minimal disagreement.
45 You understood from that, didn't you, that there was
46 a requirement that there should be a standard use of
47 language across statements provided to court?

1 A. Yes.

2
3 Q. And what freedom did you feel you had to derivate or
4 deviate from that standard wording in your statements?

5 A. Limited, if any. I - the majority of the reporting
6 team, there might be very minor wording differences between
7 us, and very minor, as in sometimes people use "thus", and
8 I don't use "thus", but other than that, we all stick to
9 the same wording.

10
11 Q. You raised your concerns about --

12
13 THE COMMISSIONER: Are you going to tender that email?

14
15 MS REECE: I think it may already be - it was tendered
16 during Ms Rika's evidence, Commissioner.

17
18 THE COMMISSIONER: All right, thanks. Don't worry.
19 That's all right.

20
21 MS REECE: I do have the reference, though, which may be
22 useful if the transcript is being looked at in the future.
23 It is - I will just get the exhibit number to Kylie Rika's
24 statement, I'm sorry, I don't have a note of it.

25
26 THE COMMISSIONER: One of your helpers can do that while
27 you carry on.

28
29 MS REECE: Thank you, I will put it on the record at the
30 conclusion of my re-examination.

31
32 Q. You were asked your concerns about the DIFP process,
33 or that you had raised - you gave evidence that you had
34 raised your concerns about the DIFP process over a number
35 of years, and you were questioned yesterday about some
36 emails which you had sent. The first of those was in 2019,
37 and then you had also written in 2020 and 2021?

38 A. Yes.

39
40 Q. If, Mr Operator, we could put up [FSS.0001.0051.5008].

41
42 Ms Quartermain, you were shown this document by
43 Mr Hunter yesterday. It is just being redacted for contact
44 details now. The email was sent by you to Kylie but copied
45 to Justin Howse, Allison Lloyd and Sharon Johnstone?

46 A. Yes.

1 Q. And you can see, can't you, that while you didn't send
2 it to Ms Brisotto, that Mr Howse appears to have sent it to
3 her?

4 A. Yes.

5
6 Q. The day after you sent it, so 8 March 2019?

7 A. Yes.

8
9 Q. It was suggested to you in cross-examination that you
10 could have taken your concerns about the DIFP process to
11 the quality manager, the quality senior scientist and to
12 the managing scientist. Do you recall that line of
13 questioning?

14 A. Yes.

15
16 Q. If I can take you to your understanding of the
17 organisational structure, Ms Brisotto is the team leader of
18 the evidence recovery and quality teams?

19 A. That's correct.

20
21 Q. She is essentially Mr Howse's equivalent, but he
22 oversees the analytical and the reporting teams?

23 A. He oversees the reporting and intelligence reporting
24 teams.

25
26 Q. I'm sorry. I will just refresh my memory,
27 I apologise. I see, so analytical is actually under
28 Ms Brisotto as well, my mistake,

29 A. Yes.

30
31 Q. So when Mr Howse was written to in 2019, when you
32 copied him into that, he was your team leader, and he was,
33 relevantly, the team leader of analytical?

34 A. Reporting.

35
36 Q. I'm sorry, reporting?

37 A. Yes.

38
39 Q. And he sent it on to the team leader of evidence
40 recovery, analytical and quality?

41 A. Yes.

42
43 Q. The quality manager, who does she report to?

44 A. I think she reports to Cathie.

45
46 Q. I'll just take you to --

47 A. Oh, no, sorry, the quality manager reports to Paula.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

Q. And is there also a quality senior scientist?
A. Sorry, the quality senior scientist reports to Paula. Sorry, I'm getting my terminology confused.

Q. So the quality senior scientist is Kirsten Scott?
A. Kirsten Scott, yes.

Q. And she reports to Paula?
A. Reports to Paula, yes.

Q. And then Helen Gregg is the quality manager?
A. Yes, sorry, Helen Gregg, yes, and I don't know who Helen reports to.

Q. She is not within the lab itself; she sits outside of the lab?
A. In her normal role she does, yes.

Q. It was suggested to you that you could have taken your concerns in relation to the DIFP process to any one of those people. Can you tell the Commissioner why, when you had raised it, 2019, 2020 and 2021, why you didn't take it further than that?
A. Well, when I raised these issues - we're divided into teams so that we - our area of expertise is within this particular field, and so my line manager and Justin are the people who, in my opinion, would understand why this is a concern to me.

I don't know, with respect to, for example, Paula's role or Cathie's role, if they still write statements or review them or do any case management. I don't know if they do or not. But I know that my team leader and my line manager both do, so those people are the ones, in my opinion, who would understand my concerns, and that was why I had brought it to Justin's attention a couple of times. And also I know that Justin is the person, as well as Cathie, that has the contact with police. So within reporting, we don't really contact police, like I said yesterday, for any particular reason, and these types of concerns are things that I believed if I brought to the attention of Justin that he would then be able to take up with whoever he saw fit to take that up with as a concern.

Q. And in fact, in 2021, in your email, you were taken to it yesterday, you proposed to him a piece of work that

1 could be done with these samples to see, essentially,
2 whether they should stop being processed in that - or stop
3 being triaged out like they were being?

4 A. Yes.

5
6 Q. And it was suggested to you in cross-examination that
7 you could have, for example, raised an OQI --

8 A. Yes.

9
10 Q. -- in relation to this issue. What would the
11 procedure be for an OQI and who would have to approve it in
12 order for it to go ahead?

13 A. I would have had to have raised it to Justin and
14 Cathie, but probably also would have had - I've only ever
15 raised one or two OQIs in my time there, so I'm not -
16 I can't remember the process exactly, but I would have had
17 to have raised it with Justin and Cathie and potentially
18 added my line manager in so that it was visible to her as
19 well to see what my concerns were.

20
21 Q. And why didn't you do that?

22 A. I just - well, firstly, an OQI isn't really like an
23 email that you can back and forth about something and have
24 a trail of information to go back to. It's not as instant
25 as what an email response can be, and also, when you raise
26 things with - within an OQI, nothing needs to change, it
27 just needs to be acknowledged that that has been raised,
28 which to me is effectively just - just as well put in an
29 email, so I've just stuck with emailing for visibility to
30 all the people that need to see it, and then any responses
31 I get I can forward on to my team if I think it's relevant
32 to them. So I'm just, I guess, more comfortable with
33 liaising with people in that way.

34
35 Q. You were also asked why you didn't put a comment on
36 the SOP. Do you want to explain why you didn't do that?

37 A. Well, a comment against a SOP effectively doesn't have
38 to be incorporated into a SOP, and it doesn't have to be
39 dealt with quickly either. Sometimes, SOPs are only
40 reviewed every year or so, and so you can record a comment
41 against a SOP and it can sit in the "Comments" section of
42 the SOP until it's up for review again, which might be, you
43 know, 10 months' time. So in order to get something
44 brought to the attention of the people that are relevant in
45 a timely manner, again, that's why I like to do - write
46 emails to people and then get responses so I can refer back
47 to those if I need to.

1
2 Q. You, in your 2019 email - and I apologise,
3 Mr Operator, if we could just go back to it, it's the
4 [FSS.0001.0001.5008] email, thank you. Further down the
5 page, I think it's on the next page, in fact - just at the
6 top there:

7
8 *We sign our statements in good faith, and*
9 *they state that would we could be liable*
10 *for prosecution if we are stating anything*
11 *we know is false.*

12
13 You go on to say:

14
15 *Saying "DNA insufficient for further*
16 *processing" when a quant value is near*
17 *that ... figure I believe, based on my*
18 *recent experiences, is false.*

19
20 So you raised that concern in 2019 and then again over
21 these three years, the last occasion of which was 2021.
22 With the response that you received, why didn't you then
23 escalate it further?

24 A. Well, this year I did actually bring it to the
25 attention of our executive director. I discussed it with
26 her. I gave her an example of a specific case that I'd
27 worked on where I'd gotten some good useable DNA profiles
28 from DNA insufficient samples. And I told her that I had
29 taken it upon myself to rework these samples at statement
30 stage when I realised that they were currently being called
31 DNA insufficient because I wasn't comfortable reporting
32 that in my statement when I knew that I had submitted some
33 samples and had gotten great DNA profiles for them, samples
34 that had fallen within that quant range.

35
36 Q. So you spoke to Justin and you spoke to Lara?

37 A. Yes.

38
39 Q. Can you explain to the Commissioner why you didn't
40 speak to Cathie Allen about it?

41 A. I don't really feel comfortable approaching Cathie,
42 and the times when I have had conversations with her, and
43 I can think of a specific example, it wasn't an easy
44 conversation nor was it pleasant. Lara comes across as
45 a very approachable person, very willing to discuss any
46 issues, to the point where she will put her mobile phone
47 number on emails and say "Please call me if you have any

1 concerns about anything." I've always felt comfortable
2 raising things to Justin, for the same reason, he's just an
3 approachable person, and I've always been happy to deal
4 with him. It's just unfortunate that he didn't take my
5 suggestion in this instance to be able to do some further
6 work on those samples.

7
8 Q. You were asked some questions about this comparison
9 between this email or the types of messages you were
10 sending to Mr Howse about DIFP. I won't paraphrase it,
11 I will take you to some questioning by Mr Hickey yesterday,
12 which is at page 963 of the transcript, at line 37. You
13 were being asked about paragraph 59 of your statement,
14 where, when talking about that case, so the rape case with
15 the five samples which ultimately produced two useable
16 profiles, where you said:

17
18 *The classification of such a sample --*

19
20 So referring to where sperm had been present and there were
21 DIFP results:

22
23 *The classification of such a sample as "DNA*
24 *insufficient for further processing" is, in*
25 *my view, unacceptable from a scientific*
26 *perspective.*

27
28 Do you remember that part of your statement?

29 A. Yes.

30
31 Q. You were then asked whether what you communicated to
32 Mr Howse, or it was suggested to you that:

33
34 *What you communicated to Mr Howse in 2019*
35 *was not communicated in a binary way - that*
36 *is to say, so that he could understand you*
37 *regarded it as entirely unacceptable*
38 *scientifically, was it?*

39
40 Do you recall being asked that question?

41 A. Yes.

42
43 Q. When you wrote to Kylie Rika and forwarded or copied
44 it to Mr Howse, when you said "saying DNA insufficient for
45 further processing, when a quant value is near that figure,
46 I believe, based on my recent experiences, is false", what
47 did you mean to convey about whether that was acceptable

1 scientifically?

2 A. That it wasn't acceptable.

3

4 Q. Was what you were saying then any different to what
5 you said in paragraph 59 of your statement?

6 A. Sorry, can I just --

7

8 Q. Yes, of course.

9

10 THE COMMISSIONER: Which paragraph?

11

12 MS REECE: Paragraph 59, Commissioner.

13

14 THE WITNESS: I'm effectively saying the same thing, just
15 using different words.

16

17 MS REECE: Q. Just a really quick question about calling
18 in sick. You will be glad to know, I too only have a few
19 questions left for you. You spoke yesterday in your
20 evidence about the fact that you needed to call in and that
21 if you didn't - this was under cross-examination - that you
22 would receive emails reminding you or telling you,
23 notifying you, that you hadn't done the right thing. Was
24 there anything else done as a result of people failing to
25 call in at the right time?

26 A. I am not certain of this but I think there's
27 a register kept of such instances.

28

29 Q. Do you know what that register is called?

30 A. I think I've heard the phrase "non-conformance",
31 something like that, non-conformance register. Again, I'm
32 not certain and I don't have any details on that, that's
33 just through overhearing discussions over time.

34

35 Q. Just some final questions, then, Ms Quartermain. You
36 were asked some questions yesterday about your practical
37 knowledge of microconning - that is, whether you have
38 actually done it, whether you have carried it out. Have
39 you ever carried out any of the tasks in evidence recovery?

40 A. Yes.

41

42 Q. That's when you first started at FSS?

43 A. Yes.

44

45 Q. Do you now carry out those tasks on a regular basis?

46 A. No.

47

1 Q. Do you perform quantitation?

2 A. No.

3

4 Q. Do you perform amplification?

5 A. No.

6

7 Q. Who does those tasks?

8 A. The analytical team.

9

10 Q. And the evidence recovery team --

11 A. And the evidence recovery team.

12

13 Q. -- do the evidence recovery tasks?

14 A. Yes.

15

16 Q. Do reporters, as part of their job, do any of those
17 processing jobs?

18 A. No.

19

20 Q. Is it the case that some of you have done those tasks
21 previously but you've moved into the reporting roles?

22 A. Yes.

23

24 Q. And do you need to carry out microcon to know its
25 significance in the processing of DNA samples?

26 A. No.

27

28 Q. Just a final question, then. You were asked about
29 your evidence that you feel that if you challenge or ask
30 a question about a decision made by management, you have
31 a target on your back. You were then asked why you've
32 never told Justin or Cathie that you felt this way. Can
33 you tell the Commissioner why you've never told Justin or
34 Cathie that you feel that way about your workplace?

35 A. I think I would come across crazy if I was to approach
36 someone and say "You make me feel like I've got a target on
37 my back." I'll discuss that with people who I'm
38 comfortable with, with people who I trust, because that's
39 a personal feeling and it's not something that I'm going to
40 discuss with people that I don't have that type of
41 relationship with. So I wouldn't take it to Cathie or
42 Justin and say those words because I don't feel comfortable
43 having those types of discussions with them.

44

45 Q. Just a final question now, I promise, I think I've
46 said that three times. You've given evidence that you

47 raised your DIFP concerns with Justin and a number of other

1 colleagues, also with Lara Keller. You've also given
2 evidence that you raised it with Inspector David Neville?
3 A. Yes.

4
5 Q. Why did you feel you needed to raise it with
6 David Neville?

7 A. It is my understanding that the contact point that
8 Inspector Neville has with DNA analysis is Cathie and
9 Justin, and that those of us who are doing the groundwork
10 of interpreting and reviewing DNA profiles don't really
11 have any opportunity to or for any reason to just have
12 general discussions in the way that potentially Justin and
13 Cathie can have with the police.

14
15 So this was important enough to me that I was speaking
16 to one of his staff who asked if I could - if she could
17 pass my number on to Inspector Neville, because she felt
18 that he also has the best - we have similar interests with
19 respect to we - Inspector Neville and I both want the best
20 DNA profile that can be obtained from a sample, and that
21 the information that I provided to her would be potentially
22 of interest to him.

23
24 MS REECE: I have now finished, Ms Quartermain.

25
26 I understand that the email that I referenced earlier,
27 Commissioner, which was the 2016 email from Justin Howse,
28 which is [WIT.0012.0027.0001_R], has not yet been tendered.
29 It should have been, I understand, in the evidence of
30 Ms Rika. I tender that email.

31
32 THE COMMISSIONER: Is that the one on the screen now?

33
34 MS REECE: Yes. There is a redacted version - no, I'm
35 sorry, that's not it.

36
37 THE COMMISSIONER: That's not it, is it?

38
39 MS REECE: I think I read the wrong number into the
40 record, I apologise.

41
42 THE COMMISSIONER: The one on the screen is the one, is
43 it? The one on the screen is the one that you want?

44
45 MS REECE: It's the wrong one, sorry. That's a different
46 document. So the number is [WIT.0012.0027.0001_R].
47

1 THE COMMISSIONER: That's the one you want tendered?

2

3 MS REECE: Yes.

4

5 **EXHIBIT #64 EMAIL FROM JUSTIN HOWSE DATED 5 AUGUST 2016,**
6 **BARCODED [WIT.0012.0027.0001_R]**

7

8 MS REECE: Commissioner, would it be convenient to break
9 for morning tea?

10

11 THE COMMISSIONER: Certainly.

12

13 MS REECE: I understand Ms Hedge will open --

14

15 THE COMMISSIONER: All right. We will resume at 20 to 12.

16

17 MS REECE: I'm sorry, she will take Ms Keller after the
18 adjournment.

19

20 THE COMMISSIONER: Yes, 20 to 12.

21

22 **<THE WITNESS WITHDREW**

23

24 **SHORT ADJOURNMENT**

25

26 THE COMMISSIONER: Yes, Ms Reece?

27

28 MS REECE: Thank you, Commissioner. I omitted to tender,
29 this morning, the two emails which had been provided
30 overnight and which were referred to by Mr Hickey in his
31 further cross-examination of Ms Quartermain.

32

33 THE COMMISSIONER: Yes, do you want to identify them?

34

35 MS REECE: I should have identified them. They don't have
36 a document number at the moment. They are two PDF
37 documents.

38

39 THE COMMISSIONER: Yes, what are the dates of them, from
40 whom to whom and the date? Or we will attend to it later.

41

42 MS REECE: Sorry, Commissioner. I do have them. The
43 first one starts with an email from Alicia Quartermain to
44 Cathie Allen on Friday, 20 November 2020, and the second
45 chain starts with an email from Alicia Quartermain to
46 Cathie Allen on 25 November 2020.

47

1 THE COMMISSIONER: That's the first email, is it?

2
3 MS REECE: The first email in time that, in fact, goes in
4 that first document, is an email from Cathie Allen, which
5 is somewhat before, it is in early November. It doesn't
6 have a date. But the documents, if they need to be
7 identified, both commence in the way that I have just
8 explained, and they are saved as CJA email 1 and CJA
9 email 2.

10
11 THE COMMISSIONER: Exhibit 65.

12
13 **EXHIBIT #65 EMAILS SAVED AS CJA EMAIL 1 AND CJA EMAIL 2**

14
15 THE COMMISSIONER: Yes, Ms Hedge?

16
17 MS HEDGE: Commissioner, I call Angelina Keller, spelt
18 K-E-L-L-E-R.

19
20 <ANGELINA KELLER, sworn: [11.47am]

21
22 <EXAMINATION BY MS HEDGE:

23
24 MS HEDGE: Q. Your name is Angelina Keller?

25 A. Yes.

26
27 Q. You are currently employed as a scientist in the
28 reporting team by Queensland Health; is that right?

29 A. Yes.

30
31 Q. At the Forensic and Scientific Services laboratory?

32 A. Yes.

33
34 Q. Thank you. You provided a statement to the Commission
35 and I will just have that brought up on the screen. It is
36 [WIT.0003.0435.0001_R]. You recognise that as your
37 statement?

38 A. Yes, I do.

39
40 MS HEDGE: Thank you. I tender that, Commissioner.

41
42 **EXHIBIT #66 STATEMENT OF ANGELINA KELLER, DATED 6 OCTOBER**
43 **2022, BARCODED [WIT.0003.0435.0001_R]**

44
45 MS HEDGE: Q. Do you have a copy of that that has the
46 exhibits attached? We can provide one to you. Oh, that's
47 in front of you there if you do need to refer to it?

1 A. Okay, thank you.

2
3 Q. Can we zoom in on this page, on paragraph 5, please,
4 paragraphs 4 and 5. We have just established that you are
5 a scientist at the DNA laboratory. And in paragraph 4,
6 those are the duties of a reporting scientist,
7 interpretation, reporting and reviewing results?

8 A. Yes.

9
10 Q. And giving evidence in court?

11 A. Yes.

12
13 Q. You joined FSS in 2004; is that correct?

14 A. Yes, that's correct.

15
16 Q. And between 2004 and 2010, worked in a number of
17 reporting teams that we see there, the analytical team, the
18 volume crime team and the intelligence team?

19 A. Yes, that's right.

20
21 Q. But from 2010, you've worked in the reporting team?

22 A. Yes.

23
24 Q. Can I ask you to speak a little louder for me just so
25 I can hear you clearly?

26 A. Yes.

27
28 Q. We see at the bottom of this paragraph that in 2006
29 you applied for and were selected to be trained in all
30 aspects of bones as part of the skeletal remains project.

31 A. Yes. That was the beginning of my journey with bones.

32
33 Q. And can you tell us the types of occasions on which
34 your laboratory would deal with a bone sample?

35 A. So bone samples come to our laboratory for testing,
36 sometimes through litigated cases, but mostly it will come
37 from a coroner who would like to establish DNA
38 identification through testing of unknown skeletal remains;
39 also, disaster victim identification incidents, so such
40 as --

41
42 THE COMMISSIONER: Q. Disaster victim identification?

43 A. Yes. So if a plane crashes and there is a number of
44 individuals on board, normally more than three, or three or
45 more than three, not always, though, it depends on the
46 amount of fragmentation that occurs, so this is established
47 by the coroner as to whether or not it is a DVI incident,

1 and then testing will proceed through DNA if it's deemed
2 necessary, and it's a very important function performed by
3 our laboratory.
4

5 Q. So these are, say, aeroplane crashes where the impact
6 is so great that it's not possible to identify people just
7 by looking at them to see who they are, so what remains is
8 for you to look at bones that are given to you so that you
9 can then identify from the - you can extract DNA from bones
10 and, or somebody - the bones are worked upon so that in the
11 end a profile can be obtained from the bone and an
12 identification can be made?

13 A. Yes. And sometimes that can be tissue, but it
14 depends, and if a plane does crash, every plane crash is
15 different. I've worked on 10 DVIs now since 2006, and
16 every DVI is different. It doesn't matter if it is a plane
17 crash, they are all different. There can be car crashes,
18 floods, fires, explosions, but if we have a plane go down
19 tomorrow with 300 individuals, you can imagine it would be
20 a massive task to --
21

22 THE COMMISSIONER: Yes.
23

24 MS HEDGE: Q. You spoke of three main situations, DVIs
25 was the third. The second was coronial investigations,
26 where a coroner asks for assistance from the DNA
27 laboratory; is that right?

28 A. Yes.
29

30 Q. And can that be true both in recent cases, but also in
31 cold cases or very old cases; is that fair?

32 A. Yes. The laboratory has tested some remains this
33 year, skeletal remains, that have been aged at
34 approximately 100 years old by a forensic anthropologist -
35 that's not my role but that was from the forensic
36 anthropologist, and it was an approximation.
37

38 So we can have 100-year-old bones or older, we can
39 have 50-year-old remains. It just depends on the remains
40 that have been located by - sometimes it's general public
41 that will find the remains or it can be police. It's
42 highly variable, but I have worked on a number of cases,
43 cold cases, that involve 20-year-old remains that
44 eventually we were able to establish their identification
45 through the coroner's assistance with DNA testing.
46

47 Q. You've mentioned that your work is very important, in

1 particular for missing persons. How does the
2 identification of a bone or the DNA in a bone assist in
3 that process?

4 A. So if remains are located, they come to our laboratory
5 and the coroner will have to deem that DNA testing is
6 necessary - we need appropriate permissions. These remains
7 are then profiled for a DNA profile and if it's a
8 believed-to-be-unknown deceased person, we may receive
9 reference samples from the family that are still with us to
10 make a comparison to the DNA profile that is obtained, and
11 hopefully we can actually give some statistical weighting
12 around a possible familial association between the
13 reference samples and the unknown remains.

14
15 Then we provide a written statement to the coroner and
16 then he will, or she will, accept the DNA report, which
17 will be taken into account often with other information
18 that we're not privy to, to establish identification or
19 not.

20
21 Q. That might mean that a missing persons case is
22 resolved or solved; is that right?

23 A. Yes, and it could be any number of - it could be
24 a murder, it could be just someone that accidentally lost
25 their life at some point. I mean, that's not up to us to
26 establish that; we just obtain the skeletal remains and do
27 the best with the testing that we can possibly do.

28
29 Q. But you're aware that that's the consequence of your
30 work?

31 A. Yes.

32
33 Q. And the first type of case you described was what you
34 described as litigated cases. Do you mean by that cases
35 going through the criminal justice system?

36 A. Yes, so sometimes we do bones for litigated cases.
37 They might know who that particular set of remains are
38 from, but because of decomposition - so they might have
39 been established through circumstantial, the coroner might
40 accept the identification through circumstantial or dental,
41 for example, another very important mode of identification
42 that we use in any sort of identification case.

43
44 So if identification is established through dental,
45 for example, then it's not necessary to establish
46 identification also with DNA and, therefore, the purpose of
47 profiling bones at that point is if we can't obtain a DNA

1 profile from blood, for example, because maybe it's been
2 six weeks up in north Queensland and decomposition is an
3 issue, then it will be DNA profiling from the bones that
4 will actually enable us to obtain a reference sample from
5 the known deceased person in that situation.

6
7 THE COMMISSIONER: Q. I see. To use in relation to
8 other samples for proof?

9 A. Sorry?

10
11 Q. So I think you said if you have remains where there
12 has been a dental identification or other forms, other
13 means of identification, you then take a DNA sample and
14 that sample can be used as a reference sample for
15 comparison purposes with other samples that are suspect?

16 A. That's right, sir.

17
18 Q. I understand.

19 A. Crime scene samples for that case. So essentially it
20 becomes a reference sample for the litigated case, the
21 bones. It doesn't happen often but it does happen.

22
23 THE COMMISSIONER: Yes.

24
25 MS HEDGE: Q. You also say in here what you were
26 trained, in 2006, in:

27
28 *... triaging of remains at autopsy,*
29 *evidence recovery from bones as well as*
30 *other post-mortem samples, and*
31 *interpretation, reporting and reviewing of*
32 *DNA results ...*

33
34 Is it fair to say that that is a wider range of skills that
35 you have than reporting scientists generally exercise with
36 respect to crime scene samples and other samples, non-bone
37 samples?

38 A. Yes, it's a specialised field and I have a real
39 passion for it, to be honest. It's something I really love
40 and I feel that being able to help people that are very
41 distressed or have suffered immensely is such an important
42 role that we play in our jobs.

43
44 I mean, I'm not saying that any case is more important
45 than any other, but I have a real passion around trying to
46 help people that have lost their loved ones or someone's
47 missing and we don't know what's happened or - just trying

1 to bring some sort of closure, and I know that has a lot of
2 meanings around it, that word, but to actually tell
3 a family that that person that went missing 10 years ago,
4 we've given a report to the coroner, and the coroner can
5 tell them, "We know what happened, and this is what
6 happened, and now you can have a funeral."

7
8 Q. And your skills and expertise range across what might
9 be done in both the evidence recovery lab, the analytical
10 lab and the reporting area of the general case flow within
11 the QHFSS lab; is that right?

12 A. I would have to say I did work in the analytical
13 section when I first started working in 2004, and I learnt
14 all of the general processes for extraction and
15 quantification, amplification and capillary
16 electrophoresis, but since I left the analytical section
17 those competencies have lapsed, but I do have experience in
18 conducting those techniques.

19
20 Q. I understand you have those skills, but what I mean to
21 ask is you, as one person for a bone sample, would do tasks
22 that would be done in evidence recovery, analytical and
23 reporting, whereas right now, today, in the QHFSS lab,
24 there would not be generally one person doing all those
25 tasks for a crime scene sample?

26 A. No, that's right, yes.

27
28 Q. There would be three sets of people doing tasks on
29 a crime scene sample?

30 A. Yes.

31
32 Q. How many bone samples come in to the Queensland lab
33 a year?

34 A. That varies a lot. This year, we've had quite a few
35 bone samples come in to the laboratory, but there are -
36 sometimes there are years where there might only be one or
37 two or three cases that will come to the laboratory. If we
38 have a DVI, that is one incident, but we might have quite
39 a few bones to test as a result of that, but every DVI is
40 different. But generally it's not a lot of cases for
41 coronial identifications that come through the laboratory.

42
43 Q. Can we talk about another difference between bones and
44 general crime scene samples. As a matter of biology, would
45 the internal part of a bone have more than one person's DNA
46 in it?

47 A. No, you wouldn't expect to see more than one person

1 from a bone. So if my bones were tested, I would expect to
2 see a single-source DNA profile. A DNA profile will look
3 like a graph, essentially, each area of the DNA that we
4 test, you'll see two peaks represented on this graph. Now,
5 if I look at a graph and I see three peaks at one area that
6 we test, that will indicate to me there's a possible
7 mixture present.

8
9 THE COMMISSIONER: Q. So if we had what looked like
10 a blood sample and is a blood sample, it's possible that
11 that blood found at a scene has been contaminated by
12 somebody else's blood or by somebody else's saliva or by
13 touch?

14 A. Yes.

15
16 Q. And so when you test that sample, you wouldn't be
17 shocked to find a preponderance of the DNA from the blood
18 but also some other indication that there was more than one
19 source for the DNA, so it's not a single source, it's
20 multiple source; correct?

21 A. Yes.

22
23 Q. But with a bone, although I take it the exterior of
24 the bone might have multi-sources, you literally drill or
25 cut into the centre of the bone, into the interior of the
26 bone, to get your sample, and so by definition, you're
27 going to get a single source of DNA and, subject to
28 deterioration, a pretty good DNA profile; is that right?

29 A. Yes, we would expect to see single-source DNA profile.

30
31 Q. So what you are saying is that if you dig into a bone,
32 as you do, cut into a bone to get your sample, and you get
33 a profile showing it's multi-source, well, you know it's
34 not multi-source; it must be something else?

35 A. It indicates a problem.

36
37 THE COMMISSIONER: Yes. Sorry go ahead.

38
39 MS HEDGE: Q. So can I ask about a fourth difference
40 between the treatment of bones and the treatment of general
41 crime scene samples, and can I suggest - is this correct -
42 you have, as a scientist in the lab, interaction with
43 a wider range of other agencies than for an ordinary crime
44 scheme sample where the main interaction would be with the
45 police; is that fair?

46 A. Yes.

1 Q. So with bones you might deal with the coroner?

2 A. Yes.

3

4 Q. The mortuary?

5 A. Yes.

6

7 Q. Perhaps some emergency services if it's a DVI
8 incident?

9 A. Well, that tends to come through the police.

10

11 Q. And the police as well?

12 A. The police, yes. The - often the points of
13 communication can be, because we have a liaison unit and
14 they may also be in contact, but it's not unusual for the
15 mortuary potentially to get in touch on behalf of
16 pathologists; pathologists can get in touch with you; the
17 police who are associated with the coroner may get in
18 touch; for a DVI it's another set of police officers, but
19 again, the police officers; forensic odontologists, which
20 are the dentists that do a lot of the identification work -
21 I have quite a good working relationship with many of
22 those; and the police officers deal with circumstantial
23 aspects and fingerprints which can be very relevant to any
24 sort of coronial identification case. But essentially,
25 that is - that encapsulates more professionals than we
26 would normally encounter when we're doing routine casework.

27

28 THE COMMISSIONER: Q. So unlike your colleagues, other
29 colleagues, in the reporting section of FSS, you tend to
30 have a real case management role, I gather, in that you
31 speak to the investigators, you speak to other
32 investigators, the dental specialists and fingerprint
33 specialists, so you speak to a range of people across the
34 face of the investigation; whereas, as I understand the
35 evidence from your colleagues so far, they tend to see the
36 results, they don't tend, in general, to deal with the
37 investigators, although that does happen from time to
38 time - is that a fair summary of how it works?

39 A. Yes, I often will get a phone call, random phone call
40 to my desk, and it will be someone associated with an
41 identification case ringing for me for specific advice
42 about something, which is not so common with all of my
43 other cases.

44

45 THE COMMISSIONER: Yes.

46

47 MS HEDGE: Q. Can we turn to [WIT.0003.0435.0001_R

1 page 0009_R] of the statement, please. Here you are
2 saying, Ms Keller - can we zoom in on paragraph 61, please,
3 operator - that bones are a particularly specialised area
4 within the laboratory and this sets out in the middle of
5 this paragraph which staff members are currently trained to
6 either sample or report on bones. Do you see that there?

7 A. Yes.

8
9 Q. And so in terms of sampling bones and teeth, there are
10 five people, and one in training; is that right?

11 A. Yes.

12
13 Q. And in terms of reporting, there are four people,
14 including yourself?

15 A. Yes.

16
17 Q. And you are the only person who appears on both of
18 those lists - so you are the only person who can do the
19 full case management from receipt of bone right through to
20 reporting; is that fair?

21 A. Yes. I'm the only reporting scientist that actually
22 performs an evidence recovery task. There used to be
23 Ingrid Moeller as well. She also used to sample bones in
24 evidence recovery, but her competency has lapsed. And
25 there used to also be Timothy Gardam, who is no longer at
26 the laboratory, and he was an expert in skeletal remains
27 because he actually contributed to my training, so he's
28 been working on bones for longer than I had.

29
30 Q. And in terms of people who are currently at the
31 laboratory, are you and Dr Moeller the most experienced in
32 that group?

33 A. Yes.

34
35 Q. Now, this is a part of your statement where you set
36 out the process of dealing with the bone sample when it
37 comes in; is that right?

38 A. Yes.

39
40 Q. And you say there that an email is sent to staff who
41 are trained to see who has availability to sample?

42 A. Yes.

43
44 Q. And the purpose of that - of having a roster - is to
45 ensure that everyone maintains their competency, because
46 there are only a few samples a year?

47 A. Generally speaking, yes. I think this year has been

1 quite busy, to be honest.

2
3 Q. It's good, for competencies, to have more samples
4 coming in; is that right?

5 A. Yes.

6
7 Q. And could we zoom in on paragraph 62 and just deal
8 with this general process of bones before we get into some
9 of the concerns you've raised. This is the process that
10 scientists might be requested to assist a pathologist with
11 the selection of bones from a sample?

12 A. Yes.

13
14 Q. And can you tell us who pathologists are?

15 A. So the pathologists are the doctors who are
16 performing - very specialised doctors performing autopsies,
17 and as part of that, they may need to be sampling a bone or
18 having a bone sampled for DNA.

19
20 There are a number of pathologists who I regularly
21 have contact with or hear from in the workplace, but, yes,
22 at times they request your assistance to help with
23 selecting - whether it's a bone, sometimes it's a tissue -
24 that they're not sure about, but they just want to check in
25 to see what is the best sample that they can take to ensure
26 the best chance of obtaining a good quality DNA profile
27 without taking extra time.

28
29 Q. And they, the pathologists, would be doing their work
30 in the mortuary?

31 A. Yes.

32
33 Q. And the mortuary is on the same site as the lab at
34 Coopers Plains?

35 A. Yes.

36
37 Q. So once you have selected a bone or a tissue or teeth
38 sample, would the pathologist in the mortuary package that
39 in a way that is appropriate to transfer to the lab?

40 A. It gets transferred. So - and I must add that if you
41 touch teeth, you always need the blessing of the forensic
42 odontologist, because that's critical to their role. So we
43 don't routinely do teeth, unless that's sort of all there
44 is for DNA, and we have to make sure that the forensic
45 dentists have finished with the teeth, because that's
46 a very important way that identification can be
47 established.

1
2 But once we have clearance and the sample is taken,
3 a bone sample or tooth sample, it goes across to property
4 point, and then it's properly registered in the forensic
5 register system that we use, because forensic pathology
6 doesn't use the same system that we use, so it has to be
7 properly registered, and then it is transferred across to
8 DNA, provided all of the communications are in place to
9 indicate, yes, this bone needs to be tested for DNA,
10 because we don't want to be touching remains that are not
11 required to be tested.

12
13 Q. Now, if it's a bone, we see there at (b), you would -
14 if you were allocated to it with another sampling
15 scientist, you would take it to the bone room which is near
16 the evidence recovery laboratory?

17 A. Yes.

18
19 Q. And you would de-flesh it and remove the edges of it;
20 is that fair?

21 A. Yes, because the ends of the bone have been normally
22 cut in the mortuary environment and this has a lot of
23 biological contaminants present.

24
25 Q. And then in part (c) we see you would, from that inner
26 part of the bone that you have obtained, chisel it into
27 small fragments, and then use a cylinder to crush it?

28 A. Yes. The bone fragments are placed in sterile
29 cylinder with bungs and an impactor in the centre and it is
30 placed on a mount in a bone crusher with liquid nitrogen.
31 Then it is started, the machine is started, and the
32 impactor, which is inside the cylinder actually - it just
33 moves very quickly and crushes the bone, smashes the bone
34 into bone powder.

35
36 Q. And so liquid nitrogen makes it very cold?

37 A. Yes.

38
39 Q. And brittle?

40 A. Yes.

41
42 Q. So that when the impactor hits it it shatters into
43 lots of pieces; is that the idea?

44 A. Yes, that's right.

45
46 Q. Can we turn to the next page, please, the top of
47 page 0010, please, Mr Operator. So then you have a fine

1 powder of just that internal part of the bone; is that
2 right?

3 A. Yes, and I just want to say that for a long bone, for
4 example, it's like a hollow cylinder, and in the very
5 centre of the bone is where the marrow is, but we
6 actually - bone marrow tends to - it doesn't keep well, and
7 so we remove that centre. So the actual bone that we get
8 into is the - it's like around the circumference, but
9 internally of the circumference, if that makes sense.

10
11 Q. So it is the internal cylinder of the bone with the
12 external parts of the bone removed?

13 A. Yes.

14
15 Q. And the marrow from the centre removed also?
16 A. Yes.

17
18 Q. Then how much powder are we talking about?
19 A. It's 0.1 grams.

20
21 Q. A very small amount?
22 A. A small amount. That's the aliquot. We call it in
23 an --

24
25 Q. Just go to the one above, what you get out of the
26 bones, is that a little more than that?

27 A. Oh, no, sorry, that's - it depends on how much bone is
28 actually in the cylinder, but we normally store the stock
29 bone in a 5ml tube and then we take the smaller aliquots
30 from the 5ml tube and we call it stock bone.

31
32 Q. And the aliquots, which we see there are weighed out
33 and transported to the analytical team for processing, that
34 is the 0.1 grams that you just mentioned?

35 A. Yes, and we normally take four of those, so four
36 aliquots from the bone powder or stock bone.

37
38 Q. And then the analytical team do the actual processing,
39 extraction, quantitation, amplification and capillary
40 electrophoresis; is that right?

41 A. Yes.

42
43 Q. And then it comes back to you with an electropherogram
44 to interpret?

45 A. Yes.

46
47 Q. That bone-crushing equipment is obviously highly

1 specialised equipment that you use?

2 A. Yes.

3
4 Q. What about the chisel that you described? Is that
5 a specific DNA analysis tool?

6 A. It is a normal chisel that you can actually buy from
7 a hardware store, but it is prone to rusting, because it's
8 not titanium or it's not - it actually has components in
9 there that every chisel, normal standard chisel, would
10 have. But obviously we're using it in a laboratory so we
11 need to clean it properly, and it's dedicated equipment;
12 it's not - it stays in the bone sampling room and it
13 doesn't move anywhere else.

14
15 Q. We will come back to cleaning in a little while.
16 Could I turn then to paragraph 47, which is on page 0007_R,
17 please, operator. Here you say currently, you are seeing
18 mixed DNA profiles, multiple contributors, in bone/teeth
19 aliquots for a number of coronial cases?

20 A. Yes.

21
22 Q. What does that indicate to you, that you are seeing
23 a number of mixed profiles come out of bone or teeth
24 samples?

25 A. Well, it tells me there is a problem. We are not
26 seeing these mixtures in bones that - or teeth - that are
27 fresh. So fresh bones are ones that might be from
28 a recently deceased person, so there is still blood within
29 the bone; whereas if you find skeletal remains that are
30 50 years old, you are not going to be expecting to see
31 blood in those remains. It's going to be cells that
32 actually form the bone. So the mixtures that we are
33 seeing, these - the mixtures that are occurring are
34 happening to older bones or even bones that are not that
35 old, maybe around a year before they have been located.

36
37 Q. So when you say that fresh bones have blood in the
38 bone, that's in the actual cells of the bone, not in the
39 marrow?

40 A. Well, the bones actually have channels that run
41 through them, and that's where you have all the blood
42 vessels running into the bone. So I'm not talking about
43 marrow, I'm actually talking about the blood that runs
44 through these channels that are within the bone. Because
45 when you sample a bone and you have the bone powder, if
46 it's a very fresh bone, you will see that it's almost
47 a salmon colour, which would --

1
2 THE COMMISSIONER: Q. It is almost what?

3 A. Like a salmon colour. It almost indicates that you
4 can see that there is a bit of a red tinge to them, and
5 it's because it obviously includes some blood cells within
6 this bone powder.

7
8 MS HEDGE: Q. So when we talk about that cylinder of
9 bone, within the cylinder itself are channels for blood
10 vessels to go through; is that right?

11 A. Yes.

12
13 Q. And so when you crush that, you will actually crush
14 that blood vessel with the blood in it; is that right?

15 A. Yes.

16
17 Q. So then blood is part of the powder?

18 A. The sample, yes.

19
20 Q. Now, when did you first notice that you were getting
21 mixed profiles from bones?

22 A. It was a case in November 2020. We actually - I think
23 the first time I really noticed it, I - it didn't really
24 register as being - it was a problem, in my opinion,
25 however, we also - we sampled two different tissue types -
26 I think we had teeth and we also had bone - and they both
27 showed mixtures. So yes, I was aware of it, I thought it
28 was very unusual. It's the first time I can really
29 remember that happening. The chance of obtaining a mixture
30 from two different tissue types, I just didn't have a good
31 explanation at the time, but since then, it's happened and
32 more frequently, and now I'm at the point that we've got
33 a problem and we've got to find out what's going on.

34
35 Q. And before that, so before November 2020, starting in
36 2006 when you were trained in this --

37 A. Yes.

38
39 Q. -- in that intervening period, did you receive mixed
40 profiles from bone samples?

41 A. I never came across a case - we occasionally will see
42 contamination. I know with mitochondrial DNA testing it's
43 quite a common thing, because it's a very sensitive testing
44 process. What has happened since 2006 is our processes are
45 getting more and more sensitive, and so every now and then,
46 it does occur that we will see mixtures occurring.
47 However, with resampling or reprocessing or further work,

1 it was resolvable, so we could obtain a single-source DNA
2 profile in the end and we were able to report
3 a single-source profile to the coroner.
4

5 THE COMMISSIONER: Q. Because the extreme sensitivity -
6 am I right in this, the extreme sensitivity that has been
7 introduced with new technology over the last few years
8 means that you will get false peaks that might look like
9 a two source when it should be a single source, but that
10 successive testing will show when you see a range of
11 profiles that they are indeed false peaks and ought to be
12 ignored; is that what you mean or something else?

13 A. Well, yes, it could be a contamination in one aliquot
14 for the bone, but you may not see it in the other three, so
15 if you've got four aliquots, or you might go back to the
16 original bone that you sampled and go again. So I mean
17 resampling, recrushing, reprocessing, and then we wouldn't
18 see the contamination. So there would be --
19

20 Q. I see. So it really speaks of a contamination issue
21 rather than a stochastic artefact?

22 A. Yes, currently, I would say it's occurring a lot.
23 Previously, it would occur rarely, and I would say that
24 it - like you pointed out, as technology has changed over
25 the years, so I've been doing this for 16 years and there's
26 been new technologies brought in at different points, and
27 as things become more advanced, more sensitive, we are
28 seeing this more and more.
29

30 MS HEDGE: Q. So in the past, before 2020, mixtures were
31 rare and in your experience always resolvable to
32 a single-source profile?

33 A. Yes, in my experience. I don't know if any of the
34 other coronial DVI reporting scientists had problems, but
35 in my experience, no.
36

37 Q. Never had to report a mixed profile to the coroner?

38 A. No.
39

40 Q. And do you keep a - do you have an estimate of how
41 many bones you would have dealt with between 2006 and 2020?

42 A. A lot. I don't know. I would have to find out, if
43 you would like me to find out.
44

45 Q. Would you estimate more than 100 or less than 100?

46 A. It would be around 100, I would say.
47

1 Q. All right. Now, since 2020, have you kept
2 a spreadsheet of bone samples that you have dealt with?
3 A. I have been looking at the different cases that we've
4 been testing.

5
6 Q. Can we look at that, it is [WIT.0003.0454.0001_R] and
7 it is attachment AK-19 to Ms Keller's statement. Is this
8 your spreadsheet?
9 A. Yes.

10
11 Q. Could we zoom in on perhaps the top 10 rows or so,
12 operator. So this spreadsheet we see some dates on the
13 left-hand side there; is that right?
14 A. Yes.

15
16 Q. You see the "Date sampled" column for the moment?
17 A. Yes.

18
19 Q. So you started - is this all of the bones that you
20 sampled from the start of 2019 onwards?
21 A. No. These are cases that I'm aware that bone sampling
22 has occurred for, or teeth sampling as well.

23
24 Q. Since 2019?
25 A. Yes.

26
27 Q. So starting on 1 January 2019?
28 A. I believe so, this spreadsheet. Because - and as you
29 can see from 2019, yes, we weren't - we don't receive a lot
30 of cases.

31
32 THE COMMISSIONER: Q. So these are all of the bones
33 sampled at the lab since that date; is that what you mean?
34 A. In my awareness, yes. If I've missed some, that is
35 possible, but I was just really trying to track back
36 through the records that I could find, and so this is what
37 I've come up with.

38
39 MS HEDGE: Q. So it's not just ones that you did?
40 A. No.

41
42 Q. It's other ones that you are aware of or that you
43 could search for using the forensic register?
44 A. Yes.

45
46 Q. And so we see there in the "Tissue" column, bones or
47 teeth, and then in the "Result" column, the first five,

1 say, "SS", that stands for "single source"?

2 A. Yes, and this is what we want to see, we want to see
3 a single-source profile.
4

5 Q. And on 12 March 2020, do you see there are two there
6 together, one bone, one teeth?

7 A. Yes.
8

9 Q. And the bone says "Partial SS", so partial
10 single-source profile, and that means there just wasn't
11 peaks in all of the locations that you'd look at on the DNA
12 strand?

13 A. Yes.
14

15 Q. How many is the cut-off to be called a partial?

16 A. Because we're testing - there are 40 possible pieces
17 of information, not including amelogenin, which is the
18 gender location, we're looking for 40. So obviously
19 I don't recall from the top of my head how many, but I know
20 that it wasn't a full DNA profile. So there weren't 40
21 pieces of information for that particular case.
22

23 But that one, we actually identified, we obtained
24 a full DNA profile from a tissue sample, so not a bone
25 sample in that case, or the teeth, it was actually a tissue
26 sample. But I actually just wanted to note that that was
27 what we obtained from the bone sample.
28

29 Q. Now, we see here a number are reported as "No DNA".
30 Is that done in the same way as we have heard about crime
31 scene samples - that is, if the quantitation falls
32 below .001 ng/ μ L, it's reported as no DNA?

33 A. I'm not sure, it possibly was one of those cases for
34 that particular sample, those ones that I can see on the
35 spreadsheet right now. I would have to go back and
36 double-check that for you if you would like me to look, but
37 it had very low levels of DNA.
38

39 Q. Is the reporting of "No DNA" done under the same
40 standard operating procedure as for all case work samples?

41 A. Yes, so bones and teeth samples were under the same
42 umbrella.
43

44 Q. So if that standard operating procedure says
45 under .001 "No DNA", that's what would be the result here?

46 A. Yes. So I would imagine that that is actually a no
47 DNA in that sense.

1
2 Q. All right. On the far right we see "Linked", and
3 "Fresh". Could you explain those categorisations?

4 A. So the two cases on the 3rd of the 8th and the 13th of
5 the 10th, those were linked. They were the same site. But
6 they were just recovered at a later time, and that does
7 happen; sometimes you might have a site where the police
8 will recover remains and then they recover more remains at
9 a later time. So both of those cases are linked in that
10 sense, same location.

11
12 Q. What about the "Fresh", how fresh do bones need to be
13 for you to describe them like that?

14 A. That was a very recently deceased person.

15
16 Q. But is there a cut-off, like, for example, sevens
17 days, or is there some cut-off between when you would call
18 it fresh and not?

19 A. I guess that's just my terminology that I'm applying
20 in this spreadsheet and it is more as a mental - it was
21 a mental note for me to understand, okay, we've got
22 a single-source DNA profile from this particular bone, and
23 that was a fresh bone. So it could have had blood still
24 contained in the bone that was able to be profiled for DNA.

25
26 Q. So by the time a bone comes to you, do you have some -
27 has someone else given some estimate of how long it's been
28 since the person was deceased?

29 A. So sometimes we'll have missing persons and it will be
30 for a very - I mean, it could be - it could be a crocodile
31 attack or something like that, so the police will be aware,
32 they've gone missing on this date, and then remains were
33 recovered on this date, so from that situation, you
34 understand it's quite a recent - and it might be a matter
35 of days between missing and recovery of remains, and then
36 it's a matter of actually obtaining a DNA profile. So I'd
37 say that situation would be fresh.

38
39 Q. But can you give us an estimate of how long the period
40 is while you still consider it fresh? Is it a matter of
41 days or weeks or months, I'm just trying to get a general
42 idea?

43 A. Yes, six months, I would not be expecting to see fresh
44 blood in bone at that time frame. I'm not - I guess --

45
46 Q. I think I'm not asking the question very well. Let's
47 try again. What time period since becoming deceased would

1 you call a bone fresh?

2 A. Days, weeks.

3

4 Q. And would you do that based on the time frame that the
5 police or the coroner have told you or would you do that by
6 visually inspecting the bone?

7 A. I might have information around if there is
8 a "believed to be", where there is a date where the person
9 was last seen, that might be a rough idea in my mind that,
10 you know, this has been a week, and then I will be looking.

11

12 But I sort of have that in the back of my mind, it's
13 not until I'm actually reporting a statement for the
14 coroner that I tend to look at that sort of information.
15 Sometimes I do. But when you actually go in to sample
16 a bone, you assess the bone and you look at the condition,
17 you have a look at if it has flesh adhering to it that
18 needs to be removed, and it could be decomposing tissue,
19 but if you have skeletal remains that have no indication of
20 any soft tissue adhering, then the indication is that it's
21 an older bone, you know, could be a year old, could be 10
22 years old. And it just depends on the environment the bone
23 is in as to what sort of condition it is in, and we do
24 assess that when we sample the bone.

25

26 Q. And so that level of condition will be highly
27 variable, even for bones of different ages; is that fair?

28 A. Yes, because if you have a bone that is in a marine
29 environment versus a bone that's in the middle of the
30 desert and it is in a cave somewhere, like, completely
31 different situations and it will affect the DNA that is
32 contained in the actual remains.

33

34 Q. Operator, could you zoom in on the next 10 lines or
35 so. Thank you.

36

37 So you described a - I said when did you first notice
38 a mixture, and you said November 2020. Is that the two -
39 a bone and a teeth sample we see there, 2 November 2020 and
40 26 November 2020?

41 A. Yes, that's the case I'm talking about.

42

43 Q. And "Complex unsuitable" means a mixed profile?

44 A. Yes, it does.

45

46 Q. And do you remember how many proposed contributors
47 were in that profile?

1 A. At least two. It could have been more. I would have
2 to go back to the case.

3
4 Q. If we look down through here, can we look at the next
5 line, 15 March 2021, a bone sample, "1 times mix, 3 times
6 single source". Can you explain what your notation means
7 there?

8 A. Yes. Okay, so again this is a case that we have taken
9 four aliquots of bone powder for, and from one of those
10 aliquots, we have obtained a mixture, and for three
11 aliquots we have obtained a single-source DNA profile.

12
13 Q. So all four of the aliquots are tested together; is
14 that right?

15 A. Yes.

16
17 Q. By that I mean at the same time?

18 A. Yes.

19
20 Q. Not in the same tube, obviously?

21 A. Yes. No, they're run separately but together, yes.

22
23 Q. So in a case like that, where there is one mixed
24 profile and three single-source profiles, you can report -
25 did you report a single-source profile?

26 A. Now, I'm just trying to recall that case, because it's
27 de-identified. In that situation - I can tell you what
28 I would do. I would fully disclose that to the coroner in
29 a statement. And it's possible that one of my colleagues
30 reported this and I may have reviewed the case, or - I'm
31 not sure exactly. However, you could report the three
32 aliquots as being single-source DNA profiles, and you could
33 also report that you obtained a mixture, and then you would
34 provide a statistic based on one of the single-source
35 profiles that provided the best quality result, but full
36 disclosure to the coroner, because that is what we've been
37 having to do.

38
39 THE COMMISSIONER: Q. So from the time you discovered,
40 first encountered this mixture on 2 November 2020, there
41 are 18 samples you have listed, 15 of them returned
42 a mixture and one returned no DNA.

43 A. If that's what you have just --

44
45 Q. But only two returned a single source correctly?

46 A. Now, I just want to clarify with you that in 2020 we
47 did actually profile 13 bones as part of a DVI, so

1 I haven't listed those on this spreadsheet. And we
2 obtained single-source profiles from those samples, and
3 I believe from the top of my head it was 13 bones, so no
4 problems. They were fresh, though.

5
6 MS HEDGE: Q. So when was that in 2020?

7 A. It was just at the - as the pandemic was beginning
8 in March of 2020.

9
10 Q. So in the first six months of 2020?

11 A. Yes, and --

12
13 Q. So they wouldn't be included in the Commissioner's
14 statistics that were from November 2020 onwards?

15 A. No.

16
17 THE COMMISSIONER: Q. So it becomes 15 erroneous
18 mixtures, 15 single source, and one no DNA - so 50 per cent
19 mixture rate where you should be getting single source?

20 A. I haven't actually done the statistics, but I - it was
21 already concerning me greatly as each case has come along.

22
23 Q. Well, a 50 per cent failure rate is not very good, is
24 it?

25 A. No.

26
27 MS HEDGE: Q. So if we look at those samples on 24 March
28 2022, do you see those three?

29 A. Yes.

30
31 Q. So all these notations mean the same as the one you've
32 just described - that is, the first is two aliquots
33 resulted in a mixed profile, two with a single source, for
34 the first one?

35 A. Yes.

36
37 Q. Three aliquots single source, one for a mix for the
38 second one on that date?

39 A. Yes.

40
41 Q. And four mixtures on the third on that date. Now, if
42 we look at 1 June 2022, eight times mix, does that mean you
43 did eight aliquots and all of them resulted in a mixed
44 profile?

45 A. Essentially, that particular case was very low level,
46 and that's why we did so many aliquots, because it was
47 very - the DNA was very low. Now, when we're assessing

1 a case like that and it's very low level, I think we had to
2 look at all of the aliquots together, and one of my
3 colleagues and I talked about it, so I put "8 by mixes"
4 there. But when you look at all the profiles and the extra
5 peaks that are popping in and out of the different
6 aliquots, we assessed them all as being complex unsuitable.
7 We weren't able to interpret them. Actually, I'm - and
8 this is a little bit difficult here, I'm not sure. There's
9 so many cases that I've worked on recently. I'm not sure,
10 that 8 by mix, would I be able to - is the information in
11 that folder redacted?

12

13 Q. No, it is not, so, please look --

14 A. Can I just refer to --

15

16 Q. Yes, please do.

17 A. Because I can't memorise all the cases off the top of
18 my head.

19

20 Q. No, I understand. Have you found that page?

21 A. I've found the page. I'm just referring to my
22 statement because I think I have actually listed it in my
23 statement, this particular case.

24

25 Okay, thank you. So I would like to take back what
26 I did just say and just clarify that that particular case
27 was eight mixtures that we obtained from it.

28

29 Q. So there was eight aliquots?

30 A. Yes.

31

32 Q. And each of them retained a mixed profile?

33 A. Yes.

34

35 Q. And was that eight aliquots taken, if you can - if I'm
36 testing your memory too far, tell me, but was that eight
37 aliquots taken originally or did you take four, as usual,
38 test them, get mixes, and then take another four?

39 A. Yes. So I actually did review this case, I didn't -
40 and that's why - I think when you're reviewing, you are a
41 little bit more removed from the case, but yes. So this
42 did actually - this case actually was mixtures.

43

44 Q. And so for these ones that have all mixtures, for
45 example, that one, all of those 30/6/2022 ones, for
46 example, where they are both complex unsuitable, they would
47 be reported to the coroner as a mixed profile?

1 A. We are having to. For the one on 1/6/2022, they
2 actually didn't know, that was an unknown deceased person.
3 So in those situations we don't tend to issue a statement
4 to the coroner for identification, because we go through
5 a process where if it's an unknown deceased person and we
6 can load the information to a database that is
7 Australia-wide. So we might go through that process for an
8 unknown deceased person, and as soon as someone is known,
9 they have to be removed from that particular database, but
10 that is the process. So if we reported to the coroner -
11 and we could - and I believe in this situation an intel
12 report was provided to the coroner, so that's an
13 alternative to a statement that we provide to the coroner,
14 because we just wanted to provide - give information around
15 the results we had obtained.

16
17 Q. And so can we just speak briefly about likelihood
18 ratios. For a single source you might report, either by
19 intelligence report or statement, that the chances of the
20 contribution by a particular person is greater than 100,000
21 or 100 billion or some number, depending on what your
22 calculations result in; is that right?

23 A. So identification cases can be different. So if you
24 are doing a direct comparison, so, for example, they're my
25 bones, you'd go to my toothbrush, for example, hopefully
26 get a single-source profile, and then do a direct
27 comparison between the ante-mortem DNA profile toothbrush
28 to the post-mortem DNA profile, my bones, and get a match.

29
30 Then, in that situation you can do a direct comparison
31 that you have just described. However, if you didn't have
32 my toothbrush, you would have to go to my parents, so you'd
33 get a DNA profile from my mum, a DNA profile from my dad,
34 and then we could perform a calculation which involves
35 looking at your relatives and then we provide a statistic.
36 So it is - and it can be a very high statistic but in that
37 situation it tends to be lower and we report it
38 differently. So coronial identification statements are a
39 little bit different to the statements we provide for the
40 crime scene samples matching to a reference sample, for
41 example.

42
43 Q. So is the likelihood ratio then the likelihood that
44 the sample is related to the relative?

45 A. Yes, we call it a paternal - in the situation
46 mother/father/missing person, we call it the paternity trio
47 calculation that we perform on a different statistical

1 package, and then that statistic goes to the coroner.

2
3 Q. So that's single source. How would you report a mixed
4 profile to the coroner?

5 A. So the only time I have ever had to do this in my life
6 is this year, and it wasn't that case, it was another case,
7 I believe it was the one from 24th of the 3rd. I can't
8 recall exactly off the top - again, it's the details.

9
10 Q. That's okay, just generally.

11 A. Yes, so we did actually have to look at a mixed DNA
12 profile. But that was --

13
14 Q. To use those two examples you have given, the first is
15 the toothbrush example?

16 A. Yes.

17
18 Q. So if you are reporting a mixed profile to the
19 coroner, would you be reporting that the person who owned
20 the toothbrush had a certain likelihood ratio of having
21 contributed to this bone sample?

22 A. Yes, you could with a direct comparison, yes.

23
24 Q. And then how do you explain in your statement, if at
25 all, difficulty with the mixed profile, the fact that it's
26 a mixed profile?

27 A. So we had - it was a linked case, and again my
28 colleague had to - we talked about it, how are we going to
29 do this. So one of the cases that we had to report to the
30 coroner, we did have a single source, and then the linked
31 case had a mixture, and we were able to just say that the
32 unknown that was obtained from the mixed case was
33 consistent with the other case.

34
35 Now, I would have to go back and have a look at those
36 statements to exactly recall how we reported that case.

37
38 THE COMMISSIONER: Ms Hedge, how is this going to help me,
39 because isn't the point that we're getting mixed results
40 where there ought to be a single source result, and that's
41 obviously going to lead to problems in reporting to the
42 people who are interested in knowing the results? But the
43 precise difficulties faced by those people, I need not
44 examine those and make findings about them, need I?

45
46 MS HEDGE: No, we were simply getting to what the problem
47 is in the reporting - that is, that the problem is

1 identified in the reporting. That's what I'm seeking to
2 elicit, but perhaps I'll ask that more directly.

3
4 THE COMMISSIONER: But aren't we more concerned with
5 whether there are problems in the lab and what those
6 problems might be that have led to the mixtures?

7
8 MS HEDGE: Yes, but the consequence of that is of some
9 relevance, but I'm content to --

10
11 THE COMMISSIONER: But the consequence is that the result
12 is unreliable, isn't it?

13
14 MS HEDGE: Perhaps we should ask Ms Keller that.

15
16 Q. What is the consequence of obtaining a mixed profile
17 from a bone sample, is it that it is an unreliable result?

18 A. I would have to say that the cases we've listed
19 complex unsuitable, we can't do much more with those cases.
20 Where you might obtain a mixture where we've got a very
21 low-level mixture and a major in the profile that is
22 clearly consistent across the case as being an unknown, we
23 can actually do something with that, but this is not - this
24 is not what we want to have to be dealing with, and I've
25 been working my way through these cases with my colleagues
26 this year, and it needs to be fixed.

27
28 Q. So is the essential problem with the mixed profile
29 that you have two DNA profiles and you don't know which of
30 them is the deceased person?

31 A. Yes, you are using the best - like all of my expertise
32 in my career to try and assess whether or not we can use
33 a profile, when it falls into that category.

34
35 Q. But tell me if I'm wrong, if I'm wrong, but is what
36 you're saying that the problem with a mixture is that you
37 might get two or more profiles, people in your profile, and
38 you don't know which of those people is the deceased
39 person --

40 A. No, that's --

41
42 Q. -- and which are contamination?

43 A. That's right.

44
45 Q. So it might be, say, a three-person mixture?

46 A. Yes.

47

1 Q. Person 1 might be the deceased, persons 2 and 3 are
2 some sort of contamination, but you don't know whether it
3 is that, or that person 2 is the deceased and 1 and 3 are
4 contamination, or person 3 is the deceased and 1 and 2 are
5 contamination; is that your point?

6 A. Yes. It is very difficult, and I wouldn't report
7 something that I wasn't able to report confidently, but
8 I've never hit this before in 16 years. So it's getting
9 very difficult.

10
11 Q. So could we just zoom out, operator. There are three
12 numbers in the far left column. Could you zoom in a way
13 that those three are in view, and the whole spreadsheet
14 across, thank you. You have also annotated this
15 spreadsheet on the far left by three things. Now, does
16 this equate to three changes in the lab that you have
17 observed since you have started seeing these mixed
18 profiles?

19 A. Yes.

20
21 Q. Now, we'll talk about each of them in turn but just
22 while we're here on this spreadsheet, is the first of those
23 on 5 July 2019 a change to the cleaning?

24 A. Yes.

25
26 Q. And the cleaning of equipment that you use to sample
27 bones, I should say?

28 A. Yes.

29
30 Q. And on 25 March 2020 there is a change to the
31 extraction process; is that right?

32 A. Yes.

33
34 Q. And then on 15 February 2021 there is the change to
35 capillary electrophoresis - that is, the introduction of
36 the 3500 machine; is that right?

37 A. Yes.

38
39 Q. So that's why you have those three things in this
40 spreadsheet, to show when those changes were made?

41 A. Yes.

42
43 Q. We will come to this in a few minutes, but you have
44 raised an OQI about this issue?

45 A. Yes.

46
47 Q. Is that right?

1 A. Yes.

2

3 Q. But that OQI hasn't been resolved, there has been no
4 identification of the root cause analysis or root cause of
5 this mixture problem?

6 A. We're still working. So I raised the OQI, and now two
7 of my colleagues and I are working through this OQI trying
8 to come up with recommendations for solutions.

9

10 Q. And these three things are things that you have
11 observed in the past that you think might have an influence
12 on creating mixtures?

13 A. Yes.

14

15 Q. But you haven't yet come to the point in your
16 consideration of it where you could say definitively that
17 one of these is the problem?

18 A. No, and I think the point is, with three changes that
19 have occurred in - I mean, it's spaced over a little bit of
20 time, but in terms of how many cases we actually come
21 across, it's a fairly short period of time, and so when you
22 change - in science, when you change more than one thing
23 around the same time, it gets very difficult to pinpoint
24 what the actual issue is. So that's why I've highlighted
25 three changes, because I think they're all contributing to
26 the problem that we're seeing.

27

28 Q. Can we go through them in a little detail. Could we
29 turn to page 10 of the statement, please,
30 [WIT.0003.0435.0010_R] can we zoom in on paragraphs 64 to
31 66. So in 2015 there was a project that you described
32 there, Project #148, about the bone crusher vials and how
33 they might be cleaned?

34 A. Yes.

35

36 Q. Now, that's the part of the process we described
37 earlier - you described earlier, I should say - where the
38 liquid nitrogen was applied and there was an impactor that
39 hit the bone until it rushed into a powder?

40 A. Yes.

41

42 Q. So that's what the bone crusher vial is?

43 A. Yes.

44

45 Q. And it investigated whether you could use Tergazyme or
46 something else, is that right - that project?

47 A. The project - the original, because I've gone back to

1 the project. The original reason that Timothy Gardam
2 commenced that project was because we had changed process
3 and he was noticing a few more of the peaks that the
4 Commissioner was talking about before, around can we find
5 a better way of cleaning, because we're finding there's
6 peaks popping up now and then in the bone crusher vial. So
7 Tim looked at a number of options in this report, and tried
8 to find - I mean, I can actually refer to that report,
9 because I've annexed it, but he looked at a number of
10 options that might be a good alternative for cleaning the
11 bone crusher vials.

12
13 Q. And so what did he conclude? After this project, what
14 did you use for the bone crusher vials?

15 A. At that point, we - I don't think we changed process
16 at that point. We - I would have to actually go back and
17 have a look at the timeline, but Tim did find that
18 Tergazyme is one of the cleaning agents that we use - found
19 that that worked very well for cleaning the bone crusher
20 vial, and he also found that using a dishwasher on
21 a certain setting was very good for cleaning the bone
22 crusher vials, and we did - we have changed to cleaning the
23 bone crusher vials now in the dishwasher, and it does seem
24 to work well.

25
26 Q. Can we turn to the next page, operator, and paragraphs
27 68 to 70. So that project only dealt with the vials; is
28 that right?

29 A. Yes.

30
31 Q. But in 2019 - and this is the change that you
32 identified on your spreadsheet --

33 A. Yes.

34
35 Q. -- there was a change to cleaning all of the bone
36 crushing equipment; is that right?

37 A. Yes.

38
39 Q. And this is the change in paragraph 68. So all of the
40 bone crushing equipment will use the dishwasher, bleach
41 and/or TriGene followed by 70 per cent ethanol?

42 A. The change was the bone crushing equipment using the
43 dishwasher, but that was just referring to the crusher
44 cylinder and the bungs and the impactor, but then the
45 bleach and/or TriGene followed by 70 per cent ethanol was
46 the remaining equipment, and as it is noted there, "in line
47 with other evidence recovery and analytical protocols".

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

Q. So it is the second part of that that is the change that you are referring to?

A. Yes.

Q. As you say in paragraph 70, to your understanding there is no validation or verification about that change in relation to bones particularly, bones and teeth?

A. Yes, so that was the using bleach and/or TriGene followed by 70 per cent ethanol for the remaining equipment.

Q. Yep.

A. It is in line with other evidence recovery protocols, however, no other process and evidence recovery uses the equipment that we use for bones. So I've listed that in paragraph 70. So that includes chisels, hammers, chisel blocks, Dremel bits sometimes, hand saws, and an electric saw, also.

Q. So in your view, because of that different equipment, was it your view that there should have been a validation before any change in process?

A. At least a verification or testing: we're going to make this change for this equipment, does it clean it adequately?

Q. What would you say the difference between a validation and a verification is?

A. I think that a verification is not quite as vigorous as a validation. I mean, to be honest, when it's such an important process - we don't do it that often, but it is a really important thing that we do - we should do it properly.

THE COMMISSIONER: Q. What was used to clean, for example, the chisels, before this change in 2019?

A. So we used a saturated solution of Tergazyme. So we would, in the bone sampling room, have a container, large container, fill it with water and then add Tergazyme and saturate the solution, so you've got excess Tergazyme - because it's like a solid, you dissolve it in the water.

Q. So you used Tergazyme, and then in 2019 Mr McNevin was put in charge of bone testing; is that right?

A. Yes, he was put in charge previous to that, I believe, but he implemented this change.

1
2 Q. And what was his experience in bones, what's his
3 scholarship in bone work?

4 A. When Allan was first put in charge of bones, I don't
5 believe that he had any experience in bones or teeth.
6

7 Q. So he then decided, on 5 July 2019, to change from
8 using Tergazyme to using bleach and/or TriGene followed by
9 70 per cent ethanol, without any testing or consultation
10 with the scientists in the bone unit?

11 A. That's right. The first I became aware of it was I -
12 there must have been a bone to be sampled, and there was an
13 email that came out, and somehow I was aware of a change.
14 I can't even recall, to be honest. There is an email. And
15 I just said, "Have we implemented a new cleaning process",
16 and it was "Yes, we have."
17

18 Q. In paragraph 71 --.

19
20 MS HEDGE: Could we have paragraphs 71 and 72, please,
21 operator.
22

23 THE COMMISSIONER: Q. You found that the chisels were
24 getting rusty?

25 A. Yes, this year, I did notice that there was rusting of
26 the chisels and I did discuss this with other staff members
27 and we started to feel that, or agreed that, it could be
28 a potential source of contamination.
29

30 Q. Because rust is a rough surface and it is prone to
31 retain substances with which it has had contact?

32 A. Yes, and actually, Tim's - I think it was
33 a verification that Tim did, he actually did - he did note
34 a number of things and he actually did mention that when
35 pieces of equipment go rusty, they can be more difficult to
36 clean and more likely to retain foreign DNA.
37

38 MS HEDGE: Q. And so this cleaning regime poses two
39 risks, as I perceive you are saying: one is the rusting,
40 and therefore the collection of DNA; and the other is just
41 simply DNA on any surface, if it is not appropriately
42 cleaned off before the equipment is used again?

43 A. I think mechanical action is a very important part of
44 the cleaning process when it comes to any sort of cleaning
45 regime, but bones --
46

47 Q. By that you mean scrubbing it with your hands?

1 A. Yes.

2

3 Q. And is that what you used to do in the tub of water
4 with the Tergazyme?

5 A. Yes, you could really get in there and scrub
6 everything very well, and it felt - I mean, you knew it was
7 as clean as you could possibly get it.

8

9 THE COMMISSIONER: Q. And had Mr McNevin, to your
10 knowledge, scrubbed any instruments clean in his work?

11 A. I don't know. Not that I'm aware of.

12

13 THE COMMISSIONER: Is that a convenient time?

14

15 MS HEDGE: Could I just ask one question to round out the
16 topic.

17

18 Q. Mr McNevin, you describe, became part of - in charge
19 of bones. At that time, he was the senior scientist in
20 charge of the evidence recovery section; is that correct?

21 A. Yes.

22

23 MS HEDGE: That's all, thank you.

24

25 THE COMMISSIONER: What time shall we adjourn to?

26

27 MS HEDGE: Perhaps 2.15?

28

29 THE COMMISSIONER: 2.15 it is, then.

30

31 **LUNCHEON ADJOURNMENT**

32

33 THE COMMISSIONER: Yes, Ms Hedge.

34

35 MS HEDGE: Q. Ms Keller, just before lunch we dealt with
36 the first of the three changes to bone processing, that is,
37 the cleaning regime. Can we turn, then, to the second of
38 those changes, which is the change issue in the extraction
39 method. Can we put Ms Keller's statement back on the
40 screen, please, operator [WIT.0003.0435.0001_R page
41 0011_R]. At the bottom of the page, paragraph 73, you say
42 that in April 2018 there was a change from organic
43 extraction to the use of instruments?

44 A. Yes.

45

46 Q. Can you explain to us what organic extraction is?

47 A. Yes, so it's an extraction technique where you use two

1 different phases of liquid to isolate the DNA in one of
2 those extractions or different phases of the liquid, and
3 then leftover cell parts go into the other liquid phase,
4 and then you focus on the one that holds the DNA. So it
5 separates and isolates and purifies the DNA from the other
6 cellular components.

7
8 Q. So would a scientist do that physically using --

9 A. Yes, it is a manual process and it does require,
10 I would say, a higher level of skill than some of the other
11 processes that are manual in the laboratory. I used to
12 actually do organic extraction myself when I worked in the
13 analytical section.

14
15 THE COMMISSIONER: Q. Can you give me an example of the
16 process, or one of the steps, in the bone extraction
17 process that would make it clear to me why a high level of
18 skill is employed - something that will make me understand
19 what you mean when you say it is an extraction process that
20 requires a higher level of skill than the extraction
21 processes ordinarily employed in dealing with swabs and
22 tapes, for example?

23 A. You'll have to forgive me because it has been quite
24 a while since I actually performed this extraction.

25
26 Q. Yes, think it through and take your time.

27 A. The organic extraction involves an organic liquid, and
28 also an aqueous liquid, so they have different abilities to
29 hold different substances.

30
31 Q. The first form of liquid was what?

32 A. It is an organic --

33
34 Q. Organic, yes.

35 A. Organic component, and then there's an aqueous
36 component as well. In the end of the extraction the DNA
37 ends up in the aqueous phase, and then it's removed. So
38 the layer that contains the other cellular components is
39 held in the organic phase, and the operator will need to
40 pipette off the aqueous phase that contains the extracted
41 or isolated DNA.

42
43 THE COMMISSIONER: Q. So it's as though you had oil and
44 water, and you are trying to pipette one component of that,
45 which you need, away from the other, and you have to be
46 careful to ensure that you don't leave a contaminated
47 amount or miss what you want; is that putting it in simple

1 terms?

2 A. Yes.

3

4 Q. Thanks. I get the picture. I get why you say there
5 are skills that you have to practise; is what you mean?

6 A. Yes. Because, from memory, you perform this
7 separation process a few times, and at the end of that
8 process, you actually perform a microcon-concentration, and
9 then you end up with your DNA extract in a tube.

10

11 MS HEDGE: Q. Can you now explain the instrument phased
12 extraction method, that is, using the QIASymphony?

13 A. QIASymphony and the QIAGEN pre-lysis. I have not had
14 a lot of experience in this particular process, but it
15 involves an instrument and reagents that you add, but
16 I understand you isolate the DNA. It utilises - you
17 attract the DNA to beads and then wash and then in the end
18 the DNA is liberated from those - I believe it's magnetic
19 beads. I would have to check the details.

20

21 Q. No, we don't need more detail than that, that's okay,
22 but it's a robotic instrument in the sense that you load
23 a plate of samples and it does all of that by itself
24 without an operator individually touching anything; is that
25 right?

26 A. Yes, it has, like, a pre-lysis step, as it says in my
27 point 73.

28

29 Q. And can we do the history of this quickly. If we turn
30 to the next page at paragraph 77, you had some concerns
31 about this extraction method, because you were seeing some
32 odd results, a noticeable decrease in quantitation yield
33 for bone aliquots; is that right?

34 A. Yes. So I was reviewing a case and I was working with
35 Jacqui on this particular case, and we actually - so this
36 is in 2018, we had four aliquots of bone that had been
37 extracted using organic extraction, and we had four
38 relatively similar quantitation values, which they were
39 fairly well what I would expect but the DNA profiles we
40 obtained from that particular case had indications of some
41 kind of contamination, so we had some low-level peaks in
42 the profiles. I can't remember exactly but essentially it
43 caused us to go back and request that a resampling
44 occurred, and I think it was just that a further four
45 aliquots were put in for DNA profiling.

46

47 And when these four new aliquots came back, we noticed

1 that the quantitation values had dropped significantly, and
2 immediately wondered what was wrong, because it had come
3 from the same stock bone source. When we looked further
4 into it, we realised that a different extraction process
5 had been implemented and one was - so the initial four
6 aliquots had been extracted using organic extraction, and
7 then the next four aliquots had been extracted using this
8 new extraction technique.

9
10 Q. And the quant values were quite different and far
11 lower for the extraction - for the instrument?

12 A. Yes.

13
14 Q. And you raised that with Justin, Justin Howse?

15 A. Yes.

16
17 Q. And he said what we have there:

18
19 *... any apparent differences would be due*
20 *to sample variation ...*

21
22 A. Yes.

23
24 Q. And in the midst of this, is it the case that you came
25 to have the view that the validation of the QIASymphony was
26 not properly done? We don't need to go into all of the
27 details of that, but is that true, you came to that view?

28 A. I knew something was wrong and I assumed it was the
29 most - the simplest explanation is often the best, and when
30 we had gone from four aliquots obtaining a good quant
31 value, essentially, from what I would expect from bones, to
32 quant values that were significantly less, and the only
33 thing that had changed was the extraction technique,
34 I assumed that there was something wrong and - but then
35 looked further into it.

36
37 Q. I see. And when you looked further into it, you found
38 that in that validation, there was 10 bone samples used,
39 but each of them were only run through the process once?

40 A. Well, I --

41
42 Q. Is that right?

43 A. I cannot remember the details that well, but I did
44 talk to my colleague.

45
46 Q. Mr Parry?

47 A. Yes, I did.

1
2 Q. Let's leave that. He is the next witness.

3 A. Okay. I will leave that there.
4

5 Q. So can we move down to paragraph 80, please. After
6 some issues were raised with that validation, the
7 laboratory reverted to the organic extraction method; is
8 that right?

9 A. Yes.
10

11 Q. And then a supplementary report was done, which was
12 Project #192, and you understood that was to try and
13 address the problems that had been raised with the initial
14 validation?

15 A. Yes.
16

17 Q. And can we come down to the next page, please,
18 operator. So then in March 2020, in paragraph 84, again
19 the bone/teeth extraction method changed from organic to
20 the instrument?

21 A. Yes.
22

23 Q. So it is this change at paragraph 84 that you are
24 talking about that might have had an impact on the mixed
25 profiles that we're seeing; is that right?

26 A. Yes, this is the second change.
27

28 Q. In paragraph 88 you say that since then, you have
29 noticed an increase in the number of low-level or no DNA
30 profiles from bones and teeth and more recently mixed DNA
31 profiles. So both of those things are of concern for you -
32 the low level or no DNA and also the mixed?

33 A. Yes.
34

35 Q. And tell us why do you say that the introduction of
36 this instrument might be causing those problems?

37 A. I think that to get a useable DNA profile you have to
38 have an appropriate starting quantity of DNA in the sample
39 to begin with, and coronial bones tend to have a lower
40 level of DNA because they don't have the blood cells
41 present anymore. So we're dealing with compromised bone
42 samples. And if the extraction process that we're using is
43 not removing all of that low amount of starting DNA in the
44 first place, I think it is problematic, in combination with
45 other changes that we've seen - there are three changes I'm
46 talking about - but that is one part of the picture, that
47 if you are not removing as much DNA from your starting

1 substrate, then it's problematic, you are having lower
2 levels of DNA, it's harder to get a full profile, then you
3 are just not able to obtain a simple single-source profile,
4 compare it to a toothbrush or relatives' profiles to give
5 a statistic to provide to the coroner. It's just --
6

7 Q. I understand that for low and no DNA.

8 A. Yes.
9

10 Q. But what about the mixed profiles?

11 A. Oh, it just --
12

13 Q. Did that instrument result in the mixed profile?

14 A. I don't know that it is causing the mixtures that
15 we're seeing, but we're dealing with very low levels of DNA
16 and so there's nothing that has flagged to me specifically
17 that it is the extraction causing the mixtures. I can't
18 say yes, and I can't say no, to be honest.
19

20 Q. So it's the - there's not something about how that
21 instrument works that gives you the concern; it's the
22 results that give you the concern, the results of mixed
23 profiles?

24 A. Yes, I'm more basing - the outcomes that we're seeing
25 this year in particular are very concerning to me and that
26 is one of the changes that we have seen.
27

28 Q. I understand. Now, that's the second of the three
29 changes you identified. The third is implementation of the
30 3500 Genetic Analyser?

31 A. Yes.
32

33 Q. We see that there at paragraph 91, that you consider
34 it may be contributing to the detection of additional low
35 level contributors that previously would not have been
36 detected?

37 A. Yes, and I --
38

39 Q. And that means - sorry?

40 A. Sorry, I was just going to say it simply is that this
41 instrument is more sensitive, it's detecting more DNA, and
42 so, therefore, using the old instrument that we used, we
43 could run the same sample on both instruments and maybe on
44 one we'd get a single-source profile, the 3130 instrument,
45 the old instrument; on the 3500, we might see some
46 low-level peaks that we wouldn't have detected on the old
47 instrument. So it's really just the change in process,

1 moving forward with technology we can detect more DNA, and
2 it's more sensitive.

3
4 Q. And you say there in paragraph 89 it has not been
5 specifically validated for bone and teeth aliquots?

6 A. No, I don't believe it has.

7
8 Q. Is it your view that it should have been?

9 A. Not necessarily, but it would be good as part of the -
10 because once the bone is extracted, so once you've got bone
11 extract, or extract like any other extract, it runs through
12 our system with all the other samples, whether it be from
13 saliva or blood or semen. So not necessarily needed to be
14 done specifically on bones or teeth, but if it is part of
15 the cohort that runs through that validation process,
16 I guess that would be a good thing.

17
18 Q. Now, you mentioned raising an OQI. Can I take you to
19 that. It is AK-20 of your statement, [WIT.0003.0455.0001]
20 so this is the OQI you raised within the lab's quality
21 information system?

22 A. Yes.

23
24 Q. And you raised it on 17 June 2022; is that right?

25 A. Well, I think I actually raised it - that might have
26 been the date that I put that we realised we had a problem.
27 The date - I may have put that in my statement, when
28 I raised the OQI.

29
30 Q. In paragraph 53 of the statement, which is on page 8,
31 it says:

32
33 *... copy of the OQI report dated*
34 *21 September 2022.*

35
36 A. Oh, okay.

37
38 Q. That's the date you printed it, I believe?

39 A. Yes.

40
41 Q. Oh, no, I'm sorry, paragraph 52:

42
43 *I raised an OQI about the issues with bones*
44 *on 29 August 2022.*

45
46 A. 29 August, yes.

1 Q. And had you raised these concerns before raising the
2 OQI?

3 A. Yes.

4
5 Q. Who had you raised concerns with before the OQI?

6 A. I think it became clear to me this year that we were
7 having repeated problems, because that spreadsheet that we
8 looked at before, I wasn't the - I didn't have carriage of
9 all of those cases, but some of them, quite a few, I did,
10 and, yes, just repeatedly seeing these problems. So
11 I actually started to look at the results we were getting,
12 you know, I started to just look into why are we seeing
13 these mixtures?

14
15 So then, when I came up with some information, I went
16 to - I talked to my colleagues about it, because they were
17 working on these cases with me, and we agreed that it's
18 obviously an issue, and so I raised it with my line
19 manager, Kylie Rika, and she was --

20
21 Q. About when was that?

22 A. Oh, it was prior to the date of raising the OQI. It
23 would have been --

24
25 Q. Prior to when the Commission started?

26 A. Oh --

27
28 Q. I'm just using that as an easy date marker in your
29 mind.

30 A. I really - it would have been the first time I had hit
31 the higher level mixtures - it would have been in the first
32 half of this year.

33
34 Q. The first half of this year, when you say you talked
35 to your colleagues, do you mean other reporters?

36 A. Yes, that are reporting on these cases, because really
37 it's like, "What's going on?" You want to sort of bounce
38 off other experts to find out what they think. I mean,
39 obviously it's an issue, but trying to actually start to
40 troubleshoot. So then, you know, it's going back, and why
41 do we think that we might be - so those types of
42 discussions, but then to actually escalate it to Kylie, and
43 I think around that time I said to her, "Can you please
44 take this to the management meeting, because I'm
45 concerned."

46
47 Q. Yes. And do you know whether she took it to --

1 A. Oh, I'm sure she did, yes.

2
3 Q. Do you know whether she did or not?

4 A. I do know, but I can't remember exactly what meeting
5 it was.

6
7 Q. Did she tell you that she took it or were you present
8 at a meeting where it was discussed?

9 A. I think I might have come back to her and said, "Did
10 you actually raise it", and she said yes, she had raised
11 it.

12
13 Q. So going back to this OQI that's on the screen, you
14 raised that in August, but you identified the date you
15 identified the problem as 17 June. So it was raised
16 in August, and then approximately a month later, this is
17 the form of it. Is that what you would expect for an OQI,
18 that a month later, there is no further information about
19 investigation or action?

20 A. Well, I have carriage of this, and I'm working on - so
21 behind the scenes, I guess, so I haven't updated this OQI,
22 but - so --

23
24 Q. Tell us what you have done --

25 A. Kristina is involved, one of my colleagues at the lab
26 is involved in this OQI, and Rhys Parry as well, and
27 Kristina has been very active in "Lets have a meeting",
28 she's been very good, "Let's talk about this". So we've
29 had a few meetings, and the thoughts that I have had prior
30 to the OQI and Kristina's involvement are really getting
31 reinforced by Kristina.

32
33 So we are - and I guess there's been a lot happening
34 this year, but we're sort of focused on can we make some
35 recommendations, so if it is the cleaning, can we make
36 recommendations? And to be honest, something - because
37 I only sampled two bones last week, talking to my
38 colleague - because we're all scientists and I think some
39 people have really good ideas that you may not be talking
40 to every day, and, you know, ultraviolet light is something
41 that is a common cleaning regime as part of mitochondrial
42 DNA testing from bones, so maybe that's a possible
43 recommendation we could put in there, but also other things
44 that have come out of the meetings that I've had with
45 Kristina and Rhys.

46
47 Q. Do you expect this OQI to end in performing some

1 experiments?

2 A. Because I have never raised an OQI before, this is the
3 first time, but I would expect we're going to make a number
4 of recommendations and I would hope that after those
5 recommendations - so it could be validating a cleaning
6 regime; hopefully, that will be taken on board and someone
7 will take carriage of that and then see it through,
8 because --

9
10 Q. All right. So is your understanding, what will come
11 out of this OQI is recommendations to then conduct
12 experiments? You're not going to conduct the experiments
13 as part of the OQI? I'm just trying to understand how
14 quickly this is going to be done?

15 A. Yes, I know. Well, the OQI, I think it's important to
16 identify the issues and then it will probably - it will
17 have to lead to some sort of recommendations for
18 experiments, and whether I'm involved in those or not, I'm
19 more than happy to be involved, but that's the process.

20
21 Q. I understand. So when do you think, just as an
22 estimate, how many weeks or months do you think it will be
23 before the recommendations are given from the OQI?

24 A. Soon. It would be sooner, it could be a few months
25 before we actually get to - but hopefully not that long to
26 actually really tease out some really good recommendations
27 that then can lead to some good experiments. But in terms
28 of - we can make recommendations and conduct experiments,
29 but we need the support of management to be able to - you
30 know, so just say that something happens with the
31 extraction or needs to happen - because I do think the
32 extraction works for DVI cases, high volume, fresh cases,
33 but I'm not convinced that it works for the compromised
34 bone samples.

35
36 Q. I understand. Just coming back to this, have you been
37 given any relaxation of your other commitments at work to
38 do this OQI work with Mr Parry and Ms Vernon, is it?

39 A. Ms Warton.

40
41 Q. Warton?

42 A. No.

43
44 Q. Have any of you been given be time away from other
45 duties to do this work?

46 A. No, not specifically. It's sort of - yes,

1 Q. It is on top of?

2 A. On top of.

3

4 Q. Have you been told about another change that might be
5 coming in the analytical section in terms of sampling
6 methods - I'm sorry, in the evidence recovery section?

7 A. I think in the evidence recovery --

8

9 Q. Yes, what have you been told about that?

10 A. I think there is a project, and I don't know the exact
11 details because I'm not involved, for looking at the
12 sampling process, but I'm very reluctant to be making any
13 more changes currently, given the situation that we're in.

14

15 Q. Let's just take that one step at a time. Do you
16 understand what the change is that's being proposed to the
17 sampling method?

18 A. Yes. It might be finding a new sampling method that
19 can be implemented instead of the bone crushing and the
20 liquid nitrogen.

21

22 Q. And coming now to the second thing that you already
23 answered in part, do you think that any changes should be
24 made to the bone process at the moment?

25 A. I think that the cleaning regime needs to be looked
26 at, but as part of the OQI. I don't want to be making more
27 changes.

28

29 Q. Are you saying you don't want to make changes until
30 the problem is identified?

31 A. Yes.

32

33 Q. That's resulting in the mixed profiles?

34 A. Because if we implement a new procedure, then there's
35 four things that - and just say we do change the cleaning
36 regime, and we're still getting mixtures, so now there's
37 still three processes that we now need to look at. So it's
38 just not a good scientific idea to make more changes while
39 there's a number of changes that we're already considering
40 that could be contributing to this issue.

41

42 Q. And do you think that the lab should continue to
43 process bones until this OQI has been resolved?

44 A. I think it would be good if we didn't have any more
45 bones that are low level, compromised bone samples, to have
46 to process this year. Having said that, we've just worked
47 on two last week, and when I was sampling, we were going

1 above and beyond all the scrubbing and the bleaching and
2 the - all of the process that we normally use, and it just
3 takes so much longer, but it's so important that it's worth
4 it. But in terms of should we be processing bones while
5 we're getting mixtures, not really - I don't think so.
6

7 Q. But you draw a distinction between low-level DNA or
8 very old bones, versus fresh bones. You have much less
9 concern about the fresh bones; is that correct?

10 A. Yes, because we're not seeing the mixtures in the
11 fresh bones.
12

13 Q. So your view there about not processing, it relates
14 to - until there is some resolution of these issues,
15 relates only to the non-fresh bones?

16 A. Yes.
17

18 Q. And what else could be - does the lab have any other
19 options with those non-fresh bones?

20 A. They would have to go interstate to another
21 laboratory. We actually have had some bones tested by
22 another laboratory that was - the case that first marked
23 noticing these mixtures, and that has been sampled by
24 another laboratory and they got a single-source DNA
25 profile.
26

27 Q. And that would be - why I asked the question was, it
28 would be a temporary thing until this OQI is resolved,
29 which you imagine might be less than a few months away?

30 A. Yes. But even if we finalise the OQI and there are
31 recommendations, the OQI may not represent a change in
32 process. That might come after some sort of experimental
33 processes are finalised.
34

35 Q. What about when you get a mixed profile - for example,
36 that one where you had the eight times mixture - is there
37 any option then to send it away to another lab? Does that
38 decision need to be made at the start or can it be made
39 later in the process, is my question?

40 A. You can actually - so my colleague - one of my
41 colleagues and I have been consulting with IOs for some of
42 these cases, when we have got very low-level DNA profiles,
43 and suggesting, "We can do this, we can do this, you can do
44 this." So providing them with options so they can actually
45 go down that path if they want to, and these are the
46 compromised low-level complex unsuitable cases that we're
47 talking about.

1
2 Q. And who did you say you provided that information to,
3 IOs; is that investigating officers?

4 A. Yes, investigating officers. Yes.
5

6 Q. Can we move to something else now, to some of your
7 concerns about other non-processing aspects of the bones in
8 the lab. The first of those I'd like to ask you about
9 orally is the coronial identification meetings, which
10 I understand are a weekly meeting held with a wide variety
11 of people from the DNA unit, forensic pathology, QPS,
12 coronial support unit, forensic odontologists and
13 bereavement counsellors; is that right?

14 A. Yes, yes.
15

16 Q. What is the purpose of those meetings?

17 A. It's basically to streamline the whole process. It's
18 a complicated - often you will have different disciplines.
19 The police might need to get dental records from New South
20 Wales or something like that, and the odontologist will
21 be - so these meetings - I should add that since COVID,
22 these meetings have been via email, essentially, but prior
23 to COVID, they used to be conducted in a room where
24 everyone sat around, and, yeah, so if we know that there
25 is - yes, the coroner wants an identification on this
26 particular case, and the dentist will be like, "Yes, we're
27 sourcing dental records from New South Wales so it's
28 probably going to be dental", well then you know straight
29 away that that's - the odontologists are going to look
30 after that case.
31

32 So immediately I know it's probably not going to come
33 to DNA, or whoever is in the meeting, so it is off your
34 radar a bit but you are still aware it is there, because
35 sometimes the odontologists can only do a probable
36 identification, and then it might come to DNA, it would
37 depend on the coroner accepting identification.
38

39 Q. Okay. So the purpose of that meeting is for everyone
40 involved in a case to come together and talk about it?

41 A. Yes.
42

43 Q. And you used to attend those meetings as a reporting
44 scientist?

45 A. Yes.
46

47 Q. And can we have on the screen page 15 of the

1 statement. In 2019, were you advised by Mr Howse that
2 reporting scientists were no longer to attend those
3 meetings but rather it would be someone from the evidence
4 recovery section?

5 A. Yes.

6
7 Q. Is that right?

8 A. Yes, that's right.

9
10 Q. And in paragraph 96 you say you were told that
11 direction came from Cathie Allen?

12 A. Yes.

13
14 Q. Justin told you that?

15 A. Yes.

16
17 Q. At the same time, on that same conversation, 20 June
18 2019, or in some other conversation?

19 A. Yes - no, it was in - we just received an appointment
20 for a meeting, but there was no information apart from an
21 appointment for a meeting with Justin, and we attended the
22 meeting and were told that we weren't to attend the
23 coronial ID meetings anymore.

24
25 Q. And in your opinion does not attending those meetings
26 detrimentally affect how you can conduct your tasks?

27 A. It does, because commonly I will get phone calls from
28 different disciplines or it could be the specialised
29 communication officer from scientific services liaison
30 unit, ringing to find out - so, "Oh, you've got this case",
31 and this year has been very challenging, "How's that case
32 going for north Queensland? It's taking a while." And
33 I will say, "We are having some really complicated issues,
34 we are having to reprocess more samples. I'm afraid that
35 we haven't got any information at this point around when
36 we're going to be able to provide information to the
37 coroner, except we're still processing", and it's because
38 of the mixtures.

39
40 We were trying to resample, trying everything we could
41 to try and obtain useable DNA profiles. But, yes, so
42 I would often end up with phone calls of people coming to
43 me. So evidence recovery deals with the sampling aspect,
44 but they are not the ones that release the actual results,
45 and so if there is a coroner that wants results, they will
46 be coming to the reporters.

1 Q. So are you saying one of the negative outcomes of not
2 going to the meeting is that people are ringing you on an
3 ad hoc basis rather than you being there and able to tell
4 everyone the same information at the same time?

5 A. It's --

6
7 THE COMMISSIONER: Q. I take it that these are occasions
8 at which you exchange information informally?

9 A. Yes.

10
11 Q. And create professional relationships so that your
12 future communications can be easier and that they have
13 a basis, because you have met face to face?

14 A. Yes, absolutely.

15
16 Q. And who in FSS has the most experience in working with
17 DNA extraction from bones, in working with bones with
18 a view to getting profiles?

19 A. From start to finish?

20
21 Q. Well, just who, in your opinion, has the most
22 experience in bone work, as we'll call it?

23 A. It would be me.

24
25 Q. And so you said you've been working in this field of
26 bones for how long?

27 A. Sixteen years.

28
29 Q. Sixteen. And who is the next most experienced person?

30 A. Ingrid's been working with bones for longer than
31 I have, but she's no longer - she's been de-skilled in
32 areas.

33
34 Q. She's not as current as you are, you mean?

35 A. In some areas, that's right. She's still reporting
36 but she --

37
38 Q. She's not as current in the bone work as you are but
39 she's had a longer - all-up, from beginning to today, she's
40 had more years in the lab and with bones than you?

41 A. Yes.

42
43 THE COMMISSIONER: Thanks.

44
45 MS HEDGE: Q. In paragraph 97 you say you discussed
46 these concerns with Ms Keller.

47 A. Oh, yes, yes.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

Q. And that's Lara Keller, the acting executive director of FSS?

A. Yes.

Q. And she's no relation of yours, just coincidental?

A. No, that's coincidental.

Q. Same last name?

A. Yes.

Q. She asked you to come back to her. Why was that? Why would you come back with this, from 19 May?

A. I think because I have talked about there's a few problems the mixtures in the bones, for example, and also the coronial meetings are just another part of that. And she wanted me to come back to her to go through everything to do with bones.

Q. And was that to be a conversation or were you meant to come back to her in writing or what was agreed?

A. Go back in and have a meeting with her, but I haven't - I haven't done that at this point in time.

Q. And were you to organise that meeting or was it for Ms Keller?

A. I was to go back to Ms Keller.

Q. I understand. And do you plan to do that?

A. I am planning to do that, but it's been a busy year.

Q. I understand. All right. The next topic is your permission to attend the mortuary. So we see that there starting at paragraph 98, that in 2021 FSS management directed scientists not to attend the mortuary to assist pathologists with bone/teeth and tissue selection. So I understand you - were you consulted? You say there you weren't consulted about that and you haven't had the reasons explained to you, but tell us how you think it assists you in your job - or the pathologist - to go to the mortuary and personally attend to do that task?

A. So for - there's two categories I would have to flag, and the first one is the coronial cases with those skeletal remains. It helps - and, look, if a pathologist is all over it and happy to take a sample, and they are confident with what they can select, absolutely, a hundred per cent behind that. But if they ring me and they would like

1 assistance, I'm more than happy to talk to them and look at
2 whatever skeletal remains it is, because sometimes - you
3 never know what you're going to expect until you actually
4 get there. I mean, they can provide photos and show you.
5 And when you get down to the mortuary you can have a look
6 and then, based on your previous experience with triaging
7 of the remains down in the mortuary, you can say - and you
8 can also touch the samples, which gives you an idea of bone
9 density and other things that you are taking into
10 consideration --

11
12 THE COMMISSIONER: Q. Just to make it clear, and without
13 getting into details that can be distressing to people,
14 you're talking about situations where bodies have been
15 mutilated and damaged by an incident; is that what you are
16 talking about?

17 A. No. I'm just talking about skeletal remains.

18
19 Q. Oh, skeletal remains?

20 A. Yes, so just right now, a skeleton, for example. But
21 if it's been in the water in a creek somewhere for a long
22 time, immediately you can see the condition, and you might
23 want to focus on some part of the skeletal remains that
24 look like they're more intact and maybe not so affected by
25 that environment. So all of that comes into it, and - yes.
26 And then you would recommend and then the pathologist will
27 say, "Thank you very much", and then the mortuary
28 assistants will take a sample and it gets sent across to
29 our property point to be brought up for DNA testing. So in
30 that situation, it can be helpful.

31
32 For a disaster victim identification incident, so if
33 we're talking about a very - like you were saying -
34 traumatic environment, you would never want anyone to go
35 into that environment unless they were confident that they
36 would be okay, and I am one of those people. I've been in
37 that situation many times. I have had 10DVIIs that I have
38 experienced - haven't always been in the mortuary for that,
39 but I'm fine. And so in that situation, it's very
40 confronting. You know, it's --

41
42 Q. And is the point of the exercise and is the point of
43 your attendance, as somebody with experience at getting DNA
44 with a view to identifying a single individual from a group
45 of individuals --

46 A. Yes.

47

1 Q. -- that you are able to identify the particular
2 tissue, whether it's flesh or bone, that is more likely to
3 give a reliable result than something else, something that
4 the pathologist would not know, nor would anybody at FSS be
5 likely to know unless they have done work in the field of
6 DV - disaster victim - identification; is that right?

7 A. Yes. Yes, and, you know, you don't know, if it is
8 a high-end impact incident - so you have to watch out for
9 contamination between different individuals in that
10 incident. So, anyway, you're just using, once again, all
11 of your experience from all of the previous cases.

12
13 You might look at all of the contents of a grid bag,
14 because that's how DVIs work, and there might be a really
15 good bone sample in there, but a lot of soil or grass or
16 who knows, and so you might, yes, look at the bone and
17 recommend a particular part of that bone. Or it could be
18 a grid bag that only has tissue, so then you're using your
19 best - all of your experience and knowledge to direct the
20 pathologist as to where to go to get a single-source DNA
21 profile, and it just improves the chance of obtaining
22 a useable DNA profile.

23
24 Q. On the first occasion?

25 A. First attempt, without a mixture, not a partial, not
26 a no DNA, yes.

27
28 MS HEDGE: Q. You have described a grid bag. Is that
29 the idea of having a grid over a disaster site and then
30 collecting items from a particular square within that grid
31 and putting them in one bag, and then you might have
32 a separate bag for each square? Is that the concept you
33 are talking about?

34 A. Yes. And the police - there are dedicated police
35 teams, there is a DVI coordinator for Queensland and then
36 teams that go - and they know exactly what to do. They go
37 to the site, yes.

38
39 Q. I understand. We don't need to go into that process
40 more, I just wanted to explain that term. Can we deal with
41 another aspect. Can we turn to page 17, please.

42
43 THE COMMISSIONER: Just before you do.

44
45 Q. So who, instead of you, is supposed to go to attend
46 the mortuary?

47 A. I think that depending on - I think the preference

1 from management is that no-one goes to the mortuary and
2 that we get a phone call about how to triage remains.

3
4 Q. I see. And was any reason given to you for the change
5 in process?

6 A. I did - I did talk - no, not really, no. I think it's
7 just to remove the risk, perceived risk, of us being
8 exposed to something that could damage us.

9
10 Q. I see, just in terms of your sensibility?

11 A. Yes.

12
13 MS HEDGE: Q. Just turn to page 16 of the statement,
14 paragraph 105 there. There's an email from Mr Howse
15 suggesting - could we just scroll up a little so we can see
16 104 as well. This is on 1 September this year, an email
17 from Justin Howse indicated "which would be in line with
18 any health and safety risks involved". So that's where you
19 come to the understanding that you just expressed, that
20 it's about the effect on you of going to the mortuary?

21 A. It's that, that it's going to upset me, and also that
22 there could be some biological exposure risks. But I have
23 actually - I did actually talk to one of the executive
24 directors, John Doherty, after this document came about,
25 and - because there's a platform that you can attend the
26 mortuary through, and you are not actually in the
27 dissection rooms at all, so you are (a) removed from the
28 potential exposure risk of any viruses or anything like
29 that, so that's - and I think police officers often use
30 that as a safe option for them if there's any concerns.

31
32 Q. I see. That's in paragraph 100 of your statement, if
33 we could go back one page. You raised this with John
34 Doherty?

35 A. Yes.

36
37 Q. You say at the end of that paragraph that you
38 understand he proceeded to discuss the topic with
39 management but you are not sure what happened in those
40 discussions.

41 A. No.

42
43 Q. Now, John Doherty's no longer the executive director.
44 Have you heard anything more about the opportunity for
45 a viewing platform since then?

46 A. Not - not for the viewing platform. That document
47 that was released had - yeah, it had, where possible, to

1 avoid, and it also had using the viewing platform as
2 a possible strategy, but, yes, I haven't heard anything
3 more about utilising those options from DNA management.
4

5 Q. And this year, in these - if we could go to page 16 -
6 in these interactions that you had with Mr Howse, did you
7 raise that issue of the viewing platform?

8 A. I don't think I had talked to Justin about it
9 specifically. I talked to John about it. I talked to
10 Kylie about it.
11

12 Q. And in paragraph 107, do you say, are the reasons why
13 you consider giving advice by phone is impractical?

14 A. Yes, and to be up-front, we had a DVI earlier this
15 year where I actually did get a phone call from the
16 pathologist about what samples to take, and that was
17 actually fine and it worked out well because we only had
18 three questioned - we only had three questioned samples,
19 because it turned out to be a very small DVI. So in a very
20 small DVI, it is possible that it can work. But --
21

22 Q. A phone call?

23 A. A phone call, so that --
24

25 Q. I see. But it's in the larger ones that it's more
26 problematic in your view?

27 A. If you have a plane crash with 180 people, that's not
28 really a practical option, I feel.
29

30 Q. Can we go forward to page 17 now and to your concern
31 that you will be deskilled and removed from bone and teeth
32 sampling which arises from, it says in paragraph 109, your
33 advice from Kylie Rika that some members of the management
34 had decided that you would not be involved at all in
35 evidence recovery from bones and teeth. Have you
36 experienced a direction from anyone to not be involved in
37 the evidence recovery section of bones and teeth or is this
38 something you believe might happen in the future?

39 A. I was told that that was - had been flagged as what
40 was going to happen.
41

42 Q. You are concerned about that; is that fair?

43 A. Yes, because I really love this work and I think I do
44 it well.
45

46 Q. And if you were to lose your competency in the
47 evidence recovery side, there would be no-one at the lab -

1 is that right - with that full, start-to-finish, competency
2 dealing with bones right from evidence recovery, analytical
3 and reporting?

4 A. Yes.

5
6 Q. And do you think that would detrimentally affect the
7 lab's capacity, to not have a person who can case manage
8 whole samples?

9 A. I think that there are not many of these cases in a
10 year, compared to our other work, and to have competency
11 that is not siloed in different sections provides a whole
12 start-to-finish expertise, and I think that that's a really
13 valuable thing to have, if you can.

14
15 You can't have that for the normal case work because
16 we are too much of a high through-put laboratory. But when
17 you don't have a high volume of cases coming through, like
18 coronial cases, I think it's a really good thing to have
19 expertise across the board from start to finish, because it
20 will only help, in the end, the families that you are
21 trying to help, if you can have knowledge at every step of
22 the way.

23
24 Q. Just in the middle of there, you said "we can't have
25 that with our ordinary casework". Why is that? Why do you
26 say that?

27 A. We used to have it with all of our casework. It might
28 be possible to do it - I think it's just because of volume
29 of work that we have coming through our laboratory, so
30 currently, with what we have on our plate, for Queensland.

31
32 So to have someone that samples in evidence recovery
33 and then goes into the analytical section and works there
34 and then reports, like, so that's when I'm saying for every
35 case that - you know. But it might be possible - so, for
36 example, I don't work in the analytical section with the
37 bones work, but I do work in evidence recovery, and it's
38 fantastic and it creates some great connections with the
39 other teams.

40
41 So there might be possibilities for having more
42 interaction with the reporting scientists and the evidence
43 recovery scientists to strategise on particular sampling
44 techniques, to benefit everyone, because there is probably
45 information the reporters have that the samplers don't and
46 information the samplers have that the reporters don't, and
47 you can look at SOPs, but there's nothing like that all

1 working together on a case. So one day it would be
2 fantastic to be able to have that with some cases or in
3 some situations.
4

5 THE COMMISSIONER: Q. So at the lab at the moment there
6 is no structure or system or even practice by which the
7 analytical scientists and the reporting scientists come
8 together on an occasion when they can exchange views and
9 discuss mutual problems?

10 A. For analytical and - because analytical and reporters
11 are close, located physically close. So actually I do have
12 quite a few conversations with analytical scientists, but
13 that's not always the case. You know, any sort of meetings
14 or connections that encourage discussions around better
15 processing of anything I think is positive. I mean, you
16 can't spend all day in meetings, of course, but every now
17 and then that type of interaction - we do have whole team
18 meetings for DNA but everyone's very quiet, no-one really
19 speaks, except for the presenters.
20

21 MS HEDGE: Q. Can I turn to a different topic. You have
22 mentioned on page 18, if we can go there, the forensic
23 register. I didn't intend to ask you at length orally but
24 you identified a spreadsheet that logged some errors that
25 you found in the forensic register or bugs that don't
26 assist you as a reporting scientist; is that right?

27 A. I think, yes, some bugs were - or errors were raised
28 when we had the implementation of the new system.
29

30 Q. And that exhibit, AK-37, has been printed in a way
31 that is difficult to read, so I'm just going to replace it
32 here. Can we put on the screen [WIT.0003.0261.0001_R]. Is
33 that your spreadsheet that's AK-37 in your statement?

34 A. I believe so. Now - sorry, I was going to say, this
35 is just an example of the spreadsheet that we were all
36 provided with, just to show the examples of some of the
37 errors that were being logged.
38

39 MS HEDGE: Commissioner, can I tender that document, which
40 is a copy of AK-37 but formatted in such a way that it is
41 possible to connect the two rows, the two columns.
42

43 THE COMMISSIONER: I see, all right. That will be
44 exhibit 67.
45

46 **EXHIBIT #67 COPY OF EXHIBIT AK-37, SPREADSHEET, BARCODED**
47 **[WIT.0003.0261.0001_R]**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

MS HEDGE: Q. What's your understanding about whether action is being taken to correct these bugs?

A. I think that - so at the time the new system was implemented, this is just a snapshot of some of the bugs which came from a bigger spreadsheet, but I know that two scientists in reporting section, for example, were dedicated working through all of these bugs to try and fix everything.

Q. How could they fix them? Surely it's controlled by bdna?

A. Well, I think they were raising these bugs with bdna and then bdna was working through each of the bugs. I don't quite know exactly how it was, but --

Q. Who were the scientists who were doing that?

A. Kerry-Anne Lancaster and also Adrian Pippia.

Q. Thank you. And in your experience, do bugs that get raised - can they be resolved through contact with bdna?

A. I believe so, but I don't actually do that task myself.

Q. I understand.

A. But I have --

Q. Have you seen bugs being resolved?

A. I have. Like, there were quite a few bugs at the time, and so they were constantly trying to resolve them.

THE COMMISSIONER: Ms Hedge, what's the significance of this list? What is the submission going to be at the end in relation to it?

MS HEDGE: Well, I think the significance is twofold. One is that there are some concerns being raised by scientists about it, but the second is whether those concerns have been acted upon, and on the basis of Ms Keller's evidence, then they have been acted on in a sufficient manner. But there may be evidence from other witnesses about that topic also.

THE COMMISSIONER: I see, all right.

MS HEDGE: Q. Can we move, then, to the question of culture. You say in your statement that over - you outline

1 in the last few pages of your statement things that have
2 happened about the culture of the lab over time, including
3 staff surveys, a Livingstones investigation and a Workplace
4 Edge consultation?

5 A. Yes.

6
7 Q. Is it your view that over that period - that is,
8 Livingstones was in 2017, Workplace Edge in 2017, staff
9 surveys in 2021 - what is your view about how the culture
10 has either improved or decreased during that time?

11 A. I would say that since - for me personally, since
12 I came back from maternity leave the second time, the
13 culture has progressively been deteriorating.

14
15 Q. When was that that you came back from maternity leave
16 the second time?

17 A. That was late 2016, but really 2017/18/19/20/21. Not
18 improving.

19
20 Q. And so these external consultants who have come in,
21 have they resulted in improvements in the culture, in your
22 view?

23 A. No.

24
25 Q. And can I have page 19 of the statement on the screen.
26 You took some of these concerns to the previous executive
27 director, John Doherty; is that right?

28 A. Yes.

29
30 Q. And in paragraphs 126 and 127 you set out the issues
31 that you raised with him?

32 A. Yes.

33
34 Q. And did you see - was he able to assist with some or
35 all of those concerns?

36 A. I think that I talked to John about the issues and he
37 was very happy to listen. So he was able to talk to me
38 about or listen to what I had to say, but whether there
39 were any positive outcomes, I would - for me personally,
40 not really. It did help to be able to talk to someone
41 about what was going on, from my personal perspective.

42
43 I initially went to John when the coronial meetings
44 were stopped, because I was very upset. I didn't
45 understand the reasons and I wanted to raise it with
46 someone, and I had raised it with Justin, the direction had
47 come from Cathie, so I didn't have anywhere else to go,

1 really. Kylie was very sympathetic and very good at
2 listening, but Justin implemented the change. So, yes,
3 I talked to John about that and, yes, so I did find it
4 helpful to have someone to listen, but then he left and as
5 far as I understand - I don't know what happened at that
6 level, whether - you know, I did talk to John a few times
7 and I did talk to him about that mortuary document. He
8 highlighted a few changes. He said, "Focus on the 'where
9 possible' because so if you are requested to go down to the
10 mortuary by" - so he provided some guidance, so that's
11 helpful. But I guess you look at outcomes, and when you
12 have problems, for me, I want to see some outcomes and
13 improvements, and maybe there were some positive aspects
14 there, talking to John, but, then he left.

15
16 Q. And I wasn't going to go through with you everything
17 you have written in your statement but you have written in
18 your statement what cultural issues arose and some of them
19 are there in paragraph 127. How do you think those
20 cultural issues in the lab have affected you in doing your
21 best work in your role?

22 A. Well, I get mixtures from bones now. That's not okay.
23 And I have raised the extraction problem at the time and
24 I was told there was nothing wrong. So I've raised
25 problems and been dismissed, and it's quite disheartening
26 in the long term. You will keep going, you will have the
27 fire in your belly and you keep raising things, but
28 eventually you sort of just do the best with what you can,
29 which is not ideal. But I have tried my best along the
30 way.

31
32 Q. Tried your best to --

33 A. Raise issues as I felt necessary.

34
35 Q. But you feel disheartened, did you say, about that?

36 A. I do.

37
38 Q. Do you feel like that now?

39 A. I do. Like, when I get up here and talk about bones,
40 it's quite upsetting, actually.

41
42 Q. Can I just deal with one correction that you told me
43 in the lunchtime, it's on page 1 of your statement in
44 paragraph 6. The first date there, "previously from 1996
45 to 2004" - that should be 1997; is that right?

46 A. Yes.

47

1 Q. We'll make that correction.

2 A. Thank you.

3

4 Q. Finally, can we turn over on to page 2, and zoom in on
5 paragraphs 7, 8 and 9. This relates to the DIFP process of
6 which we have heard much in these hearings. You say in
7 paragraph 8 that you do not consider the DIFP wording in
8 statements was correct, and in paragraph 9 you say you have
9 never been completely comfortable with the process but you
10 were informed by Mr Howse and others that the QPS were
11 aware of the situation, it was a routine process and there
12 was nothing to worry about?

13 A. Yes.

14

15 Q. Do you remember when you had that - well, was it
16 a conversation with Mr Howse or was it a written piece of
17 correspondence?

18 A. I recall thinking, "Okay, the QPS are aware of this
19 process." I didn't have a lot to do with the lead-up to
20 this, the implementation, so I, in good faith, thought,
21 "Okay, the QPS know about this, the science behind it must
22 be valid, on we go", in good faith.

23

24 And I did have a case, and I have mentioned it in
25 paragraph 10, where I had a priority one case and I had
26 a DIFP sample, and I actually did send an email about that,
27 and I didn't get a reply from Justin about the DIFP sample,
28 but it turns out the police actually did request a rework
29 for that particular sample.

30

31 Q. Yes, I understand. But you say in paragraph 9 that
32 Mr Howse said to you - well, tell me, did he say to you,
33 "The QPS are aware of this situation. It's a routine
34 process and there is nothing to worry about"?

35 A. That was the repeated thing that was said.

36

37 Q. I see. So it's not - in conversations?

38 A. Well, it was in some conversations.

39

40 Q. Yes. By Mr Howse specifically?

41 A. Yes. But I can't - I can't specifically remember,
42 but, you know, you do raise these things and, you know,
43 that's the repeated answer that you get.

44

45 Q. And when you say "others in FSS", can you now say who
46 else said those things to you?

47 A. The main person I do remember was Justin talking about

1 it in that way. I mean, I think that was the whole
2 management position. But I didn't know there were other
3 managers that had other thoughts or - I wasn't aware. It
4 wasn't until time went on that it became a bit clearer
5 that - and as more results started to pop up, that you're
6 thinking, "I'm getting a useable DNA profile here. What's
7 going on?"
8

9 Q. And perhaps can we move to page 3 and paragraph 21,
10 and is this what you are referring to later on, the raising
11 of things in November 2021 about getting useable samples
12 from DIFP reports?

13 A. Yes, that's one example. And I'm pretty confident in
14 one of the survey responses that I have annexed in my
15 statement, the whole of reporting 2 at the time actually
16 had that summarised as one of our concerns was - because
17 when the 3500 was implemented, it was much more sensitive.
18 I've already talked about that briefly with bones being -
19 but I also had a cold case at the time, and I interpreted
20 a sample for a cold case just prior to the implementation
21 of the 3500 and then just after the implementation of the
22 3500, and I went from obtaining a three-person mixture to
23 a four-person mixture. So we were getting a lot more -
24 I mean, it's not - it's another contributor in that scene
25 sample, but it's still one more contributor. So the
26 sensitivity was different, it was clearly more sensitive
27 with the 3500, and I had that in the back of my mind.
28

29 Q. And what do you think that meant for the threshold,
30 the DIFP threshold?

31 A. They needed to be looked at again. You've got a new
32 instrument, and again that's a scientific thing. You
33 implement a new process, new instrument, you have to look
34 at things that that's going to affect. And so you've got
35 thresholds based on the 3130 and then you've got a new
36 instrument, well, you need to look at the thresholds again
37 based on a new instrument.
38

39 MS HEDGE: Thank you. Thank you, those are my questions.
40

41 THE COMMISSIONER: Thank you. Mr Hunter?
42

43 <EXAMINATION BY MR HUNTER:
44

45 MR HUNTER: Q. Ms Keller, I'd like to say to you I act
46 for the Queensland Police Service. I just want to ask you
47 some questions about the cleaning protocol for the bone

1 crushing equipment. Project #148 was said to optimise the
2 cleaning protocol for the vials that were used; correct?
3 And I'm looking at your exhibit AK-21, which Mr Woolridge
4 is [WIT.0003.0456.0001].

5 A. Yes.

6
7 Q. If we can please go to, firstly, page 4 of that
8 document, we can see the various staff who approved or
9 endorsed it. Your name is not there. Were you involved in
10 this project?

11 A. No.

12
13 Q. We see Mr McNevin's name there, though; correct?

14 A. Yes.

15
16 THE COMMISSIONER: I think, Mr Hunter, the people who sign
17 it are what's called the management team, and Ms Keller
18 isn't part of that.

19
20 MR HUNTER: I understand, thank you.

21
22 Q. Can we go, please, then, to the abstract on page 7, in
23 particular at the bottom half of the page. Do you see the
24 second-last paragraph identifies the concern about damaging
25 the stainless steel components of the crushing vials by
26 causing rusting or pitting?

27 A. Yes.

28
29 Q. It makes them far more difficult to clean properly,
30 increasing retention of contaminating DNA. Now, is it your
31 evidence that that concern applies not only to the crushing
32 vials but also to any tools that might be used in the
33 extraction or crushing process.

34 A. Yes.

35
36 Q. Also, the abstract observes that the project found
37 that Tergazyme was the most effective cleaning agent, but
38 also using the special cycle in the industrial dishwasher
39 that the lab has offered equivalent performance; correct?

40 A. Yes.

41
42 Q. And you understand that the special cycle on that
43 dishwasher involves the use of some proprietary Miele
44 detergents?

45 A. Yes, and I must admit that my knowledge in that
46 particular area is limited, but yes, I know that that
47 process is - yes.

1
2 Q. Thank you. The results of the study - and just
3 correct me if I've misunderstood this - do you understand
4 that saliva was applied to the vials and to some stoppers
5 and allowed to dry?

6 A. Yes.

7
8 Q. And they were then washed according to a number of
9 different protocols, and were they then sampled to see
10 which of the items produced a DNA profile?

11 A. Yes.

12
13 Q. And the results are on page 16, please. On this page,
14 we see the number of alleles that were identified post
15 clean, according to the various cleaning protocols?

16 A. Yes.

17
18 Q. And we can see that (b) Tergazyme and (e) the
19 dishwasher, were the lowest. TriGene was the worst?

20 A. Yes.

21
22 Q. And it was worse than simply using Nanopure water?

23 A. Yes.

24
25 Q. There was no use --

26
27 THE COMMISSIONER: Sorry, Mr Hunter, I'm not with you yet.
28 Where did you get - run me through that again?

29
30 MR HUNTER: Q. If you have page 16, if we look at that
31 graph, that graph shows that when these washed vials or
32 washed items of equipment were then sampled and tested for
33 residual DNA after they had been washed, we see the number
34 of alleles that were found, depending upon which of the
35 methods was used, which of the cleaning agents was used;
36 correct?

37 A. Yes.

38
39 Q. And TriGene performed the worst, because it was the
40 one that left the most or the highest number of alleles?

41 A. Yes.

42
43 THE COMMISSIONER: I'm sorry, I must be on the wrong
44 document or something, because I'm looking at the page that
45 has 4.2 "Experiment 2 inhibition test", or not? I must be
46 on the wrong page.

1 THE WITNESS: There is a page 15.

2

3 MR HUNTER: It is a page with 16 in the top right-hand
4 corner.

5

6 THE COMMISSIONER: I see. Page 16 in the top right-hand
7 corner, page 15 on the bottom.

8

9 MR HUNTER: I'm sorry, my mistake.

10

11 THE COMMISSIONER: Thanks. Just let me look at it now.

12

13 MR HUNTER: Of course.

14

15 THE COMMISSIONER: So the point is that TriGene was worse
16 at eliminating profileable DNA than even pure water. Is
17 that the point, Mr Hunter?

18

19 MR HUNTER: Yes.

20

21 Q. This study did not evaluate the use of either bleach
22 or ethanol?

23

24 A. No.

25

26 Q. Again, at removing residual DNA?

27

28 A. No.

29

30 Q. And to your knowledge, have there been any other
31 studies that have evaluated the use of those items, bleach
32 and ethanol?

33

34 A. No. I think Tim references another study that was
35 done in the laboratory, on page 20 at the bottom, I think.
36 There was a study done - under 8, point 2, there was
37 a study done, Project #153, verification of cleaning
38 reagents. But that doesn't actually - that doesn't talk
39 about bleach or ethanol.

40

41 Q. But if we could then go to, please, Mr Woolridge,
42 [WIT.0003.0457.0001], which is AK-22, this is the minor
43 change you have spoken about. So there are two cleaning
44 methods that are specified there; is that right?

45

46 A. Yes.

47

48 Q. The first is using the special cycle on the
49 dishwasher?

50

51 A. Yes.

52

1 Q. But that's only for some of the equipment?

2 A. That's only for the cylinder and the bungs and the
3 impactor.
4

5 Q. But the other tools, the chisels and so forth, are
6 cleaned pursuant to this other method using bleach and/or
7 TriGene, followed by ethanol - TriGene being the least
8 efficacious reagent in the Project #148.

9 A. Yes.

10
11 Q. And you are not aware of any other study that
12 attempted to validate the use of bleach, bleach on its own
13 or bleach mixed with TriGene?

14 A. I'm not aware of any studies. There could be some but
15 I'm not aware of it. I mean, we do use bleach for the -
16 and ethanol for the standard laboratory equipment, which
17 I used to do myself, and it's very effective, very good.
18 But on the equipment that we use, which is specific to bone
19 sampling, it does cause rusting.
20

21 Q. And obviously the presence of these other profiles is
22 a significant issue as far as this work is concerned?

23 A. Yes.
24

25 Q. The other profiles - that is, the contaminating
26 profiles - are they likely to be residue from previous
27 samples?

28 A. So we have for one of the cases that - it was actually
29 a linked case, and I think all up there were four bones for
30 that one case across two QP cases, and we had a look at the
31 low-level peaks that were coming through, and it might be
32 for each of the aliquots we're looking at, it might be one
33 or two. So there is sort of one here and one there. But,
34 anyway, we pulled out all of those low-level peaks and did
35 conduct a quality search, but we weren't able to have
36 a meaningful outcome. So we did look into it.
37

38 Even looking at my DNA profile, for example, if I'm
39 conducting the sampling, I think it's important to rule
40 have I contaminated a sample, and we don't actually conduct
41 those checks ourselves. I do have my DNA profile on
42 record, I think most staff members do, and from time to
43 time I actually will look into that, but I've never had
44 a situation where that's been an issue. But I know our
45 quality team, we did go to the quality team about this and
46 Kirsten Scott did do what she could. I don't know exactly
47 the specific search she did, but she did look into it.

1
2 Q. Is it possible to know, for example, which vials were
3 used for previous analysis?

4 A. We could do that. So what we do when we - so in terms
5 of the vial cleaning, to be honest, I'm actually not
6 concerned about that, because it seems to be cleaned well,
7 and what we do as part of the sampling process, when we put
8 the - before we put the bone fragments in the cylinder, we
9 actually swab the inside of the cylinder, the bung endings
10 and the impactor, and then we call that our equipment
11 control, and that gets put in with the actual bone
12 extraction sample. So it goes in with the aliquots of
13 bone.
14

15 The reason that Tim initially did this project, that's
16 Project #148, was because we were seeing the odd peaks in
17 the cylinder, and so he was just like, basically, checking
18 in, is there something that we can do better, what is the
19 problem, and it's because we started using PP21 and
20 a different system, we used to use Profiler Plus, and
21 I think that's what triggered him to do this, which is good
22 science, I think. But currently, when we do the equipment
23 controls, we might get one or two peaks every now and then,
24 but it has - it's coming back quite clear, no DNA - because
25 we run those through to profiling.
26

27 Q. So are the tools also swabbed for control purposes?

28 A. There's environmental cleaning and as part of the OQI
29 we are going to be looking at that. So yes, you're right,
30 we need to consider that as well.
31

32 Q. But when you do find peaks, you are not seeing
33 a sufficiently meaningful number of them to enable you to
34 compare them either with previous samples that have been
35 analysed or with known staff profiles?

36 A. Yes, we - no, we haven't been - it's really - and
37 I want - you know, I want to know where this is coming
38 from, so we haven't been able to make that connection at
39 this point in time.
40

41 Q. And you do have a staff elimination database, don't
42 you?

43 A. We do.
44

45 Q. Does that include mortuary staff?

46 A. I don't - I don't believe so. I don't know.
47

1 Q. Are mortuary staff involved in handling bones in a way
2 that might lead to contamination?

3 A. They are, and it's always a very important
4 consideration when you are sampling the bones to take the
5 ends off the bones.
6

7 Q. That is, you don't sample the ends?

8 A. You don't sample the ends. Like we do everything we
9 can to avoid it. With that case that we had two - like
10 a tooth sample and also bone sample, and then it got
11 independently testified by another laboratory and came back
12 single source, that was - I believe they sampled it from
13 the bone, and they didn't pick up any contamination. So if
14 it was a mortuary staff member that was contaminating the
15 bone - and I'm not saying that's not possible in every
16 case, but for that particular one - I would have expected
17 them to possibly pick it up, but it depends on their
18 cleaning regime and we're not privy to that information for
19 that particular laboratory.
20

21 MR HUNTER: Those are my questions, thank you.
22

23 <EXAMINATION BY MR RICE:
24

25 MR RICE: Q. Just on that same subject, Ms Keller, your
26 attention was drawn to Project #148, and in fact you were
27 shown parts of the document. The outcome of that, can
28 I suggest, was to recommend the use of the dishwasher as
29 the primary cleaning method for the bone crusher vials?

30 A. Yes, I believe that was the recommendation. Sorry,
31 what page are you on?
32

33 Q. Internally, it's page 19.

34 A. Okay, yes.
35

36 Q. You will see there are two recommendations. And it
37 perhaps goes back to that graph that Mr Hunter took you to?

38 A. Yes.
39

40 Q. Which showed the comparable, I will call them, sizes
41 in the graph, roughly speaking, in terms of effectiveness;
42 is that correct?

43 A. Yes.
44

45 Q. And Tergazyme, which had been used, could continue to
46 be used as a viable back-up, was recommendation 2. Now, as
47 it transpires, tell me if you know this, there was

1 a significant stockpile of Tergazyme at the laboratory
2 available to be used for this purpose?

3 A. Yes.

4
5 Q. And it continued to be used for that reason, did it
6 not?

7 A. Yes, we used it until I think it was this change was
8 implemented with the cleaning.

9
10 Q. But I think you have even said yourself that one of
11 the problems with Tergazyme was that it's environmentally
12 unsound?

13 A. Yes.

14
15 Q. Can I suggest to you this, in fairness to Mr McNevin,
16 who is not here and counsel assisting can't tell me at this
17 stage if he is to be called - can I suggest that his
18 attention was drawn to the continued use of Tergazyme in
19 mid-June of 2019? Do you know anything about that?

20 A. No.

21
22 Q. And that commenced a process of consideration as to
23 what was to be done concerning the continued use of that
24 substance, as opposed to the use of the dishwasher?

25 A. Mmm.

26
27 Q. Do you know anything about that?

28 A. No.

29
30 Q. Well, can I suggest to you that, Mr McNevin's
31 attention having been drawn to it in mid-June 2019, he
32 prepared a briefing note for the attention of the
33 management committee on this subject. Do you know anything
34 about that?

35 A. No.

36
37 Q. And in the briefing note he set out a history of
38 Project #148?

39 A. Mmm-hmm.

40
41 Q. Another project, #153, and making a suggestion which
42 resulted in the instruction which you've extracted in your
43 statement at paragraph 68. You don't know anything about
44 that?

45 A. The lead-up to him adding that comment in the change
46 register?

1 Q. Yes.

2 A. I don't know about the background.

3

4 MR RICE: Commissioner, I suspect this is not presently
5 available, although the Commission has it. It would be
6 useful to fill in some more of the history of this subject
7 if it could be obtained. I will give you the document
8 number. It is [FSS.0001.0056.8821].

9

10 Q. Have a look at that, Ms Keller. Have you ever seen it
11 before?

12 A. No.

13

14 Q. It is an email, is it not, from Mr McNevin to - and
15 the addressees, I think you will agree, are members of the
16 management team?

17 A. Yes.

18

19 Q. Including the two leaders of the reporting teams,
20 Ms Scott and Ms Rika - sorry, Ms Johnstone and Ms Rika?

21 A. Yes.

22

23 Q. Did either of those reporting team leaders ever
24 mention this briefing note or the outcome of it to you?

25 A. No.

26

27 Q. So this is all news to you?

28 A. Yes.

29

30 Q. Do you see in the second paragraph, then, Mr McNevin
31 identifies that it has recently been brought to his
32 attention that there were issues with storing of Tergazyme
33 in the bone room and that it shouldn't be disposed of down
34 the sink, and he goes on to refer to two validations. We
35 know the first one, #148. He refers also to Project #153,
36 which apparently did involve a verification of TriGene
37 Advance. Do you know anything about that?

38 A. I think that may - was that referred to in the - no,
39 it wasn't, maybe, just checking. Yes, it is referred to on
40 page 20 of the other project.

41

42 Q. You see he informs the management team that Project
43 #153 found that TriGene Advance and Decon were as effective
44 as bleach as cleaning agents. You have no reason to
45 dispute that, have you?

46 A. I was aware that there was another cleaning project -
47 proposal, sorry. Okay, so that cleaning was --

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

Q. Do you dispute that sentence? Do you dispute it?

A. If that is - let me just read it carefully.

THE COMMISSIONER: What's the date of that email?

MR RICE: 21 June 2019, Commissioner.

THE COMMISSIONER: Thank you.

THE WITNESS: Okay, yes.

MR RICE: Q. Do you dispute that sentence?

A. No, if that's the finding from the project.

Q. And as we've already established, he goes on to say that the project proposal wasn't immediately implemented because of the quantity of Tergazyme in stock. And then in the next paragraph he goes on to describe that in other laboratory areas, bleach or TriGene followed by 70 per cent ethanol was the cleaning method employed, et cetera. So can I suggest to you that in terms of the use of bleach or TriGene followed by 70 per cent ethanol, Mr McNevin was not acting on some whim in including that in the instruction which he - or the change management, the change proposal, but that it was derived from other protocols in place at the time?

A. It's good to see this laid out because I wasn't aware of that. I --

Q. Well, I --

A. Sorry for interrupting you.

Q. No, that's all right.

A. I just - I will have to say that the equipment used for bones is unique. So I understand - because I used to use bleach and ethanol all the time, and flaming instruments is another thing we do. So currently, just things like chisels and saws are not what we routinely clean with the bleach and ethanol, but we're doing it. We're doing it because this is the process that has been implemented and so we are trying our best. But it is causing rusting of the equipment.

Q. Tell me if you are aware of this: that there is a process document entitled "Examination of post-mortem and associated samples from deceased persons"; do you know of

1 such a document process?

2 A. Is that a DNA SOP or is that for another department?
3 Has that been archived.

4
5 Q. Well, perhaps you could tell me. My understanding is
6 it is an SOP in place at the laboratory. If I can give the
7 number, we'll see if it is available, Mr Operator.
8 [FSS.0001.0053.1054]. Not available? No.

9
10 THE COMMISSIONER: Do you have a copy of it there?

11
12 MR RICE: Yes. It's a bit marked but I'm happy to show it
13 to the witness if that's --

14
15 THE COMMISSIONER: Yes, show it to Ms Keller and then
16 I can have it a look at it. Mr Associate, can you do that?

17
18 MR RICE: Q. Is that an FSS document?

19 A. Yes, yes.

20
21 Q. It is an SOP, isn't it, or at least a procedure?

22 A. Yes, and I am a visual person, so it's good to see it.

23
24 THE COMMISSIONER: Q. You are what?

25 A. I need to see things before I can really get my head
26 around. Yes, I am aware of it.

27
28 MR RICE: Q. That's okay. I tried to show it to you but
29 it's not available so we're doing it this way.

30
31 THE COMMISSIONER: Ms Keller, I might just have a look at
32 it for a minute and then I will give it back to you, just
33 so I have some context.

34
35 MR RICE: Q. Towards the back, I think it's 8.6 or
36 thereabouts, and it's probably got a bit of highlighting on
37 it to direct your attention to it, can you read out --

38
39 THE COMMISSIONER: Is it page 21 you want?

40
41 MR RICE: I don't know now, Commissioner, because I only
42 have one copy and the witness has it.

43
44 THE COMMISSIONER: Is it the one about ethanol?

45
46 MR RICE: Yes.

47

1 THE COMMISSIONER: Page 21.

2
3 MR RICE: Q. Could you read it out?

4 A. So under "Chisels, hammers and chisel blocks", "Prior
5 to and after use, chisels, hammers and chisel blocks need
6 to be thoroughly cleaned with bleach and ethanol".

7
8 Q. So can I suggest that what was implemented in
9 Mr McNevin's instruction, or at least his change record, is
10 what we see is part of the standard operating procedure for
11 this type of equipment specifically; is that not correct?

12 A. Well, Allan, Mr McNevin, implemented the change and
13 then it was put in the SOP after, so he --

14
15 THE COMMISSIONER: That's a 2020 document, Mr Rice.

16
17 MR RICE: Yes, I understand, but it's current to the
18 regime which has been in place. I appreciate that it
19 postdates the --

20
21 THE COMMISSIONER: You say it might have - you go ahead.
22 You know what you are doing. You go ahead.

23
24 MR RICE: Q. I'm just drawing attention, you accept that
25 that is now part of the standard operating procedure?

26 A. This is what we do now, and Allan's note that I have
27 referred to you is when we started doing that, and that is
28 currently in the active SOP, yes.

29
30 Q. Well, if we take what Mr McNevin said in his email of
31 21 June to be correct about Project #153, there would
32 appear to be a reasonable basis for the use of TriGene as
33 a cleaning agent; is that right or not?

34 A. Well, I think it's important with - because if you
35 take into account to Project #148 - I appreciate what you
36 are saying. We deal with different body fluids, whether
37 it's bone, blood, saliva, and with proposal 148, there
38 appears that the saliva could be interacting with the
39 cleaning agent, and that's why we obtained those results.

40
41 I'm not sure what cleaning fluids Project #153 was
42 based on, to be honest, because I haven't read through it,
43 but I think that when it is a specific process, it's very
44 good to look at what body material you are dealing with.
45 So we know we're going to be dealing with bones and I do
46 think it's important to actually check that whatever the
47 cleaning regime is works for - you know, you've got bone

1 powder all over those chisels, so can you clean it,
2 effectively, using bleach and ethanol? And that is what
3 we're doing currently because that is what is in the SOP
4 and we're following the SOP because that's what we do.
5

6 Q. You question it. Is that all you are saying, you
7 question the use of it?

8 A. I am noticing that the bleach is causing the rusting
9 and then that's making me wonder, am I cleaning this as
10 well as I possibly could, because we're seeing the
11 mixtures. So I'm basing - my questioning is based on what
12 I'm seeing. And I'm concerned. I think everyone in this
13 room would probably be concerned with what I'm saying, and
14 I'm just trying to, from a step-by-step process, think
15 through everything that could be contributing.
16

17 Q. Well, you'll be looking into this as part of your OQI
18 resolution, won't you?

19 A. You're right, yes.
20

21 Q. So you are not at this stage able to give us more than
22 a hypothesis which you intend to investigate; is that
23 right?

24 A. Yes, and that would be possibly a flow-on experiment
25 that, you know, okay, so we're getting some interesting
26 information from these projects: how does that look with
27 bone powder and can we clean that properly, or is saliva,
28 you know, interacting with TriGene in some way and causing
29 it to not work the way you would expect it to work?
30

31 Q. What the outcome of your further investigation may be
32 remains to be seen, but if we just go back, in terms of
33 process --

34 A. Yes.
35

36 Q. -- do you accept now, from what you have seen, that
37 Mr McNevin was not acting on some whim of his own and not
38 acting unilaterally in making this change record but,
39 rather, he gave a briefing to the management team who all
40 voted on it?

41 A. And I understand. He would have done this with some
42 sort of background, and I wasn't privy to it, but just -
43 I note that that is a cleaning regime change and this is
44 what it means for me when I'm sampling bones, yes.
45

46 MR RICE: I wonder if counsel assisting would tender the
47 email, [FSS.0001.0056. --

1
2 THE COMMISSIONER: You can tender it.

3
4 MR RICE: I will tender it.

5
6 **EXHIBIT # 68 EMAIL FROM MR McNEVIN TO THE MANAGEMENT TEAM**
7 **DATED 21 JUNE 2019 RELATING TO TERGAZYME, BARCODED**
8 **[FSS.0001.0056.86821]**
9

10 THE COMMISSIONER: Q. I seem to recall that bleach is an
11 oxidant? It doesn't matter. Somebody else will tell us.
12 A. I do know that it breaks down DNA very well, though.

13
14 MR RICE: Q. There was one other thing I wanted to take
15 you to and it concerns the attendance at the mortuary that
16 you spoke of. It relates to paragraph 98 of your
17 statement. Just take a moment to have a look at that and
18 then we will go to the exhibit that you reference in that
19 paragraph. Do you see your paragraph 98 commences:

20
21 *On 30 March 2021, FSS management directed*
22 *scientists not to attend the mortuary to*
23 *assist pathologists ...*
24

25 et cetera. And then you go on to reference an exhibit,
26 being AK-31. Perhaps if we go to that. If we go to page 2
27 of that [WIT.0003.0466.0001_R] halfway down that page you
28 will see - just down a bit, you will see an email from
29 Cathie Allen to a very long list of people. That email is
30 dated 30 March 2021. Is that the email which you refer to
31 in the first sentence of paragraph 98 of your statement?
32 A. Yes, it would be.

33
34 Q. Well, could we go over to page 3 to the text of the
35 email. Just read that to yourself, please. Tell me, where
36 do we find in that email an FSS management direction that
37 scientists not attend the mortuary?

38 A. I would have to say that when you read the document -
39 okay, so Cathie says here is some information regarding the
40 risk assessments that have been undertaken.

41
42 Q. That's not a direction, is it?

43 A. I wouldn't go to the mortuary following that email and
44 this information unless I had permission from management.

45
46 Q. Yes, but I'm just asking you, you have opted to use
47 the words "FSS management directed scientists not to attend

1 the mortuary", and you told us this is the email where that
2 direction is to be found, and I'm suggesting to you there
3 is no such wording?

4 A. Mmm, I would not - I would not feel comfortable
5 going - so maybe - maybe that's not the right word to use,
6 but I can tell you that previously, with the coronial
7 meetings, there was a direction there. So maybe that's not
8 the right word to use, however, I wouldn't dare go to the
9 mortuary without permission.

10
11 THE COMMISSIONER: Mr Rice, have you looked at the
12 memorandum that's --

13
14 MR RICE: I'm just going to go to that, Commissioner.

15
16 THE COMMISSIONER: Because you would have to take her to
17 that to get a fair picture, I think, the second-last
18 paragraph I'm talking about.

19
20 MR RICE: I will do that.

21
22 Q. Perhaps if you would go to page 5 of that exhibit. To
23 be fair, Ms Allen's simply referred to an attachment in her
24 email, did she not, and this is the attachment?

25 A. This is the attachment that Ms Allen was referring to.

26
27 Q. Yes. "Mortuary staff to direct inquiries".

28
29 THE COMMISSIONER: You had better read it, Ms Keller, so
30 that you take your mind back to whatever it was you were
31 thinking when you received it and sent that email to
32 Ms Rika.

33
34 THE WITNESS: I think my --

35
36 MR RICE: Q. I haven't asked you a question yet.

37 A. Oh, okay, sure.

38
39 MR RICE: Q. Might I ask you this: if you look at the
40 second and third paragraph of that, do you agree that it
41 appears that a meeting was held amongst stakeholders, being
42 mortuary staff, forensic DNA analysis staff, someone called
43 Casey Gardener from HSQ Safety, to discuss risks involved
44 in entering the mortuary?

45 A. Yes.

46
47 Q. And it appears - correct me if I am wrong - from the

1 first sentence of the next paragraph, that Mr Cass, the
2 mortuary manager, expressed a preference that DNA analysis
3 limit the number of people entering the mortuary. It was
4 his idea, his preference, was it not?

5 A. I don't know. I can read the document but I don't
6 know.

7
8 Q. There is no reason that you know of not to take it at
9 face value, is there?

10 A. I take it on - I mean, it's important to not have many
11 people in the mortuary. I understand that, so I'm sure
12 that from a - that's - that position is not unexpected from
13 Damien.

14
15 Q. Well, it is pretty clear, isn't it, that the
16 limitation going forward from this point was the product of
17 consultation involving a range of stakeholders about
18 occupational health and safety issues, in which the
19 mortuary manager expressed the view or expressed
20 the preference that DNA analysis limit the number of people
21 entering. That's how it all came about, do you agree?

22 A. I agree but --

23
24 Q. It's not to do with you personally, to somehow limit
25 the exercise of your skills, per se. You understand that?

26 A. I do understand that, and I do appreciate that it's an
27 important aspect to our work, workplace health and safety.
28 I do think that there is scope - I do feel like it was in
29 some way a direction from the management not to go to the
30 mortuary, and here - there's a number of reasons here.

31
32 Q. Justifiable reasons, are they not, cogent reasons?

33 A. Yes, I do - look, I do agree that it's important to be
34 very selective about who goes down there when. But
35 I don't - and I did go to discuss this with John, because
36 I was concerned if it was just a blanket rule for all the
37 time, because there are some situations where I feel it is
38 very invaluable to have input from scientists working in,
39 for example, a large DVI. I mean, if a plane went down
40 tomorrow and you have a really traumatic situation to be
41 dealing with, you're going to want to have some help from
42 a lot of different disciplines. So - you know, but it's at
43 the request, and this is what John made clear "where
44 possible", but if a pathologist can request the presence of
45 someone who is able to cope fine in that environment, if
46 they feel it is necessary, and, for example, the safe
47 platform can be utilised, I think there is still a place

1 for assistance to be given if requested.

2
3 Q. Well, does this not allow for that eventuality?

4 A. It --

5
6 Q. In the third paragraph of that document, in the final
7 sentence which reads:

8
9 *The meeting attendees agreed that*
10 *undertaking a Risk Assessment would*
11 *identify the need for Forensic DNA Analysis*
12 *staff to enter the mortuary and ensure that*
13 *only essential business was being*
14 *conducted.*

15
16 A. Sorry, did you say paragraph 3?

17
18 Q. Yes.

19
20 THE COMMISSIONER: The problem is, Mr Rice, that the
21 opinion's given in the second-last paragraph that the
22 attendance of forensic DNA analysis staff would be
23 eliminated. They would only be allowed to enter a meeting
24 room.

25
26 MR RICE: Well --

27
28 THE COMMISSIONER: So the mortuary people wanted to
29 restrict entry to those who had business, and they had to
30 be inducted and vaccinated and trained, which makes a lot
31 of sense, but the attitude of FSS management, the executive
32 director and the managing scientist, was that their
33 preferred view was to eliminate staff from entering. That
34 was their preferred control.

35
36 MR RICE: And the managing scientist of the coronial
37 services stream as well that was also consulted.

38
39 THE COMMISSIONER: But the managing scientist for Police
40 services' stream and coronial services is who, Ms Keller?

41
42 THE WITNESS: Cathie Allen.

43
44 MR RICE: That's all I had, thank you.

45
46 THE COMMISSIONER: Mr Hickey?

1 <EXAMINATION BY MR HICKEY:

2
3 MR HICKEY: Thank you, Commissioner.

4
5 Q. I only have a few short questions. Ms Keller,
6 I appear for Cathie Allen and for Justin Howse. Could
7 I ask a few questions, please, just by way of clarification
8 of matters that are set out in your statement.

9
10 Mr Operator, could we turn, please, to the statement
11 at paragraph 77, which is on page 12 [WIT.0003.0435.0001 at
12 0012]. Here you give some evidence about a meeting that
13 you and Ms Wilson had with Mr Howse in his office about
14 some concerns you had in the change to bone/teeth
15 extraction method; do you recall that?

16 A. I do.

17
18 Q. Your evidence is that you told Mr Howse about some
19 things that you had observed in respect of a case that you
20 were then working on. You give some evidence about what
21 Mr Howse said to you, and then you say finally by way of
22 conclusion "he dismissed our concerns". Could I ask you,
23 please, to explain what is it that you say constituted his
24 dismissing your concerns?

25 A. So I went to Justin with Jacqui because my concerns
26 were that, with an active case, the results that we were
27 getting were not what I would expect, and I was alarmed
28 because I had worked out that a new process had been
29 implemented and we were not getting the results that
30 I would expect to be getting from the same stock bone
31 powder. And it was quite a significant drop in the
32 quantification value. So the concerns I had was that this
33 process that had been implemented wasn't - wasn't working
34 as well as the process that we had utilised for the first
35 extraction of the first four aliquots.

36
37 Q. But how did he - I'm sorry, were you finished?

38 A. Oh, I was just - how did he dismiss our concerns?

39
40 Q. Yes.

41 A. We were concerned about the difference and Justin
42 basically said - and that was the best recollection I could
43 put down, because it was quite a while ago - that the
44 differences were due to sample-to-sample variation and
45 there wasn't a problem. So I - we both raised a problem
46 and Justin said it was due to sample-to-sample variation
47 and so, therefore, there wasn't anything to be concerned

1 about.

2
3 Q. Could I just break this down this way: you came to
4 him with a particular opinion based on some observations
5 that you had made. Do you agree with me so far? He
6 listened to the things that you had to say?

7 A. Yes, he did.

8
9 Q. He entertained your concerns?

10 A. He listened to what we had to say.

11
12 Q. He didn't rush you out of his office; he let you
13 explain them until you were satisfied you had explained
14 your concerns?

15 A. I believe I managed to get my concerns forward
16 properly, yes.

17
18 Q. And then ultimately, having heard you explain your
19 concerns, he expressed a different opinion; do you agree
20 with that?

21 A. Yes, I would agree with that.

22
23 Q. And so when you say he dismissed your concerns, do you
24 simply mean he reached a different conclusion?

25 A. Well, if I raise my concerns and someone doesn't agree
26 with it, then if that's - that - yes, if I raise my
27 concerns and it's not taken on by someone else or someone
28 else doesn't agree with me, then I feel dismissed.

29
30 Q. I'm not trying to be difficult about this, but
31 lawyers, regrettably, spend their lives obsessing over the
32 meanings of words?

33 A. Mmm.

34
35 Q. "Dismisses" contains, can I suggest to you,
36 a negative, a pejorative connotation.

37 A. At the time that I raised this issue, I was quite
38 concerned and - because the quantitation value went from
39 0.0 - it was around 0.04 down to, and it varied.
40 I actually have a spreadsheet that has the values in it in
41 an email, and so the difference was so significant to me
42 for the cases that I've worked on. I remember it clearly
43 because it was such a significant difference that I felt
44 dismissed by Justin.

45
46 Q. You would accept that your feeling was of having been
47 dismissed --

1
2 THE COMMISSIONER: I understand why you are putting that,
3 putting those questions about meaning, but from my point of
4 view, it appears that he dismissed their concerns. The
5 question is whether he was justified in dismissing them, in
6 that he is the ultimate arbiter, he is the team leader, so
7 he is entitled to dismiss their concerns if he feels they
8 are unjustified. Do you see what I mean?
9

10 MR HICKEY: I do of course, Commissioner, but the concern
11 is again that there is this repeated suggestion throughout
12 the course of lots of evidence that's in writing that there
13 is this wholesale approach by Mr Howse and Ms Allen to
14 simply - and "dismiss" is a good word for it, any
15 alternative suggestion. Of course the Commissioner would
16 appreciate there is as difference between forming the view
17 on the basis of some evidence that's brought to you,
18 perhaps - and I don't necessarily make this submission but
19 for the sake of argument - perhaps wrongly, making a wrong
20 decision, and not honestly turning one's mind to the issue
21 that is brought to them in order to dismiss it.
22

23 THE COMMISSIONER: And that's the substance of the matter.
24 That's what is of interest to me is what I'm saying to you,
25 that they come with some propositions that they say ought
26 to be looked at. He says - he gives some reason and I get
27 from the words "dismissed our concerns" that he gave the
28 impression he's not going to do anything more about it.
29 But he's perfectly entitled to do that, even if he's wrong,
30 but the criticism that is being made is that he is not
31 justified, he is wrong. Well, if it's established that he
32 is wrong, then that's the thing of interest, not that he
33 dismissed the concern. Do you see - am I making myself
34 clear or --
35

36 MR HICKEY: I understand, Commissioner.
37

38 THE COMMISSIONER: You continue but what I'm saying is
39 I don't know that it's going to be too helpful for me to
40 look at that in this instance of this issue.
41

42 MR HICKEY: I understand.
43

44 THE COMMISSIONER: Because if he was justified in
45 dismissing them, or at least not unjustified, that's all
46 that is required, if he's not unjustified in dismissing it,
47 then there is nothing in this point that Ms Keller is

1 making. He, as you put it, had a different view, dismissed
2 it. He's got the authority to dismiss it. So the more
3 interesting question for me is why it is said or implied
4 that he ought not have.

5
6 MR HICKEY: Yes.

7
8 Q. Can I just suggest to you, though, that during the
9 course of the conversation, he expressed to you that his
10 view, as a matter of the science, was that a new process
11 had been recently validated and newly implemented, and that
12 what needed to happen was that that process would be
13 carried out and trusted in light of the validation, and
14 that it was more likely than not that there was some other
15 reason for the findings that had been obtained; that was
16 the gist of the conversation he had with you?

17
18 THE COMMISSIONER: I'm sorry, I just missed the middle
19 part, I think. He said that the new process had just been
20 validated and that, what?

21
22 MR HICKEY: And implemented.

23
24 THE COMMISSIONER: And implemented, and then what?

25
26 MR HICKEY: And that the process needed to be entrusted
27 and that there may be other reasons for the findings
28 obtained.

29
30 THE COMMISSIONER: Thank you.

31
32 THE WITNESS: That's possible, that that's what Justin did
33 say, and I have to - I'm pretty sure that at the time I did
34 say that I was still concerned, because - and I'm just
35 having a look at AK-25, which is an email that my line
36 manager sent to Justin after that conversation. My concern
37 was because the quants went from 0.025, 0.04, 0.03 and
38 0.02, with the organic extraction, to 0.013, 0.0005,
39 0.00127, 0.00015, and from memory, some of those were
40 flagged as insufficient DNA, like so immediately I just
41 didn't feel that four aliquots from the same bone sample
42 could possibly decrease by that much just by chance. And
43 the extraction process had been implemented and it was new,
44 and I wasn't questioning it at that point, but then I did
45 start to question it because Justin dismissed my concern at
46 the time and I wanted to look further into it, so I did
47 talk to my line manager and then I talked to one of my

1 colleagues.

2
3 MR HICKEY: Q. Can I suggest to you that there was
4 nothing about the conversation that you had with Mr Howse
5 which would have reasonably led you to conclude that he was
6 not interested in your continuing to raise concerns with
7 him in the future if you held them?

8 A. When he did say something along the lines of "It's
9 just sample-to-sample variation", it didn't make any sense
10 to me, and I didn't want - my scientific mind couldn't
11 accept that that difference was just by variation, natural
12 variation, I - and it's quite hard to raise something when
13 you have a legitimate scientific concern that you really -
14 you really love what you do and you think it's very
15 important for the community, and then to see that one of
16 your senior managers doesn't listen to what you are saying.

17
18 So then it's like, okay, so that didn't raise any
19 concerns or didn't - Justin didn't feel that there was
20 a problem, so now I'm going to see if I'm - "Kylie, do you
21 think that this variation is significant?" And yes, she
22 did too, as a different scientist, and then you raise it
23 with other scientists as well. And this is - I think it's
24 an important process as a scientist to discuss
25 discrepancies like this, because sometimes it's
26 a significant point that needs to be fixed or addressed or
27 looked at.

28
29 Q. That was a very long answer to what I think was
30 a short question. In the course of it you suggested that
31 Mr Howse hadn't listened to you. That's not right, is it?
32 He did listen to you; he just didn't agree with you?

33 A. He heard what I had to say.

34
35 Q. Yes.

36 A. He said that he didn't share my opinion that there was
37 a significant variation and it was okay, and, yes, I didn't
38 agree with that, and I'm pretty sure that at the time I did
39 say that I didn't agree with the fact that it was
40 a sample-to-sample variation.

41
42 Q. Now, you have given some evidence just in that answer
43 you gave me a moment ago, the second-last one, where you
44 said it was - and I don't intend to put words into your
45 mouth but the impression I took was you said something like
46 it was a difficult thing or a big thing to speak to your
47 manager about something you had a concern about; is that

1 right?

2 A. When you see a problem and you are concerned and - it
3 is important to raise issues.

4
5 Q. Can I suggest to you - you have known Mr Howse for
6 a very long time?

7 A. Yes.

8
9 Q. He is a gentle man?

10 A. I - he's - I don't know. I've never really thought of
11 him like that, to be honest.

12
13 Q. Could I ask you to think about it now. He's a gentle
14 man, isn't he?

15 A. I probably wouldn't choose that word, to be honest.

16
17 THE COMMISSIONER: Q. He doesn't mean gentleman; he
18 means mild-mannered.

19 A. Mild-mannered, person?

20
21 MR HICKEY: Q. Yes.

22 A. Possibly, yes.

23
24 Q. You have never seen him be aggressive?

25 A. Not to me, no.

26
27 Q. You have never heard of him being aggressive?

28 A. I have never thought Justin's aggressive, no,
29 I haven't --

30
31 Q. He's not a difficult person to speak to?

32 A. Well, if you raise a point that you are very concerned
33 about with someone, and even if they are mild-mannered or
34 however they are, if they don't listen to you, then I don't
35 feel positive about that.

36
37 Q. He a not a difficult person to speak to, is he?

38 A. May I ask what you mean about "difficult"?

39
40 Q. He's not somebody that you have ever been intimidated
41 about talking to?

42 A. I don't feel as comfortable talking to Justin about my
43 concerns as I do with Kylie, for example.

44
45 Q. But he's not intimidating, is he?

46 A. I don't find him intimidating but it's not pleasant to
47 talk to someone about your concerns and then not be

1 listened to.

2
3 Q. But, nevertheless, you as an obviously passionate
4 person of science would know that it's important to
5 communicate clearly to other scientists the extent of your
6 concerns, if you continue to hold them, in the face of
7 their disagreement with your opinion?

8 A. It is important to talk to people about concerns, and
9 I did talk to my colleague that day, who actually did raise
10 this issue with the other team leader, who did actually
11 listen, and then the process got changed back to organic
12 extraction.

13
14 Q. Can I suggest to you that there is really nothing
15 about Mr Howse which would cause somebody in your position
16 to think that they could not reasonably talk to him about
17 any concerns they might have if they were ongoing concerns?

18 A. I can talk to Justin 20 times about my concerns.
19 I could talk to Justin many times. But if someone doesn't
20 listen to you repeatedly, it is - to do something over and
21 over again without an outcome, it is a waste of energy.

22
23 Q. All right. But you are talking in abstraction there.
24 Can I be very focused. Thinking about this particular
25 issue, you didn't speak to Justin 20 times about this, did
26 you?

27 A. No, because I went back to my desk, I talked to my
28 line manager - same day, I believe; I could double-check
29 the - if you would give me a minute I will just
30 double-check the dates we're talking about.

31
32 Q. All I'm asking is you didn't speak to him 20 times
33 about this particular issue?

34 A. No, because I believe on that same day, Kylie --

35
36 Q. It permits of a yes or no answer, with respect.

37
38 THE COMMISSIONER: No, she said no, she was just giving
39 a further explication.

40
41 THE WITNESS: I was just providing some more information.
42 On that same day this problem was raised by my line manager
43 to Justin and also my colleague raised this - or the next
44 day, sorry, I did talk to my colleague, it's in my
45 statement, and then my colleague did talk to the other team
46 leader. So I didn't feel it necessary to keep talking to
47 Justin about this particular issue.

1
2 MR HICKEY: Q. But you could have done that if you had
3 wished to?

4 A. If I had have needed to, I would have.
5

6 Q. Can we move then, please, to paragraph 93. In the
7 third line there you describe a DVI incident in March 2020
8 and you say that Allan did something with the support of
9 Justin Howse. Can I just understand what it is you say
10 evinces Mr Howse's support?

11 A. So for this particular DVI, I was talking to Justin
12 twice a day. With larger DVIs it's important to brief with
13 each other so that the DVI coordinator, which was Justin
14 for this particular case, can communicate the progress to
15 the rest of the laboratory, because it does impact on the
16 whole functioning of the laboratory.
17

18 In one of those morning or afternoon briefs, Justin
19 did outline that we would be doing soft tissue samples for
20 this DVI, or Allan would be processing soft tissue samples
21 for this DVI. So I was told what was happening in one of
22 these briefs.
23

24 Q. And that's the extent of it?

25 A. For that particular sentence?
26

27 Q. Yes.

28 A. Yes.
29

30 Q. Could we move on, please, to paragraph 114. Here you
31 are talking about in November 2019, seeking approval from
32 Ms Allen to rework a sample, and you say she approved the
33 rework request and subsequently you obtained a three
34 contributor mixture. You provided a written update and she
35 decided you would additionally need to provide an intel
36 report to QPS. Now, I just want to interrogate one aspect
37 of this. You say "she decided" you would additionally
38 need. You are aware, aren't you, that that particular
39 requirement is provided in the standard operating
40 procedures around this process?

41 A. At that particular time - because I'm actually -
42 I have - I actually update that particular SOP, and at this
43 time that I was giving the additional duty, that wasn't
44 part of the process. If the line was added to the result,
45 "This sample has undergone further processing", the police
46 know that we've undergone further processing, so the result
47 that follows is - at that time was just a natural process.

1 So initially I obtained "This sample's undergone further
2 processing" but I did have to get - I couldn't just rework
3 that sample, because it had been reviewed, I did need to
4 actually seek permission to get it reworked because we're
5 not allowed to do that without getting Cathie's permission.
6

7 So at that time I had gone to Cathie and asked her if
8 I was able to rework that sample. She came back and she
9 said, "Yes". So then I did rework that sample and she
10 asked me if I could come back to her and give her an
11 update, and I did, and then she additionally asked me to do
12 an intelligence report to the police.
13

14 Q. So that I can be clear about your evidence, your
15 evidence is at that time it wasn't part of the standard
16 operating procedure?

17 A. I don't believe so.
18

19 Q. Thank you. But nevertheless, in her email to you, she
20 explained to you that there had been an undertaking given
21 to QPS that they would advise that - that the lab would
22 advise them of amendments to results, and that she felt the
23 lab needed to honour that commitment. Do you recall that?

24 A. I do recall her putting that in her email. I will
25 have a look.
26

27 MR HICKEY: I'm trying to be efficient about this,
28 Commissioner. I don't think it's necessary to take the
29 witness to the email, but if the witness feels it's
30 necessary to go to it, I can give the number.
31

32 THE COMMISSIONER: Yes.
33

34 MR HICKEY: [WIT.0003.0471.0001_R].
35

36 THE COMMISSIONER: It is exhibit 36 to your statement.
37

38 THE WITNESS: I have got it, yes, thank you. Yes, I do -
39 look, and I do recall at the time Cathie did provide
40 reasoning around it.
41

42 MR HICKEY: Q. So it wasn't something that she did just
43 for no particular reason?

44 A. Yes, Cathie had her reasons. But I - my understanding
45 was, according to the SOP at that time, that wasn't
46 necessary.
47

1 Q. Could we go then, please, to paragraph 136 of your
2 statement. Here you give some evidence about a meeting on
3 8 February 2018 that you say all reporters attended with
4 Cathie, which summarised the information gathered during
5 the Workplace Edge interviews. Now, can I suggest to you
6 that, in fact, the meeting was chaired or, rather,
7 conducted by Mr Csoban and Alan Holz from Workplace Edge?
8 A. That's possible, I can't remember that meeting very
9 well because I was actually quite distressed after it, or
10 quite confused.

11
12 Q. And you are aware, aren't you, that in fact it was
13 Workplace Edge that conducted the process of conducting
14 interviews and so forth, not the management team?

15 A. I was present with the Workplace Edge representative.
16 I wasn't sure why we were having these meetings, exactly.
17 Like, we did have an email.

18
19 Q. Perhaps I can ask it this way: did you not understand
20 precisely who was conducting this process which culminated
21 in this meeting at which feedback was given?

22 A. I understand, as I have got in point 133, that was
23 for - consultants had come in for FSS. They gave us
24 a feedback session, and there were management
25 representatives there. Cathie was present.

26
27 Q. Yes. I don't suggest otherwise to you. But what I'm
28 trying to get to grips with is you say you felt like
29 management did not take into consideration your feedback,
30 and I'm trying to understand what feedback are you
31 referring to? Is that feedback that was part of the
32 Workplace Edge interviews or feedback that you gave at the
33 meeting?

34 A. Well, we all had an interview, so if all of that
35 information came from Workplace Edge, then it came from
36 Workplace Edge, but it was presented in a forum where there
37 was Workplace Edge and managers were present. So yes, it
38 was a little bit unclear as to where the feedback came
39 from, and also, my feedback wasn't really represented in
40 the presentation.

41
42 Q. All right. If I can ask you to assume that the
43 assimilation of the feedback and the presentation of it was
44 the work of external parties not anyone in the management
45 team, would you agree with me that the criticism which
46 seems to be implicit in the last line of 136 properly lies
47 with whoever undertook that process I have described rather

1 than the management team?

2 A. If that purely came from Workplace Edge, then yes.

3
4 Q. Thank you. Can I suggest to you that Ms Allen didn't
5 attend the interview that you participated in with the
6 Workplace Edge representatives?

7 A. Oh, no, she wasn't in the meeting. No, she wasn't.

8
9 Q. And that she didn't have any input into the
10 formulation of the Workplace Edge report?

11 A. And I don't know that. Now you're telling me that,
12 okay, thank you.

13
14 Q. Now, if we could go, please, to paragraph 137, here
15 you say in the second sentence:

16
17 *Management seems focused on "numbers" and*
18 *turnaround times ... Scientists are*
19 *celebrated for producing high quantity*
20 *rather than high quality results.*

21
22 This is simply your impression, isn't it?

23 A. It is my impression from all of my experiences.

24
25 Q. Can I suggest to you that it's never been suggested by
26 anybody within the management team that high quality
27 results are not important - that's right, isn't it?

28 A. To me? Well --

29
30 Q. Perhaps you have misunderstood my question. The
31 management team has never said to you or to anybody else,
32 "High-quality results are not important"?

33 A. I have never heard that directly.

34
35 Q. And you'd be surprised if that was their view,
36 wouldn't you?

37 A. I think that turnaround times are important and I see
38 that that is a focus in our laboratory, like there probably
39 is a focus for any laboratory that deals with forensic
40 work.

41
42 Q. And would you agree with me that the high-quality
43 result, a kind of high-quality result, is where somebody
44 does some scientific work within the lab which leads to,
45 for example, the resolution of or, rather, the
46 identification of a perpetrator?

47 A. Anything that furthers forensics in Queensland is

1 really important.

2
3 Q. Or, for instance, where you, in assessing bones, can
4 identify somebody who has been long thought missing?

5 A. Yes.

6
7 Q. That's a high quality result?

8 A. Yes.

9
10 Q. And it's right, isn't it, that from time to time the
11 management team have congratulated and celebrated when
12 particularly good high quality results have been achieved?

13 A. I notice that for high priority cases that come in,
14 like P1s, that have very fast turnaround times, it's common
15 to have group emails celebrating, you know, 24-hour
16 turnaround for this particular case which has "unknown
17 offenders present in the community". That is very
18 important.

19
20 Q. Can I repeat my question: it's the case, though,
21 isn't it, that from time to time, where some particular
22 high quality result, the resolution of a notorious crime,
23 the identification of somebody who has long been missing,
24 is celebrated within the lab?

25 A. That does happen.

26
27 Q. Can I turn then, finally, to the question of
28 performance reviews, which you raise in paragraph 138.
29 It's the case, is it, that those are conducted by Ms Rika?

30 A. Currently, yes. I've had other line managers.

31
32 Q. They are usually conducted by the line manager?

33 A. Yes.

34
35 Q. And as far as you are aware, it's their responsibility
36 to carry them out?

37 A. I believe they schedule it based on their line
38 managers, so it probably depends on how frequently all of
39 the line managers have their yearly performance reviews or
40 few-yearly.

41
42 Q. You say you believe - is there some basis for that
43 belief? Has somebody told you that?

44 A. I think that at some point I requested a more frequent
45 performance review, but I know that at the time, Kylie was
46 awaiting for her performance review with Justin, and it
47 hadn't happened yet, so it was a little bit delayed. But

1 that was because she was awaiting her performance review,
2 because that will flow down to - there might be certain
3 aspects of her performance review that she has to roll out
4 to the next line. So I think in that situation it actually
5 created a little bit of a delay because Justin's was also
6 delayed and I don't know if that was because it was further
7 delayed up the line.

8
9 Q. All right. Could I ask you then, would you agree with
10 this proposition: at any time, there are opportunities to
11 discuss professional development with line managers?

12 A. In my performance review I will normally bring up
13 a presentation that I might want to give to another
14 organisation or some training that I want to partake in.

15
16 Q. Can I ask the question again: at any time, you can
17 discuss professional development opportunities with your
18 line manager?

19 A. You mean just approaching my line manager, Kylie, and
20 saying, "Can I do this", or sending an email?

21
22 Q. Yes.

23 A. Oh, I can certainly do that, yes.

24
25 Q. And there is also the opportunity for you to discuss
26 professional development that you might wish to undertake
27 with the FSS skills development unit?

28 A. Yes, if I see a course, I can organise an attendance
29 of a particular course.

30
31 Q. And also it's the case that that skills development
32 unit proactively sends training opportunities to staff,
33 don't they?

34 A. I think they do send emails at times. Often I am a
35 little bit too busy doing my work, work --

36
37 Q. But they send them, nevertheless?

38 A. They do send them.

39
40 Q. And it's the case, isn't it, that you recently
41 attended a workshop at the ANZFSS symposium?

42 A. Yes, on a Sunday I decided that a particular
43 statistical workshop would be really helpful for the DVI
44 work and paternity work that I do.

45
46 Q. And that was supported by the FSS lab, wasn't it?

47 A. Yes. I'm still waiting for some PDL to be finalised

1 because it's been a little bit tricky to have that
2 approved, but --

3
4 Q. You don't have any reason to doubt it won't be in due
5 course?

6 A. It's going to be approved. We're just working through
7 some emails at the moment.

8
9 Q. Are there other development opportunities that you
10 applied for through your line manager which have been
11 refused?

12 A. Kylie is very supportive.

13
14 Q. Is that a no?

15 A. Sorry, can you please repeat the question?

16
17 Q. Yes. Are there other development opportunities that
18 you have applied for through your line manager which have
19 been refused?

20 A. No, not that I can think of.

21
22 MR HICKEY: Those are the questions, Commissioner.

23
24 THE COMMISSIONER: Thank you.

25
26 Q. I just want to understand something. You spoke of
27 your approach to Mr Howse in relation to the variable
28 quants you were getting from aliquots of bone samples.

29 A. Yes.

30
31 Q. If you go to exhibit 25 of your statement, you said
32 a couple of things, and I just want to understand this. If
33 you look at exhibit AQ-25 - if you put that up on the
34 screen, please, [WIT.0003.0460.0001-R] and if you highlight
35 the second paragraph, beginning "Another sample" -
36 thank you. Now, I understand that from a particular sample
37 of bone, you take four sub-samples called aliquots?

38 A. Yes.

39
40 Q. And you take each of them and put them through the
41 quantitation process --

42 A. Yes.

43
44 Q. -- to determine the concentration of DNA in them?

45 A. Yes.

46
47 Q. And you got those four figures for four pieces - four

1 samples that were extracted from the same bone?

2 A. Yes.

3
4 Q. And I understood from the tenor of your evidence that
5 you expect the quants, while they might not be identical,
6 that they would be reasonably close?

7 A. Yes.

8
9 Q. So on my arithmetic, if we take 0.013, that's the
10 highest quant there, isn't it?

11 A. Yes.

12
13 Q. And 0.00015 is 90-times less, I think - yes?

14 A. I will have to agree with your arithmetic, but it's
15 a lot lower.

16
17 Q. Well, then, 0.00127, which is really 0.0013 - well,
18 that's 10 times less, and 0.0005 is about 25, 26 times
19 less.

20 A. Yes.

21
22 Q. So the variations are one, one-26th, one-tenth and
23 one-90th. What do you say about those kinds of variations
24 arising from four aliquots of the same bone?

25 A. I was concerned. I wouldn't expect to see that amount
26 of variation from the same bone, stock bone powder.

27
28 Q. And we need not do the arithmetic of the samples
29 above, because they're a bit easier, because the numbers
30 are at the same decimal point, but you've got - anyway, we
31 don't need to do them. But your evidence was that you felt
32 or believed that you weren't being listened to. You said
33 you were heard but not listened to, and that Mr Howse said,
34 in your statement, words to the effect that it might be due
35 to sample-to-sample variation, "Any apparent differences
36 would be due to sample-to-sample variations", and you said
37 that didn't make sense. So can you just explain to me what
38 gave you the impression that you weren't being listened to?

39 A. I - because raising such a difference, it didn't make
40 scientific sense that it was such a variable, and it's
41 variable within the same extraction, and then it's variable
42 between the different extraction techniques.

43
44 And, yes, Justin did listen to me, but - or he heard
45 what I said, but he just said that he did disagree with
46 what I was saying, he - and I found that quite - quite
47 distressing, because what more proof do I need? I need -

1 you know, this is a problem I can see a change. I think
2 could you not just look into it? But there was none of
3 that. It was not a, basically, "Come back and talk to me
4 another time" or - he just completely didn't want to hear
5 about it, even though - and his reasoning it was it was
6 sample-to-sample variation. But I know full well from all
7 of my work with bones and the aliquots, because we
8 constantly repeat the process, that this was not a good
9 result, and --

10
11 Q. You are not going to get a 26-fold or 10-fold or
12 90-fold difference?

13 A. And my immediate concern was, here is a new process,
14 this is what we're going to see from now on. This is not
15 okay.

16
17 THE COMMISSIONER: Anything arising out of that,
18 Mr Hickey?

19
20 MR HICKEY: No, Commissioner, thank you.

21
22 THE COMMISSIONER: Anyone else? Ms Hedge, any
23 re-examination?

24
25 **<EXAMINATION BY MS HEDGE:**

26
27 MS HEDGE: Q. Can we return to page 21 of the statement
28 please, operator, and Mr Hickey was asking you some
29 questions about your statement in paragraph 137 that
30 "management seems focused on numbers and turnaround times
31 for the QPS; scientists are celebrated for producing high
32 quantity rather than high quality results"; do you remember
33 being asked about that?

34 A. Yes.

35
36 Q. You agreed with Mr Hickey that on occasion from time
37 to time management did celebrate good quality results. Can
38 you tell us what you have observed where management has
39 celebrated high quantity results?

40 A. I think that in the end, any - so a high quantity
41 result would be a fast turnaround, but then you could argue
42 that's also a good quality result, provided it's all done
43 properly, all your 'i's are dotted and your 't's are
44 crossed, because you wouldn't want to do it any other way.
45 But it is quite common to get positive feedback for the
46 whole laboratory for P1 cases that are turned around very
47 quickly.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

Q. So by "quantity", you weren't referring to the number of interpretations done by a reporting scientist, for example, you were relating to turnaround times for results; that's what you meant by quantity?

A. Yes, it would be fast turnarounds, but I think in terms of a high quantity, all of our numbers are tracked and - which is fine, because that helps with management assessing what gets done where and allocating work, all that sort of stuff, but there's no sort of measure for quality that's as visible as the quantity.

Q. What do you mean "all of our numbers get tracked"; can you explain that?

A. So there is a dashboard in the forensic register where you can see who has done what for every day of, you know, the whole year.

Q. Are you talking about reporters or --

A. It's anyone who is doing - putting out - interpreting results or reviewing results. So whether you are interpreting them or you are reviewing them, it's visible on a dashboard.

Q. And that's reporters who do that?

A. Yes. So you tend --

Q. So is it the reporters?

A. Sometimes analytical, if they were doing certain reviewing of results like the no DNAs, they would have numbers as well, and sometimes people in the quality team I think might be doing work. So some other people, scientists from other sections, are present.

Q. Okay.

A. I'm not sure exactly how, but they must be doing some sort of work in that way.

Q. And what statistics are shown there - your daily tally or your weekly tally or your yearly tally? What's shown there?

A. So just say I do a piece of work right now, I get a 1 next to my name for that particular week and then if I do 20 by the end of the week it's 20.

Q. So it's a weekly tally?

A. It just rolls on through. So that's for that week.

1 So then next week it chalks up zero on Monday, and by the
2 end of the week there we all are with the numbers.

3
4 Q. And is there a separate number for the number of
5 interpretations versus the number of reviews?

6 A. Yes.

7
8 Q. And are people celebrated for having high numbers?

9 A. I don't recall anyone openly saying, "Hey, this
10 person" - so not openly. Whether it happens behind - with
11 a tap on the shoulder or whatever, maybe, but no, it hasn't
12 happened to me.

13
14 Q. So when you say in your statement, "Scientists are
15 celebrated for producing high quantity results", you are
16 referring to emails about P1 cases that had a fast
17 turnaround time?

18 A. Yes.

19
20 Q. And then this dashboard issue is something that is
21 tracked, but it's not something that involves celebration?

22 A. Not openly, yes.

23
24 Q. Now, you said also, "Management seems focused on
25 'numbers' and turnaround times". What gave you that
26 impression?

27 A. Well, because every week we will have some guidance
28 around, you know, "You've got to do this many of this", so
29 for interpreting profiles, "You've got to do this many"
30 or - actually, it's a little more general, but it might be
31 a statement, a review of the statement, and then it might
32 be "Then focus on interpreting samples". So it won't be -
33 but we are told that we have to hit X number of numbers
34 a week. There is an expectation.

35
36 Q. Who tells you that?

37 A. That's come through in our professional development,
38 the CSP is a target number that we are meant to interpret
39 and review every - every week.

40
41 Q. What is a CSP?

42 A. That's a good question.

43
44 Q. Okay. Can you describe it?

45 A. It's the development plan, the performance review that
46 we have.

1 Q. I thought you said a moment ago, but maybe I misheard,
2 "Every week we are told"?

3 A. An email will come out with like a weekly direction,
4 but then in the --

5

6 Q. Who sends that email?

7 A. That will come from our line manager, so that's either
8 Kylie or Sharon, just to the reporting team.

9

10 Q. And what does it say?

11 A. "This week, can you do this many statements, this many
12 statement reviews and this much interpretation or review of
13 actual samples."

14

15 Q. And just returning to the quality for a moment, would
16 you say that the preparation of a high quality validation
17 or project report is a high quality result in the --

18 A. Well, I think - I mean, I think having to deal with
19 what's happening with bones currently, to me, having
20 a single-source DNA profile from a bone is a high quality
21 result and I think that should be celebrated. I think
22 everyone should be celebrating that.

23

24 Q. Are you celebrated for getting a single-source profile
25 from a bone?

26 A. Well, I know - well, am I celebrated for that?

27 I mean, I think that if we're able to release an
28 identification statement, I definitely - I get feedback
29 from all the different disciplines quite often about
30 releasing - it might be the counsellors might be,
31 "Thank you so much for helping that family, they are very
32 grateful", and it's very --

33

34 Q. What about from the management of the lab? We're just
35 focusing on the lab for a moment.

36 A. I think generally the positive feedback will come
37 around high priority cases that are celebrated by the whole
38 laboratory.

39

40 Q. So Mr Hickey asked you about the high quality results
41 being celebrated from time to time, and you have said
42 that - I think you used the word "often" turnaround times
43 are celebrated; what is the sort of balance of this, are
44 turnaround times celebrated more often than high quality
45 results?

46 A. Yes.

47

1 Q. By what degree?

2 A. I guess quality isn't celebrated in itself. It's
3 easier to celebrate a quick turnaround of a sample because
4 it's very visible. In our system that we currently have,
5 that's something that's very visible, a high - fast
6 turnaround, or you can see this person's done a lot of
7 numbers. Whether or not that's celebrated by management
8 I'm not sure. But it's a very easy measure because you can
9 see it, it's very easy. Whereas quality is a little bit
10 more difficult to see in DNA analysis currently. I can
11 tell you where there are problems, and I want to celebrate
12 high quality results. I think it's such an important part
13 of what we do. We can't do one without the other. They
14 are intertwined.

15
16 MS HEDGE: Yes, thank you. Might Ms Keller be excused?

17
18 THE COMMISSIONER: Thank you, Ms Keller, you are free to
19 go. Thank you for your evidence.

20
21 <THE WITNESS WITHDREW

22
23 THE COMMISSIONER: Ms Hedge, what's happening tomorrow?

24
25 MS HEDGE: We have two witnesses planned, Mr Parry and
26 Ms Caunt. Before Mr Parry starts, I will open the evidence
27 in relation to validations.

28
29 THE COMMISSIONER: That's coming later, do you mean, or is
30 he giving some of it?

31
32 MS HEDGE: Part of his evidence relates to his concerns
33 about particular validations. You might remember Mr Parry
34 has specific statistical expertise. So he has more
35 criticisms or concerns in that space than others. So
36 that's why I intended to open the whole of that topic
37 before he gave evidence.

38
39 THE COMMISSIONER: All right. Thank you. Well, 9.30?

40
41 MS HEDGE: Yes, thank you.

42
43 THE COMMISSIONER: We will adjourn, then.

44
45 **AT 4.57PM THE COMMISSION WAS ADJOURNED TO**
46 **WEDNESDAY, 12 OCTOBER 2022 AT 9.30AM**
47

#	1044:27, 1048:5, 1049:42, 1054:1, 1054:3, 1054:4, 1077:16, 1083:43, 1118:42 1/6/2022 [1] - 1051:1 10 [11] - 993:9, 1022:43, 1031:15, 1034:3, 1044:11, 1047:21, 1047:34, 1055:29, 1062:38, 1084:25, 1116:18 10-fold [1] - 1117:11 10.01am [1] - 992:27 100 [6] - 1031:34, 1043:45, 1043:46, 1051:21, 1077:32 100,000 [1] - 1051:20 100-year-old [1] - 1031:38 104 [1] - 1077:16 105 [1] - 1077:14 107 [4] - 1001:38, 1002:6, 1002:32, 1078:12 108 [3] - 1003:9, 1003:23, 1004:1 109 [1] - 1078:32 10am [1] - 991:20 10DVs [1] - 1075:37 10th [1] - 1046:5 11 [1] - 991:20 11.47am [1] - 1029:20 114 [1] - 1109:30 12 [9] - 1003:6, 1016:8, 1016:9, 1017:7, 1028:15, 1028:20, 1045:5, 1102:11, 1121:46 12-month [1] - 1015:16 126 [1] - 1082:30 127 [2] - 1082:30, 1083:19 13 [2] - 1048:47, 1049:3 133 [1] - 1111:22 136 [2] - 1111:1, 1111:46 137 [2] - 1112:14, 1117:29 138 [1] - 1113:28 13th [1] - 1046:4 148 [1] - 1096:37 15 [10] - 1012:17, 1012:19, 1048:5, 1048:41, 1049:17, 1049:18, 1054:34, 1071:47, 1088:1, 1088:7	16 [8] - 1043:25, 1054:8, 1077:13, 1078:5, 1087:13, 1087:30, 1088:3, 1088:6 17 [6] - 1007:7, 1013:39, 1065:24, 1067:15, 1076:41, 1078:30 18 [2] - 1048:41, 1080:22 180 [1] - 1078:27 19 [3] - 1074:13, 1082:25, 1091:33 1996 [1] - 1083:44 1997 [1] - 1083:45	2 2 [15] - 1002:33, 1012:17, 1029:9, 1029:13, 1047:39, 1048:40, 1054:1, 1054:3, 1054:4, 1084:4, 1085:15, 1087:45, 1088:33, 1091:46, 1098:26 2.15 [2] - 1059:27, 1059:29 20 [13] - 1000:23, 1000:40, 1028:15, 1028:20, 1028:44, 1072:17, 1088:32, 1093:40, 1108:18, 1108:25, 1108:32, 1118:44 20-year-old [1] - 1031:43 2004 [4] - 1030:13, 1030:16, 1034:13, 1083:45 2006 [6] - 1030:28, 1031:15, 1033:26, 1042:36, 1042:44, 1043:41 2010 [2] - 1030:16, 1030:21 2015 [3] - 1014:3, 1015:3, 1055:31 2016 [4] - 1018:32, 1027:27, 1028:5, 1082:17 2017 [2] - 1082:8 2017/18/19/20/21 [1] - 1082:17 2018 [6] - 1011:39, 1012:1, 1012:5, 1059:42, 1061:36, 1111:3 2019 [23] - 1019:36,	1020:6, 1020:31, 1021:23, 1023:2, 1023:20, 1024:34, 1044:20, 1044:24, 1044:27, 1044:29, 1054:23, 1056:31, 1057:37, 1057:44, 1058:7, 1072:1, 1072:18, 1092:19, 1092:31, 1094:7, 1098:7, 1109:31 2020 [26] - 1000:29, 1009:43, 1010:3, 1019:37, 1021:23, 1028:44, 1028:46, 1042:22, 1042:35, 1043:30, 1043:41, 1044:1, 1045:5, 1047:38, 1047:39, 1047:40, 1048:40, 1048:46, 1049:6, 1049:8, 1049:10, 1049:14, 1054:30, 1063:18, 1096:15, 1109:7 2021 [11] - 1019:37, 1021:23, 1021:46, 1023:21, 1048:5, 1054:34, 1074:34, 1082:9, 1085:11, 1098:21, 1098:30 2022 [8] - 991:20, 1029:43, 1049:28, 1049:42, 1065:24, 1065:34, 1065:44, 1121:46 21 [9] - 1014:10, 1065:34, 1085:9, 1094:7, 1095:39, 1096:1, 1096:31, 1098:7, 1117:27 23 [1] - 1007:41 24 [3] - 1006:23, 1009:33, 1049:27 24-hour [1] - 1113:15 24th [1] - 1052:7 25 [4] - 1028:46, 1054:30, 1115:31, 1116:18 26 [2] - 1047:40, 1116:18 26-fold [1] - 1117:11 29 [2] - 1065:44, 1065:46	1101:16 30 [2] - 1098:21, 1098:30 30/6/2022 [1] - 1050:45 300 [1] - 1031:19 3130 [2] - 1064:44, 1085:35 32 [1] - 1015:29 32-point-something-hour [1] - 1015:30 33 [1] - 1015:29 35 [11] - 1007:22, 1007:29, 1007:34, 1010:43, 1011:1, 1011:26, 1011:40, 1012:13, 1012:15, 1012:16, 1012:28 3500 [7] - 1054:36, 1064:30, 1064:45, 1085:17, 1085:21, 1085:22, 1085:27 36 [1] - 1110:36 37 [1] - 1024:12 38 [2] - 1008:14, 1008:15 38-hour [1] - 1015:29 3rd [2] - 1046:4, 1052:7
'	'numbers' [1] - 1119:25 'where' [1] - 1083:8				
0	0.0 [1] - 1103:39 0.00015 [2] - 1105:39, 1116:13 0.0005 [2] - 1105:38, 1116:18 0.00127 [2] - 1105:39, 1116:17 0.0013 [1] - 1116:17 0.013 [2] - 1105:38, 1116:9 0.02 [1] - 1105:38 0.025 [1] - 1105:37 0.03 [1] - 1105:37 0.04 [2] - 1103:39, 1105:37 0.1 [2] - 1040:19, 1040:34 0004_R [1] - 1000:23 0007_R [1] - 1041:16 0009_R [1] - 1037:1 001 [2] - 1045:32, 1045:45 0010 [1] - 1039:47 0011_R [1] - 1059:41 0012 [1] - 1102:12 0018_R [1] - 1001:37 0027.0001 [1] - 1018:28 0027.0001_R [1] - 1013:31				
1	1 [13] - 993:9, 1006:21, 1029:8, 1029:13,				

<p>6</p> <p>6 [3] - 1015:34, 1029:42, 1083:44</p> <p>6.15 [1] - 1015:13</p> <p>60 [2] - 1014:8, 1014:10</p> <p>61 [1] - 1037:2</p> <p>62 [1] - 1038:7</p> <p>64 [1] - 1055:30</p> <p>65 [1] - 1029:11</p> <p>66 [1] - 1055:31</p> <p>67 [1] - 1080:44</p> <p>68 [4] - 1056:27, 1056:39, 1092:43, 1098:6</p>	<p>9.30AM [1] - 1121:46</p> <p>90-fold [1] - 1117:12</p> <p>90-times [1] - 1116:13</p> <p>909 [1] - 1007:1</p> <p>91 [1] - 1064:33</p> <p>912 [1] - 1007:41</p> <p>93 [1] - 1109:6</p> <p>96 [1] - 1072:10</p> <p>963 [1] - 1024:12</p> <p>97 [1] - 1073:45</p> <p>98 [4] - 1074:34, 1098:16, 1098:19, 1098:31</p> <p>988 [1] - 993:8</p>	<p>1087:8, 1087:15, 1110:45</p> <p>account [2] - 1032:17, 1096:35</p> <p>achieved [1] - 1113:12</p> <p>acknowledged [2] - 1002:45, 1022:27</p> <p>act [4] - 1002:35, 1002:42, 1006:18, 1085:45</p> <p>acted [2] - 1081:39, 1081:40</p> <p>acting [7] - 1001:41, 1005:13, 1016:43, 1074:2, 1094:24, 1097:37, 1097:38</p> <p>action [4] - 1006:14, 1058:43, 1067:19, 1081:3</p> <p>active [3] - 1067:27, 1096:28, 1102:26</p> <p>acts [2] - 1002:1, 1002:20</p> <p>actual [8] - 1040:7, 1040:38, 1041:38, 1047:32, 1055:24, 1072:44, 1090:11, 1120:13</p> <p>ad [1] - 1073:3</p> <p>add [4] - 1038:40, 1057:40, 1061:15, 1071:21</p> <p>added [3] - 1001:12, 1022:18, 1109:44</p> <p>adding [1] - 1092:45</p> <p>additional [3] - 994:3, 1064:34, 1109:43</p> <p>additionally [3] - 1109:35, 1109:37, 1110:11</p> <p>address [4] - 996:20, 1000:11, 1018:31, 1063:13</p> <p>addressed [1] - 1106:26</p> <p>addressees [1] - 1093:15</p> <p>adequately [1] - 1057:26</p> <p>adhering [2] - 1047:17, 1047:20</p> <p>adjourn [2] - 1059:25, 1121:43</p> <p>adjournment [1] - 1028:18</p> <p>admin [1] - 999:21</p> <p>administered [1] - 993:33</p> <p>administrative [4] - 993:26, 997:19,</p>	<p>999:10, 999:22</p> <p>admit [1] - 1086:45</p> <p>Adrian [1] - 1081:18</p> <p>advance [1] - 1005:38</p> <p>Advance [2] - 1093:37, 1093:43</p> <p>advanced [3] - 1005:7, 1005:15, 1043:27</p> <p>advice [3] - 1036:41, 1078:13, 1078:33</p> <p>advise [2] - 1110:21, 1110:22</p> <p>advised [1] - 1072:1</p> <p>aeroplane [1] - 1031:5</p> <p>affect [4] - 1047:31, 1072:26, 1079:6, 1085:34</p> <p>affected [2] - 1075:24, 1083:20</p> <p>afraid [1] - 1072:34</p> <p>afternoon [7] - 992:40, 993:39, 996:21, 1000:31, 1001:35, 1001:46, 1109:18</p> <p>aged [1] - 1031:33</p> <p>agencies [1] - 1035:43</p> <p>agent [3] - 1086:37, 1096:33, 1096:39</p> <p>agents [3] - 1056:18, 1087:35, 1093:44</p> <p>ages [1] - 1047:27</p> <p>aggressive [3] - 1107:24, 1107:27, 1107:28</p> <p>ago [7] - 1003:5, 1003:6, 1003:7, 1034:3, 1102:43, 1106:43, 1120:1</p> <p>agree [19] - 1000:16, 1000:18, 1093:15, 1099:40, 1100:21, 1100:22, 1100:33, 1103:5, 1103:19, 1103:21, 1103:25, 1103:28, 1106:32, 1106:38, 1106:39, 1111:45, 1112:42, 1114:9, 1116:14</p> <p>agreed [5] - 1058:27, 1066:17, 1074:21, 1101:9, 1117:36</p> <p>agreement [1] - 1018:33</p> <p>ahead [5] - 1013:29, 1022:12, 1035:37, 1096:21, 1096:22</p> <p>AK-19 [1] - 1044:7</p> <p>AK-20 [1] - 1065:19</p> <p>AK-21 [1] - 1086:3</p>	<p>AK-22 [1] - 1088:39</p> <p>AK-25 [1] - 1105:35</p> <p>AK-31 [1] - 1098:26</p> <p>AK-37 [4] - 1080:30, 1080:33, 1080:40, 1080:46</p> <p>Alan [1] - 1111:7</p> <p>alarmed [1] - 1102:27</p> <p>Alicia [2] - 1028:43, 1028:45</p> <p>ALICIA [1] - 992:27</p> <p>aliquot [2] - 1040:22, 1043:13</p> <p>aliquots [35] - 1040:29, 1040:32, 1040:36, 1041:19, 1043:15, 1048:9, 1048:10, 1048:11, 1048:13, 1048:32, 1049:32, 1049:37, 1049:43, 1049:46, 1050:2, 1050:6, 1050:29, 1050:35, 1050:37, 1061:33, 1061:36, 1061:45, 1061:47, 1062:6, 1062:7, 1062:30, 1065:5, 1089:32, 1090:12, 1102:35, 1105:41, 1115:28, 1115:37, 1116:24, 1117:7</p> <p>all-up [1] - 1073:39</p> <p>Allan [4] - 1058:4, 1096:12, 1109:8, 1109:20</p> <p>Allan's [1] - 1096:26</p> <p>alleles [3] - 1087:14, 1087:34, 1087:40</p> <p>Allen [42] - 994:21, 994:26, 994:43, 995:27, 996:3, 997:32, 998:9, 998:12, 999:16, 1000:4, 1000:27, 1000:29, 1000:35, 1000:47, 1002:8, 1002:12, 1002:16, 1003:11, 1003:14, 1003:24, 1003:40, 1005:20, 1006:2, 1006:7, 1006:9, 1006:14, 1006:16, 1006:22, 1015:43, 1023:40, 1028:44, 1028:46, 1029:4, 1072:11, 1098:29, 1099:25, 1101:42, 1102:6, 1104:13, 1109:32, 1112:4</p>
<p>7</p> <p>7 [3] - 1015:9, 1084:5, 1086:22</p> <p>70 [9] - 1056:27, 1056:41, 1056:45, 1057:6, 1057:10, 1057:17, 1058:9, 1094:20, 1094:23</p> <p>71 [2] - 1058:18, 1058:20</p> <p>72 [1] - 1058:20</p> <p>73 [2] - 1059:41, 1061:27</p> <p>75 [4] - 994:28, 995:32, 995:45, 996:8</p> <p>77 [2] - 1061:30, 1102:11</p> <p>7am [3] - 997:10, 1015:18, 1015:32</p>	<p>abilities [1] - 1060:28</p> <p>ability [4] - 999:45, 999:46, 1007:9, 1007:17</p> <p>able [36] - 1007:10, 1007:16, 1008:12, 1011:26, 1015:12, 1015:14, 1015:21, 1016:27, 1016:28, 1016:31, 1016:36, 1021:43, 1024:5, 1031:44, 1033:40, 1043:2, 1046:24, 1050:7, 1050:10, 1052:31, 1054:7, 1064:3, 1068:29, 1072:36, 1073:3, 1076:1, 1080:2, 1082:34, 1082:37, 1082:40, 1089:35, 1090:38, 1097:21, 1100:45, 1110:8, 1120:27</p> <p>absolutely [2] - 1073:14, 1074:46</p> <p>abstract [2] - 1086:22, 1086:36</p> <p>abstraction [1] - 1108:23</p> <p>accept [7] - 993:30, 1032:16, 1032:40, 1096:24, 1097:36, 1103:46, 1106:11</p> <p>acceptable [2] - 1024:47, 1025:2</p> <p>accepting [1] - 1071:37</p> <p>access [4] - 997:20, 997:28, 998:11, 998:34</p> <p>accidentally [1] - 1032:24</p> <p>according [3] -</p>	<p>1087:8, 1087:15, 1110:45</p> <p>account [2] - 1032:17, 1096:35</p> <p>achieved [1] - 1113:12</p> <p>acknowledged [2] - 1002:45, 1022:27</p> <p>act [4] - 1002:35, 1002:42, 1006:18, 1085:45</p> <p>acted [2] - 1081:39, 1081:40</p> <p>acting [7] - 1001:41, 1005:13, 1016:43, 1074:2, 1094:24, 1097:37, 1097:38</p> <p>action [4] - 1006:14, 1058:43, 1067:19, 1081:3</p> <p>active [3] - 1067:27, 1096:28, 1102:26</p> <p>acts [2] - 1002:1, 1002:20</p> <p>actual [8] - 1040:7, 1040:38, 1041:38, 1047:32, 1055:24, 1072:44, 1090:11, 1120:13</p> <p>ad [1] - 1073:3</p> <p>add [4] - 1038:40, 1057:40, 1061:15, 1071:21</p> <p>added [3] - 1001:12, 1022:18, 1109:44</p> <p>adding [1] - 1092:45</p> <p>additional [3] - 994:3, 1064:34, 1109:43</p> <p>additionally [3] - 1109:35, 1109:37, 1110:11</p> <p>address [4] - 996:20, 1000:11, 1018:31, 1063:13</p> <p>addressed [1] - 1106:26</p> <p>addressees [1] - 1093:15</p> <p>adequately [1] - 1057:26</p> <p>adhering [2] - 1047:17, 1047:20</p> <p>adjourn [2] - 1059:25, 1121:43</p> <p>adjournment [1] - 1028:18</p> <p>admin [1] - 999:21</p> <p>administered [1] - 993:33</p> <p>administrative [4] - 993:26, 997:19,</p>	<p>999:10, 999:22</p> <p>admit [1] - 1086:45</p> <p>Adrian [1] - 1081:18</p> <p>advance [1] - 1005:38</p> <p>Advance [2] - 1093:37, 1093:43</p> <p>advanced [3] - 1005:7, 1005:15, 1043:27</p> <p>advice [3] - 1036:41, 1078:13, 1078:33</p> <p>advise [2] - 1110:21, 1110:22</p> <p>advised [1] - 1072:1</p> <p>aeroplane [1] - 1031:5</p> <p>affect [4] - 1047:31, 1072:26, 1079:6, 1085:34</p> <p>affected [2] - 1075:24, 1083:20</p> <p>afraid [1] - 1072:34</p> <p>afternoon [7] - 992:40, 993:39, 996:21, 1000:31, 1001:35, 1001:46, 1109:18</p> <p>aged [1] - 1031:33</p> <p>agencies [1] - 1035:43</p> <p>agent [3] - 1086:37, 1096:33, 1096:39</p> <p>agents [3] - 1056:18, 1087:35, 1093:44</p> <p>ages [1] - 1047:27</p> <p>aggressive [3] - 1107:24, 1107:27, 1107:28</p> <p>ago [7] - 1003:5, 1003:6, 1003:7, 1034:3, 1102:43, 1106:43, 1120:1</p> <p>agree [19] - 1000:16, 1000:18, 1093:15, 1099:40, 1100:21, 1100:22, 1100:33, 1103:5, 1103:19, 1103:21, 1103:25, 1103:28, 1106:32, 1106:38, 1106:39, 1111:45, 1112:42, 1114:9, 1116:14</p> <p>agreed [5] - 1058:27, 1066:17, 1074:21, 1101:9, 1117:36</p> <p>agreement [1] - 1018:33</p> <p>ahead [5] - 1013:29, 1022:12, 1035:37, 1096:21, 1096:22</p> <p>AK-19 [1] - 1044:7</p> <p>AK-20 [1] - 1065:19</p> <p>AK-21 [1] - 1086:3</p>	<p>AK-22 [1] - 1088:39</p> <p>AK-25 [1] - 1105:35</p> <p>AK-31 [1] - 1098:26</p> <p>AK-37 [4] - 1080:30, 1080:33, 1080:40, 1080:46</p> <p>Alan [1] - 1111:7</p> <p>alarmed [1] - 1102:27</p> <p>Alicia [2] - 1028:43, 1028:45</p> <p>ALICIA [1] - 992:27</p> <p>aliquot [2] - 1040:22, 1043:13</p> <p>aliquots [35] - 1040:29, 1040:32, 1040:36, 1041:19, 1043:15, 1048:9, 1048:10, 1048:11, 1048:13, 1048:32, 1049:32, 1049:37, 1049:43, 1049:46, 1050:2, 1050:6, 1050:29, 1050:35, 1050:37, 1061:33, 1061:36, 1061:45, 1061:47, 1062:6, 1062:7, 1062:30, 1065:5, 1089:32, 1090:12, 1102:35, 1105:41, 1115:28, 1115:37, 1116:24, 1117:7</p> <p>all-up [1] - 1073:39</p> <p>Allan [4] - 1058:4, 1096:12, 1109:8, 1109:20</p> <p>Allan's [1] - 1096:26</p> <p>alleles [3] - 1087:14, 1087:34, 1087:40</p> <p>Allen [42] - 994:21, 994:26, 994:43, 995:27, 996:3, 997:32, 998:9, 998:12, 999:16, 1000:4, 1000:27, 1000:29, 1000:35, 1000:47, 1002:8, 1002:12, 1002:16, 1003:11, 1003:14, 1003:24, 1003:40, 1005:20, 1006:2, 1006:7, 1006:9, 1006:14, 1006:16, 1006:22, 1015:43, 1023:40, 1028:44, 1028:46, 1029:4, 1072:11, 1098:29, 1099:25, 1101:42, 1102:6, 1104:13, 1109:32, 1112:4</p>
<p>8</p> <p>8 [8] - 1020:6, 1050:3, 1050:10, 1065:30, 1084:5, 1084:7, 1088:33, 1111:3</p> <p>8.6 [1] - 1095:35</p> <p>8/363 [1] - 991:15</p> <p>80 [1] - 1063:5</p> <p>84 [2] - 1063:18, 1063:23</p> <p>88 [1] - 1063:28</p> <p>883 [1] - 1009:33</p> <p>89 [1] - 1065:4</p> <p>8th [1] - 1046:4</p>	<p>absolutely [2] - 1073:14, 1074:46</p> <p>abstract [2] - 1086:22, 1086:36</p> <p>abstraction [1] - 1108:23</p> <p>accept [7] - 993:30, 1032:16, 1032:40, 1096:24, 1097:36, 1103:46, 1106:11</p> <p>acceptable [2] - 1024:47, 1025:2</p> <p>accepting [1] - 1071:37</p> <p>access [4] - 997:20, 997:28, 998:11, 998:34</p> <p>accidentally [1] - 1032:24</p> <p>according [3] -</p>	<p>1087:8, 1087:15, 1110:45</p> <p>account [2] - 1032:17, 1096:35</p> <p>achieved [1] - 1113:12</p> <p>acknowledged [2] - 1002:45, 1022:27</p> <p>act [4] - 1002:35, 1002:42, 1006:18, 1085:45</p> <p>acted [2] - 1081:39, 1081:40</p> <p>acting [7] - 1001:41, 1005:13, 1016:43, 1074:2, 1094:24, 1097:37, 1097:38</p> <p>action [4] - 1006:14, 1058:43, 1067:19, 1081:3</p> <p>active [3] - 1067:27, 1096:28, 1102:26</p> <p>acts [2] - 1002:1, 1002:20</p> <p>actual [8] - 1040:7, 1040:38, 1041:38, 1047:32, 1055:24, 1072:44, 1090:11, 1120:13</p> <p>ad [1] - 1073:3</p> <p>add [4] - 1038:40, 1057:40, 1061:15, 1071:21</p> <p>added [3] - 1001:12, 1022:18, 1109:44</p> <p>adding [1] - 1092:45</p> <p>additional [3] - 994:3, 1064:34, 1109:43</p> <p>additionally [3] - 1109:35, 1109:37, 1110:11</p> <p>address [4] - 996:20, 1000:11, 1018:31, 1063:13</p> <p>addressed [1] - 1106:26</p> <p>addressees [1] - 1093:15</p> <p>adequately [1] - 1057:26</p> <p>adhering [2] - 1047:17, 1047:20</p> <p>adjourn [2] - 1059:25, 1121:43</p> <p>adjournment [1] - 1028:18</p> <p>admin [1] - 999:21</p> <p>administered [1] - 993:33</p> <p>administrative [4] - 993:26, 997:19,</p>	<p>999:10, 999:22</p> <p>admit [1] - 1086:45</p> <p>Adrian [1] - 1081:18</p> <p>advance [1] - 1005:38</p> <p>Advance [2] - 1093:37, 1093:43</p> <p>advanced [3] - 1005:7, 1005:15, 1043:27</p> <p>advice [3] - 1036:41, 1078:13, 1078:33</p> <p>advise [2] - 1110:21, 1110:22</p> <p>advised [1] - 1072:1</p> <p>aeroplane [1] - 1031:5</p> <p>affect [4] - 1047:31, 1072:26, 1079:6, 1085:34</p> <p>affected [2] - 1075:24, 1083:20</p> <p>afraid [1] - 1072:34</p> <p>afternoon [7] - 992:40, 993:39, 996:21, 1000:31, 1001:35, 1001:46, 1109:18</p> <p>aged [1] - 1031:33</p> <p>agencies [1] - 1035:43</p> <p>agent [3] - 1086:37, 1096:33, 1096:39</p> <p>agents [3] - 1056:18, 1087:35, 1093:44</p> <p>ages [1] - 1047:27</p> <p>aggressive [3] - 1107:24, 1107:27, 1107:28</p> <p>ago [7] - 1003:5, 1003:6, 1003:7, 1034:3, 1102:43, 1106:43, 1120:1</p> <p>agree [19] - 1000:16, 1000:18, 1093:15, 1099:40, 1100:21, 1100:22, 1100:33, 1103:5, 1103:19, 1103:21, 1103:25, 1103:28, 1106:32, 1106:38, 1106:39, 1111:45, 1112:42, 1114:9, 1116:14</p> <p>agreed [5] - 1058:27, 1066:17, 1074:21, 1101:9, 1117:36</p> <p>agreement [1] - 1018:33</p> <p>ahead [5] - 1013:29, 1022:12, 1035:37, 1096:21, 1096:22</p> <p>AK-19 [1] - 1044:7</p> <p>AK-20 [1] - 1065:19</p> <p>AK-21 [1] - 1086:3</p>	<p>AK-22 [1] - 1088:39</p> <p>AK-25 [1] - 1105:35</p> <p>AK-31 [1] - 1098:26</p> <p>AK-37 [4] - 1080:30, 1080:33, 1080:40, 1080:46</p> <p>Alan [1] - 1111:7</p> <p>alarmed [1] - 1102:27</p> <p>Alicia [2] - 1028:43, 1028:45</p> <p>ALICIA [1] - 992:27</p> <p>aliquot [2] - 1040:22, 1043:13</p> <p>aliquots [35] - 1040:29, 1040:32, 1040:36, 1041:19, 1043:15, 1048:9, 1048:10, 1048:11, 1048:13, 1048:32, 1049:32, 1049:37, 1049:43, 1049:46, 1050:2, 1050:6, 1050:29, 1050:35, 1050:37, 1061:33, 1061:36, 1061:45, 1061:47, 1062:6, 1062:7, 1062:30, 1065:5, 1089:32, 1090:12, 1102:35, 1105:41, 1115:28, 1115:37, 1116:24, 1117:7</p> <p>all-up [1] - 1073:39</p> <p>Allan [4] - 1058:4, 1096:12, 1109:8, 1109:20</p> <p>Allan's [1] - 1096:26</p> <p>alleles [3] - 1087:14, 1087:34, 1087:40</p> <p>Allen [42] - 994:21, 994:26, 994:43, 995:27, 99</p>

Allen's [2] - 1000:42, 1099:23	ANGELINA [2] - 1029:20, 1029:42	999:30, 1018:40, 1026:35, 1104:13, 1115:27	1017:6, 1017:11	AT [2] - 1121:45, 1121:46
Allison [1] - 1019:45	ANN [1] - 992:27		arrangements [9] - 1014:3, 1015:7, 1016:22, 1016:46, 1017:2, 1017:4, 1017:24, 1017:33	attached [1] - 1029:46
allocated [1] - 1039:14	Anne [1] - 1081:18	approachable [3] - 1010:9, 1023:45, 1024:3		attachment [4] - 1044:7, 1099:23, 1099:24, 1099:25
allocating [1] - 1118:9	annexed [2] - 1056:9, 1085:14	approaching [2] - 1023:41, 1114:19	artefact [1] - 1043:21	attack [1] - 1046:31
allow [1] - 1101:3	annotated [1] - 1054:14	appropriate [5] - 1002:25, 1002:44, 1032:6, 1038:39, 1063:38	article [1] - 1008:34	attempt [3] - 994:10, 1008:19, 1076:25
allowed [6] - 997:10, 1015:8, 1015:18, 1087:5, 1101:23, 1110:5	answer [6] - 1004:2, 1008:25, 1084:43, 1106:29, 1106:42, 1108:36	approval [2] - 1006:21, 1109:31	articles [4] - 1007:43, 1007:45, 1008:3, 1008:21	attempted [2] - 992:46, 1089:12
almost [6] - 1008:5, 1008:9, 1008:19, 1041:46, 1042:2, 1042:3	answered [1] - 1069:23	appropriately [1] - 1058:41	AS [1] - 1029:13	attend [14] - 995:45, 1028:40, 1071:43, 1072:2, 1072:22, 1074:33, 1074:35, 1074:41, 1076:45, 1077:25, 1098:22, 1098:37, 1098:47, 1112:5
alternative [3] - 1051:13, 1056:10, 1104:15	ante [1] - 1051:27	approve [1] - 1022:11	ascertaining [1] - 995:9	attendance [4] - 1075:43, 1098:15, 1101:22, 1114:28
amlogenin [1] - 1045:17	ante-mortem [1] - 1051:27	approved [10] - 1014:6, 1014:12, 1016:7, 1016:9, 1017:6, 1086:8, 1109:32, 1115:2, 1115:6	aspect [4] - 1072:43, 1076:41, 1100:27, 1109:36	attended [3] - 1072:21, 1111:3, 1114:41
amendments [1] - 1110:22	anthropologist [2] - 1031:34, 1031:36	approves [1] - 1014:35	aspects [6] - 998:28, 1030:30, 1036:23, 1071:7, 1083:13, 1114:3	attendees [1] - 1101:9
amount [7] - 1001:31, 1030:46, 1040:21, 1040:22, 1060:47, 1063:43, 1116:25	anticipate [2] - 1004:46, 1005:15	approximation [1] - 1031:36	assess [3] - 1047:16, 1047:24, 1053:32	attending [1] - 1072:25
amounts [1] - 997:27	anyway [4] - 994:33, 1076:10, 1089:34, 1116:30	April [3] - 1009:43, 1010:3, 1059:42	assessed [1] - 1050:6	attention [12] - 1018:33, 1021:37, 1021:43, 1022:44, 1023:25, 1091:26, 1092:18, 1092:31, 1092:32, 1093:32, 1095:37, 1096:24
amp [3] - 1012:18, 1012:31	ANZFSS [1] - 1114:41	arbit [1] - 1104:6	assessing [3] - 1049:47, 1113:3, 1118:9	attitude [1] - 1101:31
amplification [4] - 1012:28, 1026:4, 1034:15, 1040:39	apart [2] - 1018:40, 1072:20	archived [1] - 1095:3	Assessment [1] - 1101:10	attract [1] - 1061:17
analysed [1] - 1090:35	apologise [3] - 1020:27, 1023:2, 1027:40	area [7] - 1002:39, 1021:26, 1034:10, 1035:3, 1035:5, 1037:3, 1086:46	assessments [1] - 1098:40	attributable [1] - 1006:11
Analysed [1] - 1064:30	apparent [4] - 1006:28, 1006:32, 1062:19, 1116:35	AQ-01 [1] - 1000:28	assimilation [1] - 1111:43	August [5] - 1018:31, 1065:44, 1065:46, 1067:14, 1067:16
Analysis [1] - 1009:47	appear [6] - 992:3, 992:6, 992:8, 992:9, 1096:32, 1102:6	AQ-25 [1] - 1115:33	assist [6] - 1032:2, 1038:10, 1074:35, 1080:26, 1082:34, 1098:23	AUGUST [1] - 1028:5
analysis [15] - 996:9, 996:36, 1001:17, 1001:27, 1018:11, 1027:8, 1041:5, 1055:4, 1090:3, 1099:42, 1100:2, 1100:20, 1101:11, 1101:22, 1121:10	apples [1] - 992:46	aqueous [4] - 1060:28, 1060:35, 1060:37, 1060:40	assistance [6] - 992:35, 1031:26, 1031:45, 1038:22, 1075:1, 1101:1	Australia [1] - 1051:7
analytical [27] - 1007:27, 1007:28, 1007:30, 1011:3, 1020:22, 1020:27, 1020:33, 1020:40, 1026:8, 1030:17, 1034:9, 1034:12, 1034:16, 1034:22, 1040:33, 1040:38, 1056:47, 1060:13, 1069:5, 1079:2, 1079:33, 1079:36, 1080:7, 1080:10, 1080:12, 1118:29	applicant [1] - 1015:1	arbitr [1] - 1104:6	assistants [1] - 1075:28	Australia-wide [1] - 1051:7
AND [1] - 1029:13	application [4] - 992:3, 1014:29, 1017:15, 1017:21	areas [3] - 1073:32, 1073:35, 1094:20	Assisting [1] - 991:30	authorise [1] - 1014:27
Angelina [2] - 1029:17, 1029:24	applications [1] - 1017:9	argue [1] - 1117:41	assisting [3] - 1007:3, 1092:16, 1097:46	authority [6] - 1003:12, 1004:11, 1004:12, 1014:23, 1014:35, 1105:2
	applied [10] - 1010:41, 1014:3, 1014:4, 1014:42, 1016:3, 1030:29, 1055:38, 1087:4, 1115:10, 1115:18	argument [1] - 1104:19	assists [1] - 1074:40	automatically [1] - 1011:40
	applies [1] - 1086:31	arise [1] - 1001:34	associate [1] - 1095:16	autopsies [1] - 1038:16
	applying [1] - 1046:19	arisen [1] - 1010:32	associated [3] - 1036:17, 1036:40, 1094:47	autopsy [1] - 1033:28
	appointment [2] - 1072:19, 1072:21	arises [1] - 1078:32	association [1] - 1032:12	availability [1] - 1037:41
	appreciate [6] - 994:18, 1006:2, 1096:18, 1096:35, 1100:26, 1104:16	arising [4] - 992:32, 1016:11, 1116:24, 1117:17	assumed [2] - 1062:28, 1062:34	available [14] -
	apprehend [1] - 1006:5	arithmetic [3] - 1116:9, 1116:14, 1116:28		
	approach [6] - 999:20,	arose [1] - 1083:18		
		arrange [1] - 994:35		
		arrangement [8] - 1014:22, 1014:39, 1014:43, 1015:4, 1016:4, 1016:9,		

bounce ^[1] - 1066:37	capacity ^[1] - 1079:7	1031:30, 1031:31,	Caunt ^[1] - 1121:26	1072:31
break ^[4] - 993:39, 1008:24, 1028:8, 1103:3	capillary ^[3] - 1034:15, 1040:39, 1054:35	1031:42, 1031:43, 1032:34, 1032:36, 1034:37, 1034:40, 1036:43, 1041:19, 1044:3, 1044:21, 1044:30, 1045:33, 1046:4, 1046:9, 1050:9, 1050:17, 1051:23, 1052:29, 1053:18, 1053:19, 1053:25, 1055:20, 1066:9, 1066:17, 1066:36, 1068:32, 1070:42, 1070:46, 1074:43, 1076:11, 1079:9, 1079:17, 1079:18, 1080:2, 1089:28, 1089:30, 1103:42, 1113:13, 1117:46, 1119:16, 1120:37	caused ^[1] - 1061:43	chance ^[5] - 1003:17, 1038:26, 1042:29, 1076:21, 1105:42
breaks ^[1] - 1098:12	car ^[1] - 1031:17		causes ^[2] - 996:22, 1001:23	
brief ^[1] - 1109:12	career ^[2] - 1016:24, 1053:32		causing ^[7] - 1063:36, 1064:14, 1064:17, 1086:26, 1094:43, 1097:8, 1097:28	chances ^[1] - 1051:19
briefing ^[4] - 1092:32, 1092:37, 1093:24, 1097:39	careful ^[1] - 1060:46		cave ^[1] - 1047:30	change ^[41] - 1014:27, 1022:26, 1054:23, 1054:30, 1054:34, 1055:22, 1056:31, 1056:35, 1056:39, 1056:42, 1057:2, 1057:7, 1057:23, 1057:25, 1057:37, 1057:47, 1058:7, 1058:13, 1059:38, 1059:42, 1063:23, 1063:26, 1064:47, 1069:4, 1069:16, 1069:35, 1070:31, 1077:4, 1083:2, 1088:40, 1092:7, 1092:45, 1094:25, 1096:9, 1096:12, 1097:38, 1097:43, 1102:14, 1117:1
briefly ^[2] - 1051:17, 1085:18	carefully ^[1] - 1094:3		celebrate ^[3] - 1117:37, 1121:3, 1121:11	
briefs ^[2] - 1109:18, 1109:22	carriage ^[3] - 1066:8, 1067:20, 1068:7		celebrated ^[16] - 1112:19, 1113:11, 1113:24, 1117:31, 1117:39, 1119:8, 1119:15, 1120:21, 1120:24, 1120:26, 1120:37, 1120:41, 1120:43, 1120:44, 1121:2, 1121:7	
bring ^[6] - 994:7, 1001:6, 1013:37, 1023:24, 1034:1, 1114:12	carried ^[3] - 1025:38, 1025:39, 1105:13		celebrating ^[2] - 1113:15, 1120:22	changed ^[8] - 1003:29, 1043:24, 1056:2, 1056:15, 1056:22, 1062:33, 1063:19, 1108:11
Brisbane ^[2] - 991:14, 991:15	carry ^[4] - 1019:27, 1025:45, 1026:24, 1113:36		celebration ^[1] - 1119:21	changes ^[17] - 1054:16, 1054:40, 1055:18, 1055:25, 1059:36, 1059:38, 1063:45, 1064:26, 1064:29, 1069:13, 1069:23, 1069:27, 1069:29, 1069:38, 1069:39, 1083:8
Brisotto ^[4] - 999:16, 1020:2, 1020:17, 1020:28	case ^[89] - 993:21, 993:31, 998:3, 1002:15, 1002:36, 1002:46, 1008:12, 1008:14, 1008:17, 1008:35, 1008:41, 1009:6, 1009:11, 1009:13, 1010:4, 1021:33, 1023:26, 1024:14, 1026:20, 1032:21, 1032:33, 1032:42, 1033:19, 1033:20, 1033:44, 1034:10, 1036:24, 1036:30, 1036:41, 1037:19, 1042:22, 1042:41, 1045:21, 1045:25, 1045:40, 1047:41, 1048:2, 1048:8, 1048:23, 1048:26, 1048:30, 1049:21, 1049:45, 1050:1, 1050:23, 1050:26, 1050:39, 1050:41, 1050:42, 1052:6, 1052:27, 1052:31, 1052:32, 1052:33, 1052:36, 1053:22, 1061:34, 1061:35, 1061:40, 1062:24, 1070:22, 1071:26, 1071:30, 1071:40, 1072:30, 1072:31, 1079:7, 1079:15, 1079:35, 1080:1, 1080:13, 1084:24, 1084:25, 1085:19, 1085:20, 1089:29, 1089:30, 1091:9, 1091:16, 1102:19, 1102:26, 1109:14, 1113:16, 1113:20, 1113:29, 1114:31, 1114:40	casework ^[2] - 1036:26, 1079:27	cell ^[1] - 1060:3	channels ^[6] - 1014:5, 1016:6, 1017:10, 1041:40, 1041:44, 1042:9
brittle ^[1] - 1039:39		casework ^[1] - 1079:25	cells ^[4] - 1041:31, 1041:38, 1042:5, 1063:40	charge ^[6] - 998:20, 1057:45, 1057:46, 1058:4, 1059:18, 1059:20
broad ^[1] - 1004:41		Casey ^[1] - 1099:43	cellular ^[2] - 1060:6, 1060:38	chase ^[1] - 1014:11
brought ^[11] - 998:18, 1018:33, 1021:37, 1021:42, 1022:44, 1029:35, 1043:26, 1075:29, 1093:31, 1104:17, 1104:21		Cass ^[1] - 1100:1	cent ^[14] - 994:28, 994:34, 995:32, 995:44, 996:8, 1049:18, 1049:23, 1056:41, 1056:45, 1057:10, 1058:9, 1074:46, 1094:20, 1094:23	chasing ^[1] - 1009:11
bugs ^[10] - 1080:25, 1080:27, 1081:3, 1081:5, 1081:8, 1081:13, 1081:14, 1081:20, 1081:28, 1081:29		categories ^[1] - 1074:42	centre ^[5] - 1035:25, 1039:29, 1040:5, 1040:7, 1040:15	check ^[6] - 1038:24, 1045:36, 1061:19, 1096:46, 1108:28, 1108:30
bung ^[1] - 1090:9		categorisations ^[1] - 1046:3	certain ^[9] - 1005:9, 1005:14, 1007:4, 1025:26, 1025:32, 1052:20, 1056:21, 1114:2, 1118:29	checked ^[1] - 1011:17
bungs ^[3] - 1039:29, 1056:44, 1089:2		category ^[1] - 1053:33	centrally ^[3] - 1013:22, 1028:11, 1114:23	checking ^[3] - 999:23, 1090:17, 1093:39
business ^[4] - 1017:42, 1017:45, 1101:13, 1101:29		Cathie ^[45] - 994:43, 995:31, 996:7, 997:32, 998:9, 998:14, 1000:4, 1000:8, 1001:30, 1002:45, 1003:34, 1003:43, 1004:2, 1004:5, 1004:7, 1014:31, 1017:16, 1017:22, 1017:28, 1020:44, 1021:39, 1022:14, 1022:17, 1023:40, 1023:41, 1026:32, 1026:34, 1026:41, 1027:8, 1027:13, 1028:44, 1028:46, 1029:4, 1072:11, 1082:47, 1098:29, 1098:39, 1101:42, 1102:6, 1110:7, 1110:39, 1110:44, 1111:4, 1111:25	challenge ^[2] - 1013:40, 1026:29	checks ^[1] - 1089:41
busy ^[3] - 1038:1, 1074:30, 1114:35		cases ^[47] - 1030:36,	challenging ^[1] -	chemistry ^[8] - 993:14, 993:22, 993:32, 996:30,
buy ^[1] - 1041:6				
BY ^[8] - 992:29, 1010:35, 1013:13, 1029:22, 1085:43, 1091:23, 1102:1, 1117:25				
<hr/>				
C				
<hr/>				
cabinets ^[1] - 997:7				
calculation ^[2] - 1051:34, 1051:47				
calculations ^[1] - 1051:22				
campus ^[1] - 1018:10				
cannot ^[1] - 1062:43				

996:43, 996:44, 997:6, 997:16 chief [1] - 1001:35 children [3] - 1015:11, 1015:24, 1016:25 chisel [8] - 1039:26, 1041:4, 1041:6, 1041:9, 1057:17, 1096:4, 1096:5 Chisels [1] - 1096:4 chisels [8] - 1057:17, 1057:37, 1058:23, 1058:26, 1089:5, 1094:39, 1096:5, 1097:1 choose [2] - 1015:35, 1107:15 Christmas [5] - 994:25, 994:29, 994:33, 995:45, 996:5 churlishly [1] - 992:46 circulating [1] - 996:1 circumference [2] - 1040:8, 1040:9 circumstances [1] - 998:12 circumstantial [3] - 1032:39, 1032:40, 1036:22 CJA [4] - 1029:8, 1029:13 clarification [1] - 1102:7 clarified [1] - 993:20 clarify [5] - 993:38, 996:15, 1007:15, 1048:46, 1050:26 classification [2] - 1024:18, 1024:23 clean [11] - 1041:11, 1057:25, 1057:36, 1058:36, 1059:7, 1059:10, 1086:29, 1087:15, 1094:40, 1097:1, 1097:27 cleaned [5] - 1055:33, 1058:42, 1089:6, 1090:6, 1096:6 cleaning [42] - 1041:15, 1054:23, 1054:26, 1056:5, 1056:10, 1056:18, 1056:19, 1056:21, 1056:22, 1056:35, 1058:15, 1058:38, 1058:44, 1059:37, 1067:35, 1067:41, 1068:5, 1069:25, 1069:35, 1085:47,	1086:2, 1086:37, 1087:15, 1087:35, 1088:34, 1088:40, 1090:5, 1090:28, 1091:18, 1091:29, 1092:8, 1093:44, 1093:46, 1093:47, 1094:21, 1096:33, 1096:39, 1096:41, 1096:47, 1097:9, 1097:43 clear [12] - 1001:10, 1001:30, 1004:3, 1011:43, 1060:17, 1066:6, 1075:12, 1090:24, 1100:15, 1100:43, 1104:34, 1110:14 clearance [1] - 1039:2 clearer [1] - 1085:4 clearly [5] - 1030:25, 1053:22, 1085:26, 1103:42, 1108:5 climate [1] - 1011:16 close [3] - 1080:11, 1116:6 closure [1] - 1034:1 cogent [1] - 1100:32 cohort [1] - 1065:15 coincidental [2] - 1074:6, 1074:7 cold [5] - 1031:31, 1031:43, 1039:36, 1085:19, 1085:20 colleague [8] - 1052:28, 1062:44, 1067:38, 1070:40, 1108:9, 1108:43, 1108:44, 1108:45 colleagues [16] - 998:43, 1004:34, 1016:30, 1027:1, 1036:28, 1036:29, 1036:35, 1048:29, 1050:3, 1053:25, 1055:7, 1066:16, 1066:35, 1067:25, 1070:41, 1106:1 collecting [1] - 1076:30 collection [1] - 1058:40 collective [1] - 1018:33 colour [2] - 1041:47, 1042:3 column [4] - 1044:16, 1044:46, 1044:47, 1054:12 columns [1] - 1080:41	combination [1] - 1063:44 comfortable [10] - 1018:43, 1022:32, 1023:31, 1023:41, 1024:1, 1026:38, 1026:42, 1084:9, 1099:4, 1107:42 coming [12] - 1038:4, 1068:36, 1069:5, 1069:22, 1072:42, 1072:46, 1079:17, 1079:29, 1089:31, 1090:24, 1090:37, 1121:29 commence [1] - 1029:7 commenced [2] - 1056:2, 1092:22 commences [1] - 1098:19 comment [4] - 1022:35, 1022:37, 1022:40, 1092:45 commented [2] - 1002:34, 1002:41 Comments [1] - 1022:41 COMMISSION [2] - 991:4, 1121:45 Commission [7] - 992:9, 1005:2, 1006:7, 1006:13, 1029:34, 1066:25, 1093:5 Commissioner [43] - 991:26, 992:6, 992:17, 992:25, 992:36, 992:47, 994:9, 996:15, 1004:39, 1005:10, 1006:38, 1007:44, 1010:28, 1010:32, 1013:11, 1013:22, 1013:26, 1013:31, 1016:14, 1019:16, 1021:22, 1023:39, 1025:12, 1026:33, 1027:27, 1028:8, 1028:28, 1028:42, 1029:17, 1029:40, 1056:4, 1080:39, 1093:4, 1094:7, 1095:41, 1099:14, 1102:3, 1104:10, 1104:15, 1104:36, 1110:28, 1115:22, 1117:20 COMMISSIONER [123] - 992:1, 992:11,	992:15, 992:23, 996:17, 998:46, 999:35, 999:41, 1004:31, 1004:43, 1005:5, 1005:24, 1005:33, 1005:47, 1006:20, 1006:41, 1010:30, 1011:39, 1012:37, 1013:9, 1013:19, 1013:24, 1013:29, 1013:33, 1016:11, 1016:16, 1018:3, 1019:13, 1019:18, 1019:26, 1025:10, 1027:32, 1027:37, 1027:42, 1028:1, 1028:11, 1028:15, 1028:20, 1028:26, 1028:33, 1028:39, 1029:1, 1029:11, 1029:15, 1030:42, 1031:22, 1033:7, 1033:23, 1035:9, 1035:37, 1036:28, 1036:45, 1042:2, 1043:5, 1044:32, 1048:39, 1049:17, 1052:38, 1053:4, 1053:11, 1057:36, 1058:23, 1059:9, 1059:13, 1059:25, 1059:29, 1059:33, 1060:15, 1060:43, 1073:7, 1073:43, 1075:12, 1076:43, 1080:5, 1080:43, 1081:32, 1081:44, 1085:41, 1086:16, 1087:27, 1087:43, 1088:6, 1088:11, 1088:15, 1094:5, 1094:9, 1095:10, 1095:15, 1095:24, 1095:31, 1095:39, 1095:44, 1096:1, 1096:15, 1096:21, 1098:2, 1098:10, 1099:11, 1099:16, 1099:29, 1101:20, 1101:28, 1101:39, 1101:46, 1104:2, 1104:23, 1104:38, 1104:44, 1105:18, 1105:24, 1105:30, 1107:17, 1108:38, 1110:32, 1110:36, 1115:24, 1117:17, 1117:22, 1121:18, 1121:23, 1121:29, 1121:39, 1121:43	Commissioner's [1] - 1049:13 commitment [1] - 1110:23 commitments [1] - 1068:37 committee [1] - 1092:33 common [5] - 1036:42, 1042:43, 1067:41, 1113:14, 1117:45 commonly [1] - 1072:27 communicate [2] - 1108:5, 1109:14 communicated [5] - 1000:4, 1008:29, 1024:31, 1024:34, 1024:35 communicating [1] - 994:27 communication [6] - 1002:7, 1003:19, 1005:16, 1018:12, 1036:13, 1072:29 communications [3] - 1018:18, 1039:8, 1073:12 community [1] - 1106:15 community" [1] - 1113:17 comparable [1] - 1091:40 compare [3] - 992:46, 1064:4, 1090:34 compared [5] - 992:41, 993:12, 996:41, 997:1, 1079:10 comparing [1] - 993:6 comparison [8] - 996:29, 1024:8, 1032:10, 1033:15, 1051:24, 1051:27, 1051:30, 1052:22 compelled [1] - 1015:34 competencies [2] - 1034:17, 1038:3 competency [5] - 1037:24, 1037:45, 1078:46, 1079:1, 1079:10 complaint [4] - 997:40, 997:43, 1005:11, 1005:25 complete [1] - 1014:7 completely [4] -
---	--	---	--	--

1012:21, 1047:30, 1084:9, 1117:4	1066:5, 1071:7, 1073:46, 1077:30, 1081:37, 1081:38, 1082:26, 1082:35, 1085:16, 1098:15, 1102:14, 1102:24, 1102:25, 1102:32, 1102:38, 1103:9, 1103:14, 1103:15, 1103:19, 1103:23, 1103:25, 1103:27, 1104:4, 1104:7, 1104:27, 1106:6, 1106:19, 1107:43, 1107:47, 1108:6, 1108:8, 1108:17, 1108:18, 1121:32, 1121:35	1079:38, 1080:14	1053:42, 1054:2, 1054:4, 1054:5, 1058:28, 1061:41, 1076:9, 1091:2, 1091:13	1068:33
complex [5] - 1047:43, 1050:6, 1050:46, 1053:19, 1070:46	complicated [2] - 1071:18, 1072:33	connotation [1] - 1103:36	content [1] - 1053:9	Coopers [1] - 1038:34
component [3] - 1060:35, 1060:36, 1060:44	components [4] - 1041:8, 1060:6, 1060:38, 1086:25	consequence [5] - 1000:36, 1032:29, 1053:8, 1053:11, 1053:16	contents [1] - 1076:13	coordinator [2] - 1076:35, 1109:13
compromised [4] - 1063:41, 1068:33, 1069:45, 1070:46	concentrated [3] - 1011:11, 1011:15, 1012:44	consider [6] - 1017:36, 1046:40, 1064:33, 1078:13, 1084:7, 1090:30	context [2] - 994:2, 1095:33	cope [1] - 1100:45
concentrating [1] - 1010:43	concentrating [1] - 1010:43	consideration [5] - 1055:16, 1075:10, 1091:4, 1092:22, 1111:29	continue [5] - 995:5, 1069:42, 1091:45, 1104:38, 1108:6	copied [3] - 1019:44, 1020:32, 1024:43
concentration [4] - 1012:22, 1012:24, 1061:8, 1115:44	concern [18] - 996:28, 1021:29, 1021:44, 1023:20, 1063:31, 1064:21, 1064:22, 1070:9, 1078:30, 1086:24, 1086:31, 1104:10, 1104:33, 1105:36, 1105:45, 1106:13, 1106:47, 1117:13	considered [1] - 1013:2	continues [1] - 1015:5	COPY [1] - 1080:46
concept [1] - 1076:32	concerns [1] - 1102:22	considering [1] - 1069:39	CONTINUING [1] - 992:29	core [4] - 1008:6, 1008:26, 1008:28, 1009:12
concern [18] - 996:28, 1021:29, 1021:44, 1023:20, 1063:31, 1064:21, 1064:22, 1070:9, 1078:30, 1086:24, 1086:31, 1104:10, 1104:33, 1105:36, 1105:45, 1106:13, 1106:47, 1117:13	conclude [2] - 1056:13, 1106:5	consistent [2] - 1052:33, 1053:22	continuing [1] - 1106:6	corner [2] - 1088:4, 1088:7
concerned [16] - 1011:21, 1053:4, 1066:45, 1078:42, 1089:22, 1090:6, 1097:12, 1097:13, 1100:36, 1102:41, 1102:47, 1103:38, 1105:34, 1107:2, 1107:32, 1116:25	concluded [1] - 995:10	consists [2] - 993:13, 996:42	contrary [1] - 997:13	coroner [30] - 1030:37, 1030:47, 1031:26, 1032:5, 1032:15, 1032:39, 1034:4, 1036:1, 1036:17, 1043:3, 1043:37, 1047:5, 1047:14, 1048:28, 1048:36, 1050:47, 1051:4, 1051:10, 1051:12, 1051:13, 1052:1, 1052:4, 1052:19, 1052:30, 1064:5, 1071:25, 1071:37, 1072:37, 1072:45
concerning [5] - 998:24, 998:27, 1049:21, 1064:25, 1092:23	conduct [6] - 1068:11, 1068:12, 1068:28, 1072:26, 1089:35, 1089:40	constantly [2] - 1081:30, 1117:8	contributed [2] - 1037:27, 1052:21	coroner's [1] - 1031:45
concerns [56] - 1000:44, 1001:23, 1005:17, 1005:35, 1011:37, 1017:4, 1017:27, 1019:11, 1019:32, 1019:34, 1020:10, 1021:21, 1021:36, 1021:42, 1022:19, 1024:1, 1026:47, 1038:9, 1061:30, 1066:1,	conducting [4] - 1034:18, 1089:39, 1111:13, 1111:20	constituted [1] - 1102:23	contributing [4] - 1055:25, 1064:34, 1069:40, 1097:15	coronial [17] - 1031:25, 1034:41, 1036:24, 1041:19, 1043:34, 1051:38, 1063:39, 1071:9, 1071:12, 1072:23, 1074:16, 1074:43, 1079:18, 1082:43, 1099:6, 1101:36, 1101:40
	condition [4] - 1047:16, 1047:23, 1047:26, 1075:22	consultants [2] - 1082:20, 1111:23	contribution [1] - 1051:20	correct [21] - 993:18, 999:33, 1011:30, 1020:19, 1030:13, 1030:14, 1035:20, 1035:41, 1059:20, 1070:9, 1081:3, 1084:8, 1086:2, 1086:13, 1086:39, 1087:3, 1087:36, 1091:42, 1096:11, 1096:31, 1099:47
	conduct [6] - 1068:11, 1068:12, 1068:28, 1072:26, 1089:35, 1089:40	consultation [4] - 1014:37, 1058:9, 1082:4, 1100:17	contributor [3] - 1085:24, 1085:25, 1109:34	correction [2] - 1083:42, 1084:1
	conducted [6] - 1071:23, 1101:14, 1111:7, 1111:13, 1113:29, 1113:32	consulted [3] - 1074:37, 1074:38, 1101:37	contributors [3] - 1041:18, 1047:46, 1064:35	correctly [2] - 1001:12, 1048:45
	confident [3] - 1074:45, 1075:35, 1085:13	consulting [1] - 1070:41	control [13] - 992:42, 996:24, 998:7, 998:8, 998:11, 998:15, 998:16, 1000:6, 1005:2, 1090:11, 1090:27, 1101:34	correspondence [2] -
	confidently [1] - 1054:7	contact [9] - 1017:47, 1019:43, 1021:39, 1021:40, 1027:7, 1036:14, 1038:21, 1058:31, 1081:21	controlled [1] - 1081:11	
	conformance [2] - 1025:30, 1025:31	contained [2] - 1046:24, 1047:32	controls [1] - 1090:23	
	confronting [1] - 1075:40	container [2] - 1057:39, 1057:40	convenient [2] - 1028:8, 1059:13	
	confused [2] - 1021:4, 1111:10	contains [3] - 1060:38, 1060:40, 1103:35	conversation [10] - 1004:16, 1023:44, 1072:17, 1072:18, 1074:20, 1084:16, 1105:9, 1105:16, 1105:36, 1106:4	
	congratulated [1] - 1113:11	contaminants [1] - 1039:23	conversations [5] - 1002:40, 1023:42, 1080:12, 1084:37, 1084:38	
	connect [1] - 1080:41	contaminated [3] - 1035:11, 1060:46, 1089:40	convey [1] - 1024:47	
	connection [1] - 1090:38	contaminating [3] - 1086:30, 1089:25, 1091:14	convinced [1] -	
	connections [2] -	contamination [13] - 1042:42, 1043:13, 1043:18, 1043:20,		

995:42, 1084:17	1025:21, 1028:31	D	1053:24, 1060:21,	density [1] - 1075:9
Counsel [1] - 991:30	cross-examination [4]		1063:41, 1064:15,	dental [7] - 1032:40,
counsel [4] - 992:7,	- 1020:9, 1022:6,	dad [1] - 1051:33	1079:2, 1096:44,	1032:44, 1033:12,
1007:2, 1092:16,	1025:21, 1028:31	daily [1] - 1118:39	1096:45, 1100:41	1036:32, 1071:19,
1097:46	cross-purposes [1] -	damage [1] - 1077:8	deals [2] - 1072:43,	1071:27, 1071:28
counsellors [2] -	992:35	damaged [1] -	1112:39	dentist [1] - 1071:26
1071:13, 1120:30	crossed [1] - 1117:44	1075:15	dealt [5] - 1022:39,	dentists [2] - 1036:20,
couple [3] - 1010:32,	crush [3] - 1039:27,	damaging [1] -	1043:41, 1044:2,	1038:45
1021:37, 1115:32	1042:13	1086:24	1056:27, 1059:35	department [5] -
course [16] - 993:43,	crusher [11] -	Damien [1] - 1100:13	deceased [15] -	997:2, 998:20,
994:39, 1010:21,	1039:30, 1055:32,	dare [1] - 1099:8	1032:8, 1033:5,	1008:22, 1014:39,
1011:39, 1015:42,	1055:42, 1056:6,	dashboard [3] -	1041:28, 1046:14,	1095:2
1025:8, 1080:16,	1056:11, 1056:14,	1118:15, 1118:23,	1046:28, 1046:47,	department's [1] -
1088:13, 1104:10,	1056:19, 1056:22,	1119:20	1051:2, 1051:5,	1015:31
1104:12, 1104:15,	1056:23, 1056:43,	data [1] - 1001:18	1051:8, 1053:30,	departmental [1] -
1105:9, 1106:30,	1091:29	database [3] - 1051:6,	1053:38, 1054:1,	1014:38
1114:28, 1114:29,	crushes [1] - 1039:33	1051:9, 1090:41	1054:3, 1054:4,	derivate [1] - 1019:3
1115:5	crushing [9] -	date [23] - 1002:28,	1094:47	derived [1] - 1094:26
Court [1] - 991:14	1040:47, 1056:36,	1003:18, 1003:29,	decide [2] - 1007:25,	describe [8] - 998:6,
court [14] - 992:13,	1056:40, 1056:42,	1008:34, 1008:44,	1015:44	1003:47, 1010:9,
1002:29, 1002:30,	1069:19, 1086:1,	1009:3, 1028:40,	decided [5] - 1058:7,	1046:13, 1059:18,
1003:18, 1003:29,	1086:25, 1086:31,	1029:6, 1044:16,	1078:34, 1109:35,	1094:19, 1109:7,
1004:9, 1004:19,	1086:33	1044:33, 1046:32,	1109:37, 1114:42	1119:44
1017:45, 1017:47,	Csoban [1] - 1111:7	1046:33, 1047:8,	decimal [1] - 1116:30	described [13] -
1018:15, 1018:16,	CSP [2] - 1119:38,	1049:38, 1049:41,	decision [4] -	992:41, 998:13,
1018:22, 1018:47,	1119:41	1065:26, 1065:27,	1015:38, 1026:30,	1032:33, 1032:34,
1030:10	culminated [1] -	1065:38, 1066:22,	1070:38, 1104:20	1041:4, 1047:37,
courteous [1] -	1111:20	1066:28, 1067:14,	decomposing [1] -	1049:32, 1051:31,
1010:12	cultural [2] - 1083:18,	1083:44, 1094:5	1047:18	1055:31, 1055:36,
cover [1] - 992:32	1083:20	DATED [3] - 1028:5,	decomposition [2] -	1055:37, 1076:28,
COVID [2] - 1071:21,	culture [8] - 1004:23,	1029:42, 1098:7	1032:38, 1033:2	1111:47
1071:23	1004:41, 1004:47,	dated [2] - 1065:33,	Decon [1] - 1093:43	describing [1] -
crash [4] - 1031:14,	1081:47, 1082:2,	1098:30	decrease [2] -	993:16
1031:17, 1078:27	1082:9, 1082:13,	dates [4] - 1002:29,	1061:32, 1105:42	desert [1] - 1047:30
crashes [3] - 1030:43,	1082:21	1028:39, 1044:12,	deceased [1] -	desk [2] - 1036:40,
1031:5, 1031:17	cupboard [5] - 996:28,	1108:30	1082:10	1108:27
crazy [1] - 1026:35	996:31, 996:36,	David [2] - 1027:2,	dedicated [3] -	deskilld [1] - 1078:31
create [2] - 1005:29,	997:15, 999:32	1027:6	1041:11, 1076:34,	detail [3] - 995:7,
1073:11	cupboards [1] - 997:1	day-to-day [1] -	1081:8	1055:28, 1061:21
created [1] - 1114:5	current [9] - 1000:27,	1008:5	deem [1] - 1032:5	details [8] - 1019:44,
creates [1] - 1079:38	1007:20, 1007:25,	days [8] - 1006:22,	deemed [1] - 1031:1	1025:32, 1052:8,
creating [1] - 1055:12	1007:36, 1011:16,	1014:8, 1014:10,	default [1] - 1007:21	1061:19, 1062:27,
creek [1] - 1075:21	1016:24, 1073:34,	1046:17, 1046:35,	definitely [1] -	1062:43, 1069:11,
crime [11] - 1030:18,	1073:38, 1096:17	1046:41, 1047:2	1120:28	1075:13
1033:19, 1033:36,	cut [7] - 1015:35,	de [3] - 1039:19,	definition [1] -	detect [1] - 1065:1
1034:25, 1034:29,	1035:25, 1035:32,	1048:27, 1073:31	1035:26	detected [4] -
1034:44, 1035:41,	1039:22, 1045:15,	de-flesh [1] - 1039:19	definitively [1] -	1011:27, 1013:2,
1035:43, 1045:30,	1046:16, 1046:17	de-identified [1] -	1055:16	1064:36, 1064:46
1051:40, 1113:22	cut-off [3] - 1045:15,	1048:27	degree [1] - 1121:1	detecting [1] -
criminal [1] - 1032:35	1046:16, 1046:17	de-skilled [1] -	delay [4] - 1006:9,	1064:41
critical [1] - 1038:42	cycle [3] - 1086:38,	1073:31	1006:10, 1006:13,	detection [1] -
criticism [3] -	1086:42, 1088:44	deadline [1] - 1004:9	1114:5	1064:34
1003:24, 1104:30,	cylinder [13] -	deal [11] - 1006:30,	delayed [4] - 1014:26,	deter [1] - 1002:1
1111:45	1039:27, 1039:29,	1024:3, 1030:34,	1113:47, 1114:6,	detergents [1] -
criticisms [1] -	1039:32, 1040:4,	1036:1, 1036:22,	1114:7	1086:44
1121:35	1040:11, 1040:28,	1036:36, 1038:7,	delaying [1] - 1004:6	deteriorating [1] -
crocodile [1] -	1042:8, 1042:9,	1076:40, 1083:42,	delays [1] - 1006:22	1082:13
1046:30	1056:44, 1089:2,	1096:36, 1120:18	deliberate [1] -	deterioration [1] -
cross [5] - 992:35,	1090:8, 1090:9,	dealing [11] - 1006:33,	1005:29	1035:28
1020:9, 1022:6,	1090:17	1006:34, 1037:36,	delivered [1] - 1014:9	determine [1] -

1115:44
deterrent [6] -
 1001:41, 1001:42,
 1002:20, 1002:35,
 1002:43, 1005:13
detrimentally [2] -
 1072:26, 1079:6
development [10] -
 1007:42, 1114:11,
 1114:17, 1114:26,
 1114:27, 1114:31,
 1115:9, 1115:17,
 1119:37, 1119:45
deviate [1] - 1019:4
difference [10] -
 1034:43, 1035:39,
 1057:28, 1102:41,
 1103:41, 1103:43,
 1104:16, 1106:11,
 1116:39, 1117:12
differences [4] -
 1019:6, 1062:19,
 1102:44, 1116:35
different [41] -
 1014:13, 1025:4,
 1025:15, 1027:45,
 1031:15, 1031:16,
 1031:17, 1034:40,
 1042:25, 1042:30,
 1043:26, 1044:3,
 1047:27, 1047:31,
 1050:5, 1051:23,
 1051:39, 1051:47,
 1057:21, 1060:1,
 1060:2, 1060:28,
 1060:29, 1062:4,
 1062:10, 1071:18,
 1072:28, 1076:9,
 1079:11, 1080:21,
 1085:26, 1087:9,
 1090:20, 1096:36,
 1100:42, 1103:19,
 1103:24, 1105:1,
 1106:22, 1116:42,
 1120:29
differently [1] -
 1051:38
difficult [15] - 997:13,
 1014:15, 1050:8,
 1054:6, 1054:9,
 1055:23, 1058:35,
 1080:31, 1086:29,
 1103:30, 1106:46,
 1107:31, 1107:37,
 1107:38, 1121:10
difficulties [1] -
 1052:43
difficulty [1] - 1052:25
DIFF [18] - 1010:38,
 1011:11, 1011:27,
 1011:40, 1018:35,
 1019:32, 1019:34,
 1020:10, 1021:21,
 1024:10, 1024:21,
 1026:47, 1084:5,
 1084:7, 1084:26,
 1084:27, 1085:12,
 1085:30
dig [1] - 1035:31
digits [1] - 1013:27
direct [9] - 1004:3,
 1017:47, 1051:24,
 1051:26, 1051:30,
 1052:22, 1076:19,
 1095:37, 1099:27
directed [4] - 998:17,
 1074:35, 1098:21,
 1098:47
direction [9] -
 1072:11, 1078:36,
 1082:46, 1098:36,
 1098:42, 1099:2,
 1099:7, 1100:29,
 1120:3
directions [1] -
 1005:16
directly [4] - 996:8,
 1003:14, 1053:2,
 1112:33
director [14] - 1014:5,
 1014:31, 1014:34,
 1015:39, 1015:43,
 1016:2, 1016:43,
 1017:16, 1017:25,
 1023:25, 1074:2,
 1077:43, 1082:27,
 1101:32
director's [1] -
 1017:14
directors [1] - 1077:24
disagree [1] - 1116:45
disagreement [2] -
 1018:44, 1108:7
disaster [5] - 1030:39,
 1030:42, 1075:32,
 1076:6, 1076:29
disciplines [4] -
 1071:18, 1072:28,
 1100:42, 1120:29
disclose [1] - 1048:28
disclosure [1] -
 1048:36
discovered [1] -
 1048:39
discrepancies [1] -
 1106:25
discuss [13] -
 1014:29, 1023:45,
 1026:37, 1026:40,
 1058:26, 1077:38,
 1080:9, 1099:43,
 1100:35, 1106:24,
 1114:11, 1114:17,
 1114:25
discussed [4] -
 1017:32, 1023:25,
 1067:8, 1073:45
discussing [1] -
 996:25
discussion [3] -
 1001:40, 1002:38,
 1002:46
discussions [8] -
 996:10, 998:39,
 1025:33, 1026:43,
 1027:12, 1066:42,
 1077:40, 1080:14
disheartened [1] -
 1083:35
disheartening [1] -
 1083:25
dishwasher [10] -
 1056:20, 1056:23,
 1056:40, 1056:43,
 1086:38, 1086:43,
 1087:19, 1088:45,
 1091:28, 1092:24
dismiss [5] - 1102:38,
 1104:7, 1104:14,
 1104:21, 1105:2
dismissed [11] -
 1083:25, 1102:22,
 1103:23, 1103:28,
 1103:44, 1103:47,
 1104:4, 1104:27,
 1104:33, 1105:1,
 1105:45
dismisses [1] -
 1103:35
dismissing [4] -
 1102:24, 1104:5,
 1104:45, 1104:46
disposed [1] -
 1093:33
dispute [4] - 1093:45,
 1094:2, 1094:13
disruption [2] -
 999:44, 999:46
dissection [1] -
 1077:27
dissolve [1] - 1057:42
distinction [1] -
 1070:7
distressed [2] -
 1033:41, 1111:9
distressing [2] -
 1075:13, 1116:47
divided [1] - 1021:25
DNA [148] - 991:6,
 993:7, 993:14,
 996:9, 996:30,
 996:36, 996:43,
 1001:12, 1001:17,
 1007:30, 1007:36,
 1009:47, 1011:27,
 1013:1, 1013:2,
 1014:37, 1018:11,
 1023:15, 1023:27,
 1023:28, 1023:31,
 1023:33, 1024:23,
 1024:44, 1026:25,
 1027:8, 1027:10,
 1027:20, 1030:5,
 1030:37, 1031:1,
 1031:9, 1031:26,
 1031:45, 1032:2,
 1032:5, 1032:7,
 1032:10, 1032:16,
 1032:46, 1032:47,
 1033:3, 1033:13,
 1033:32, 1034:45,
 1035:2, 1035:3,
 1035:17, 1035:19,
 1035:27, 1035:28,
 1035:29, 1038:18,
 1038:26, 1038:44,
 1039:8, 1039:9,
 1041:5, 1041:18,
 1042:42, 1043:1,
 1045:11, 1045:20,
 1045:24, 1045:32,
 1045:37, 1045:39,
 1045:45, 1045:47,
 1046:22, 1046:24,
 1046:36, 1047:31,
 1048:11, 1048:32,
 1048:42, 1049:18,
 1049:47, 1051:27,
 1051:28, 1051:33,
 1052:11, 1053:29,
 1058:36, 1058:40,
 1058:41, 1060:1,
 1060:4, 1060:5,
 1060:36, 1060:41,
 1061:9, 1061:16,
 1061:17, 1061:18,
 1061:39, 1061:45,
 1063:29, 1063:30,
 1063:32, 1063:37,
 1063:38, 1063:40,
 1063:43, 1063:47,
 1064:2, 1064:7,
 1064:15, 1064:41,
 1065:1, 1067:42,
 1070:7, 1070:24,
 1070:42, 1071:11,
 1071:33, 1071:36,
 1072:41, 1073:17,
 1075:29, 1075:43,
 1076:20, 1076:22,
 1076:26, 1078:3,
 1080:18, 1085:6,
 1086:30, 1087:10,
 1087:33, 1088:16,
 1088:25, 1089:38,
 1089:41, 1090:24,
 1095:2, 1098:12,
 1099:42, 1100:2,
 1100:20, 1101:11,
 1101:22, 1105:40,
 1115:44, 1120:20,
 1121:10
DNA [1] - 1045:29
DNAs [1] - 1118:30
docked [1] - 1015:27
doctors [2] - 1038:15,
 1038:16
document [25] -
 995:15, 1000:21,
 1013:17, 1013:27,
 1014:33, 1019:42,
 1027:46, 1028:36,
 1029:4, 1077:24,
 1077:46, 1080:39,
 1083:7, 1086:8,
 1087:44, 1091:27,
 1093:7, 1094:46,
 1095:1, 1095:18,
 1096:15, 1098:38,
 1100:5, 1101:6
documentation [1] -
 1014:35
documents [4] -
 992:17, 994:8,
 1028:37, 1029:6
Doherty [4] - 1014:43,
 1077:24, 1077:34,
 1082:27
Doherty's [1] -
 1077:43
done [36] - 1003:26,
 1005:13, 1007:22,
 1007:32, 1008:7,
 1009:8, 1014:36,
 1022:1, 1025:23,
 1025:24, 1025:38,
 1026:20, 1034:9,
 1034:22, 1045:30,
 1045:39, 1049:20,
 1062:26, 1063:11,
 1065:14, 1067:24,
 1068:14, 1074:23,
 1076:5, 1088:32,
 1088:33, 1088:34,
 1092:23, 1097:41,
 1109:2, 1117:42,
 1118:3, 1118:9,
 1118:16, 1121:6
dotted [1] - 1117:43
double [3] - 1045:36,
 1108:28, 1108:30

double-check [3] - 1045:36, 1108:28, 1108:30	1066:28, 1121:8, 1121:9	1022:23, 1022:25, 1022:29, 1023:2, 1023:4, 1024:9, 1027:26, 1027:27, 1027:30, 1028:43, 1028:45, 1029:1, 1029:3, 1029:4, 1029:8, 1029:9, 1037:40, 1058:13, 1058:14, 1071:22, 1077:14, 1077:16, 1084:26, 1093:14, 1094:5, 1096:30, 1097:47, 1098:28, 1098:29, 1098:30, 1098:35, 1098:36, 1098:43, 1099:1, 1099:24, 1099:31, 1103:41, 1105:35, 1110:19, 1110:24, 1110:29, 1111:17, 1114:20, 1120:3, 1120:6	1060:36, 1061:7, 1061:9, 1061:17, 1067:47, 1072:42, 1076:8, 1077:37, 1079:20, 1081:33, 1117:40, 1118:44, 1119:2	equivalent [2] - 1020:21, 1086:39
doubt [1] - 1115:4	Edge [13] - 1082:4, 1082:8, 1111:5, 1111:7, 1111:13, 1111:15, 1111:32, 1111:35, 1111:36, 1111:37, 1112:2, 1112:6, 1112:10	EMAIL [4] - 1028:5, 1029:13, 1028:6	endings [1] - 1090:9	erroneous [1] - 1049:17
down [22] - 994:11, 1003:10, 1008:24, 1023:4, 1031:18, 1048:4, 1063:5, 1063:17, 1070:45, 1075:5, 1075:7, 1083:9, 1093:33, 1098:12, 1098:27, 1098:28, 1100:34, 1100:39, 1102:43, 1103:3, 1103:39, 1114:2	edges [1] - 1039:19	emailed [2] - 1003:43, 1008:22	endorsed [1] - 1086:9	errors [3] - 1080:24, 1080:27, 1080:37
draw [1] - 1070:7	effect [5] - 993:5, 1001:47, 1013:38, 1077:20, 1116:34	email [62] - 993:39, 993:40, 994:25, 994:26, 996:8, 1000:28, 1001:6, 1001:7, 1003:19, 1003:34, 1004:16, 1008:29, 1018:26, 1018:30, 1019:13, 1019:44, 1021:46,	ends [5] - 1039:21, 1060:37, 1091:5, 1091:7, 1091:8	escalate [2] - 1023:23, 1066:42
drawing [1] - 1096:24	effective [3] - 1086:37, 1089:17, 1093:43	EMAILS [1] - 1029:13	energy [1] - 1108:21	escalated [1] - 1002:25
drawn [3] - 1091:26, 1092:18, 1092:31	effectively [8] - 1005:21, 1014:47, 1015:16, 1015:28, 1022:28, 1022:37, 1025:14, 1097:2	emergency [1] - 1036:7	engaging [1] - 1005:27	essential [2] - 1053:28, 1101:13
Dremel [1] - 1057:18	effectiveness [1] - 1091:41	employee [3] - 1008:14, 1014:40, 1017:42	enjoy [2] - 1007:7, 1016:29	essentially [9] - 1020:21, 1022:1, 1033:19, 1035:3, 1036:24, 1049:45, 1061:42, 1062:31, 1071:22
drill [1] - 1035:24	efficacious [1] - 1089:8	enable [2] - 1033:4, 1090:33	ensure [6] - 997:28, 1008:33, 1037:45, 1038:25, 1060:46, 1101:12	establish [5] - 1030:37, 1031:44, 1032:18, 1032:26, 1032:45
drop [2] - 1015:11, 1102:31	efficient [1] - 1110:27	encapsulates [1] - 1036:25	enter [2] - 1101:12, 1101:23	established [7] - 1030:4, 1030:46, 1032:39, 1032:44, 1038:47, 1094:16, 1104:31
dropped [1] - 1062:1	efficiently [1] - 1018:44	encounter [1] - 1036:26	entering [4] - 1099:44, 1100:3, 1100:21, 1101:33	estimate [5] - 1043:40, 1043:45, 1046:27, 1046:39, 1068:22
dry [1] - 1087:5	eight [7] - 1049:42, 1049:43, 1050:27, 1050:29, 1050:35, 1050:36, 1070:36	encountered [1] - 1048:40	entirely [4] - 1002:6, 1002:24, 1006:10, 1024:37	et [2] - 1094:21, 1098:25
due [6] - 1062:19, 1102:44, 1102:46, 1115:4, 1116:34, 1116:36	either [8] - 1022:39, 1037:6, 1051:18, 1082:10, 1088:21, 1090:34, 1093:23, 1120:7	encourage [1] - 1080:14	entirety [1] - 1016:7	ethanol [15] - 1056:41, 1056:45, 1057:10, 1058:9, 1088:22, 1088:30, 1088:36, 1089:7, 1089:16, 1094:21, 1094:23, 1094:37, 1094:40, 1095:44, 1097:2
during [5] - 1012:29, 1019:16, 1082:10, 1105:8, 1111:4	electric [1] - 1057:18	end [20] - 995:39, 1001:34, 1004:33, 1006:1, 1009:17, 1031:11, 1043:2,	entitled [3] - 1094:46, 1104:7, 1104:29	ethanol [1] - 1096:6
duties [2] - 1030:6, 1068:45	electropherogram [1] - 1040:43	end [20] - 995:39, 1001:34, 1004:33, 1006:1, 1009:17, 1031:11, 1043:2,	entrusted [1] - 1105:26	evaluate [1] - 1088:21
duty [1] - 1109:43	electrophoresis [3] - 1034:16, 1040:40, 1054:35	encourage [1] - 1080:14	entry [1] - 1101:29	evaluated [1] - 1088:29
DV [1] - 1076:6	elicit [1] - 1053:2	encounter [1] - 1036:26	environment [7] - 1039:22, 1047:22, 1047:29, 1075:25, 1075:34, 1075:35, 1100:45	Eve [5] - 994:25, 994:29, 994:33, 995:45, 996:6
DVI [20] - 1030:47, 1031:16, 1034:38, 1034:39, 1036:7, 1036:18, 1043:34, 1048:47, 1068:32, 1076:35, 1078:14, 1078:19, 1078:20, 1100:39, 1109:7, 1109:11, 1109:13, 1109:20, 1109:21, 1114:43	eliminate [1] - 1101:33	encountered [1] - 1048:40	environmental [1] - 1090:28	events [2] - 1013:43, 1013:47
DVs [4] - 1031:15, 1031:24, 1076:14, 1109:12	eliminated [1] - 1101:23	encourage [1] - 1080:14	environmentally [1] - 1092:11	eventuality [1] - 1101:3
	eliminating [1] - 1088:16	encounter [1] - 1036:26	equate [1] - 1054:16	eventually [2] - 1031:44, 1083:28
	elimination [1] - 1090:41	encountered [1] - 1048:40	equipment [24] - 1040:47, 1041:1, 1041:11, 1054:26, 1056:36, 1056:40, 1056:42, 1056:46, 1057:11, 1057:16, 1057:21, 1057:25, 1058:35, 1058:42, 1086:1, 1087:32, 1089:1, 1089:16, 1089:18, 1090:10, 1090:22, 1094:35, 1094:43, 1096:11	evidence [7] - 992:33, 993:5, 997:14, 998:6, 998:9, 1001:35, 1001:46, 1002:5, 1004:39, 1005:2, 1006:2, 1006:12,
	email [62] - 993:39, 993:40, 994:25, 994:26, 996:8, 1000:28, 1001:6, 1001:7, 1003:19, 1003:34, 1004:16, 1008:29, 1018:26, 1018:30, 1019:13, 1019:44, 1021:46,			

E

early [2] - 1015:23,
1029:5
easier [3] - 1073:12,
1116:29, 1121:3
easy [4] - 1023:43,

1006:47, 1007:40, 1009:32, 1017:45, 1017:47, 1019:16, 1019:33, 1020:18, 1020:39, 1025:20, 1025:39, 1026:10, 1026:11, 1026:13, 1026:29, 1026:46, 1027:2, 1027:29, 1030:10, 1033:29, 1034:9, 1034:22, 1036:35, 1037:22, 1037:24, 1039:16, 1056:47, 1057:14, 1057:15, 1059:20, 1069:6, 1069:7, 1072:3, 1072:43, 1078:35, 1078:37, 1078:47, 1079:2, 1079:32, 1079:37, 1079:42, 1081:39, 1081:41, 1086:31, 1102:12, 1102:18, 1102:20, 1104:12, 1104:17, 1106:42, 1110:14, 1110:15, 1111:2, 1116:4, 1116:31, 1121:19, 1121:26, 1121:32, 1121:37	1074:15, 1075:20, 1079:36, 1080:35, 1081:7, 1085:13, 1089:38, 1090:2, 1100:39, 1100:46, 1107:43, 1112:45, 1118:4	994:27, 1008:11, 1119:34	1077:22, 1077:28	1025:20, 1029:3, 1052:25, 1091:26, 1106:39, 1111:6, 1111:12
evidence-in-chief [1] - 1001:35	examples [2] - 1052:14, 1080:36	expected [2] - 1008:39, 1091:16	express [1] - 1005:17	expressed [7] - 1005:18, 1077:19, 1100:2, 1100:19, 1103:19, 1105:9
evinces [1] - 1109:10	except [2] - 1072:37, 1080:19	expecting [2] - 1041:30, 1046:43	extended [1] - 997:10	extending [1] - 1005:17
exact [1] - 1069:10	excess [1] - 1057:41	experience [15] - 1003:9, 1034:17, 1043:31, 1043:33, 1043:35, 1058:2, 1058:5, 1061:14, 1073:16, 1073:22, 1075:6, 1075:43, 1076:11, 1076:19, 1081:20	extent [4] - 993:25, 1003:47, 1108:5, 1109:24	exterior [1] - 1035:23
exactly [11] - 1022:16, 1048:31, 1052:8, 1052:36, 1061:42, 1067:4, 1076:36, 1081:15, 1089:46, 1111:16, 1118:36	exchange [9] - 993:1, 994:3, 994:10, 995:27, 1000:26, 1000:29, 1000:34, 1073:8, 1080:8	experienced [4] - 1037:31, 1073:29, 1075:38, 1078:36	extra [3] - 1002:27, 1038:27, 1050:4	external [3] - 1040:12, 1082:20, 1111:44
examination [7] - 1019:30, 1020:9, 1022:6, 1025:21, 1028:31, 1094:46, 1117:23	excused [1] - 1121:16	experiences [3] - 1023:18, 1024:46, 1112:23	extract [5] - 1031:9, 1061:9, 1065:11	extracted [7] - 1060:40, 1061:37, 1062:6, 1062:7, 1065:10, 1092:42, 1116:1
examine [1] - 1052:44	executive [16] - 1014:5, 1014:31, 1014:34, 1015:39, 1015:43, 1016:2, 1016:43, 1017:14, 1017:16, 1017:24, 1023:25, 1074:2, 1077:23, 1077:43, 1082:26, 1101:31	experiment [2] - 1087:45, 1097:24	extraction [39] - 1034:14, 1040:39, 1054:31, 1059:38, 1059:43, 1059:46, 1059:47, 1060:12, 1060:16, 1060:19, 1060:20, 1060:24, 1060:27, 1060:36, 1061:12, 1061:31, 1061:37, 1062:4, 1062:6, 1062:8, 1062:11, 1062:33, 1063:7, 1063:19, 1063:42, 1064:17, 1068:31, 1068:32, 1073:17, 1083:23, 1086:33, 1090:12, 1102:15, 1102:35, 1105:38, 1105:43, 1108:12, 1116:41, 1116:42	fairly [2] - 1055:21, 1061:39
example [40] - 993:12, 996:41, 999:7, 1000:7, 1014:2, 1017:45, 1018:19, 1018:20, 1021:31, 1022:7, 1023:26, 1023:43, 1032:41, 1032:45, 1033:1, 1040:4, 1046:16, 1050:45, 1050:46, 1051:24, 1051:25, 1051:41, 1052:15, 1057:37, 1060:15, 1060:22, 1070:35,	exercise [3] - 1033:35, 1075:42, 1100:25	expert [1] - 1037:26	eyes [1] - 1014:32	fairness [4] - 992:32, 992:35, 995:41, 1092:15
	exercised [3] - 996:24, 998:15, 998:16	expertise [6] - 1021:26, 1034:8, 1053:31, 1079:12, 1079:19, 1121:34		faith [3] - 1023:8, 1084:20, 1084:22
	exercises [1] - 1000:5	experts [1] - 1066:38		fall [1] - 1004:40
	exerts [1] - 998:8	explain [16] - 994:39, 995:31, 1004:35, 1022:36, 1023:39, 1046:3, 1048:6, 1052:24, 1059:46, 1061:11, 1076:40, 1102:23, 1103:13, 1103:18, 1116:37, 1118:14		fallen [1] - 1023:34
	exhaust [4] - 1007:19, 1011:19, 1012:14, 1012:15	explained [7] - 1003:40, 1004:1, 1004:2, 1029:8, 1074:39, 1103:13, 1110:20		falls [2] - 1045:31, 1053:33
	exhausted [2] - 997:21, 1012:23	explanation [3] - 1003:39, 1042:31, 1062:29		false [5] - 1023:11, 1023:18, 1024:46, 1043:8, 1043:11
	EXHIBIT [6] - 1028:5, 1029:13, 1029:42, 1080:46, 1098:6	explication [1] - 1108:39		familial [1] - 1032:12
	exhibit [12] - 1000:28, 1019:23, 1029:11, 1080:30, 1080:44, 1086:3, 1098:18, 1098:25, 1099:22, 1110:36, 1115:31, 1115:33	explicit [2] - 1014:45, 1015:1		families [2] - 994:36, 1079:20
	exhibits [1] - 1029:46	explosions [1] - 1031:18		family [5] - 1016:32, 1016:36, 1032:9, 1034:3, 1120:31
	expect [19] - 998:27, 1000:10, 1000:13, 1003:27, 1005:8, 1034:47, 1035:1, 1035:29, 1061:39, 1062:31, 1067:17, 1067:47, 1068:3, 1075:3, 1097:29, 1102:27, 1102:30, 1116:5, 1116:25	exposed [1] - 1077:8		fantastic [2] - 1079:38, 1080:2
	expectation [3] -	exposure [2] -		far [13] - 996:44, 1017:22, 1036:35, 1046:2, 1050:36, 1054:12, 1054:15, 1062:10, 1083:5, 1086:29, 1089:22, 1103:5, 1113:35

F

face [5] - 1036:34, 1073:13, 1100:9, 1108:6	feedback [12] - 1111:21, 1111:24, 1111:29, 1111:30, 1111:31, 1111:32, 1111:38, 1111:39, 1111:43, 1117:45, 1120:28, 1120:36
faced [1] - 1052:43	feelings [1] - 1005:3
fact [17] - 993:33, 996:4, 1006:16, 1007:18, 1014:18, 1017:33, 1018:39, 1021:46, 1023:5,	feet [3] - 998:12, 1004:27, 1005:22

felt [9] - 1024:1, 1026:32, 1027:17, 1059:6, 1083:33, 1103:43, 1110:22, 1111:28, 1116:31	1017:5, 1019:36, 1025:42, 1028:43, 1029:1, 1029:3, 1029:4, 1032:33, 1034:13, 1042:20, 1042:23, 1042:28, 1044:47, 1047:37, 1048:40, 1049:10, 1049:32, 1049:34, 1052:14, 1054:22, 1058:4, 1058:11, 1059:36, 1060:31, 1063:44, 1066:30, 1066:31, 1066:34, 1068:3, 1070:22, 1071:8, 1074:43, 1076:24, 1076:25, 1083:44, 1088:44, 1093:35, 1098:31, 1100:1, 1102:34, 1102:35	1117:30, 1119:24	fortnight [1] - 1015:17	FSS [17] - 993:17, 1025:42, 1030:13, 1036:29, 1073:16, 1074:3, 1074:34, 1076:4, 1084:45, 1095:18, 1098:21, 1098:36, 1098:47, 1101:31, 1111:23, 1114:27, 1114:46
few [27] - 995:30, 998:3, 999:2, 1017:32, 1017:33, 1018:32, 1025:18, 1034:34, 1034:39, 1037:46, 1043:7, 1054:43, 1056:3, 1061:7, 1066:9, 1067:29, 1068:24, 1070:29, 1074:14, 1080:12, 1081:29, 1082:1, 1083:6, 1083:8, 1102:5, 1102:7, 1113:40	few-yearly [1] - 1113:40	following [3] - 1008:30, 1097:4, 1098:43	forward [6] - 1007:35, 1022:31, 1065:1, 1078:30, 1100:16, 1103:15	FSS.0001.0001.5008 [1] - 1023:4
field [4] - 1021:27, 1033:38, 1073:25, 1076:5	fit [2] - 1014:39, 1021:44	follows [1] - 1109:47	forwarded [1] - 1024:43	FSS.0001.0051.5008 [1] - 1019:40
figure [2] - 1023:17, 1024:45	five [5] - 1015:16, 1015:17, 1024:15, 1037:10, 1044:47	foot [1] - 1001:38	forwards [1] - 995:7	FSS.0001.0053.1054 [1] - 1095:8
figures [3] - 1000:28, 1001:12, 1115:47	fix [2] - 1081:8, 1081:11	foreign [1] - 1058:36	fostering [1] - 1004:22	FSS.0001.0056 [1] - 1097:47
fill [3] - 1002:1, 1057:40, 1093:6	fixed [2] - 1053:26, 1106:26	FORENSIC [1] - 991:6	four [27] - 995:22, 1037:13, 1040:35, 1043:15, 1048:9, 1048:13, 1049:41, 1050:37, 1050:38, 1061:36, 1061:37, 1061:44, 1061:47, 1062:5, 1062:7, 1062:30, 1069:35, 1085:23, 1089:29, 1102:35, 1105:41, 1115:37, 1115:47, 1116:24	FSS.0001.0056.8821 [1] - 1093:8
final [9] - 1000:25, 1012:47, 1013:26, 1014:34, 1015:44, 1025:35, 1026:28, 1026:45, 1101:6	flag [1] - 1074:42	forensic [37] - 993:7, 993:14, 993:22, 993:32, 996:9, 996:29, 996:30, 996:36, 996:43, 996:44, 997:6, 997:16, 998:24, 1001:11, 1009:47, 1014:37, 1016:37, 1018:11, 1031:34, 1031:35, 1036:19, 1038:41, 1038:44, 1039:4, 1039:5, 1044:43, 1071:11, 1071:12, 1080:22, 1080:25, 1099:42, 1101:11, 1101:22, 1112:39, 1118:15	four-person [1] - 1085:23	full [24] - 1007:34, 1008:14, 1010:44, 1010:46, 1011:3, 1011:4, 1011:7, 1011:15, 1011:27, 1011:34, 1012:2, 1012:5, 1012:26, 1015:11, 1015:13, 1016:5, 1016:36, 1037:19, 1045:20, 1045:24, 1048:35, 1064:2, 1079:1, 1117:6
finalise [1] - 1070:30	flagged [3] - 1064:16, 1078:39, 1105:40	Forensic [1] - 1029:31	frame [2] - 1046:44, 1047:4	full-time [2] - 1008:14, 1016:5
finalised [2] - 1070:33, 1114:47	flaming [1] - 1094:37	forensics [1] - 1112:47	freedom [1] - 1019:3	fully [1] - 1048:28
finally [3] - 1084:4, 1102:21, 1113:27	flesh [3] - 1039:19, 1047:17, 1076:2	form [13] - 1001:41, 1002:1, 1002:35, 1002:42, 1004:4, 1005:13, 1012:34, 1012:42, 1012:45, 1012:46, 1041:32, 1060:31, 1067:17	frequent [2] - 1009:12, 1113:44	function [1] - 1031:2
findings [3] - 1052:44, 1105:15, 1105:27	flexibility [1] - 1017:28	formal [2] - 997:43, 1011:7	frequently [4] - 1003:27, 1009:21, 1042:32, 1113:38	functioning [1] - 1109:16
fine [5] - 1039:47, 1075:39, 1078:17, 1100:45, 1118:8	flexible [14] - 1014:3, 1014:22, 1014:43, 1015:4, 1016:4, 1016:8, 1016:21, 1016:45, 1017:2, 1017:3, 1017:6, 1017:11, 1017:24, 1017:32	formatted [1] - 1080:40	fresh [18] - 1041:27, 1041:37, 1041:46, 1046:12, 1046:18, 1046:23, 1046:37, 1046:40, 1046:43, 1047:1, 1049:4, 1068:32, 1070:8, 1070:9, 1070:11, 1070:15, 1070:19	funeral [1] - 1034:6
fingerprint [1] - 1036:32	flow [3] - 1034:10, 1097:24, 1114:2	former [1] - 992:27	Fresh [1] - 1046:12	further [1] - 1112:47
fingerprints [1] - 1036:23	flow-on [1] - 1097:24	forming [1] - 1104:16	fresh" [1] - 1046:3	future [4] - 1019:22, 1073:12, 1078:38, 1106:7
finish [5] - 1015:14, 1073:19, 1079:1, 1079:12, 1079:19	fluids [2] - 1096:36, 1096:41	forms [2] - 999:23, 1033:12	Friday [1] - 1028:44	
finished [3] - 1027:24, 1038:45, 1102:37	focus [8] - 1008:32, 1009:10, 1060:4, 1075:23, 1083:8, 1112:38, 1112:39, 1119:32	formulation [1] - 1112:10	friend [1] - 1009:34	
fire [1] - 1083:27	focused [5] - 1067:34, 1108:24, 1112:17,	forth [3] - 1022:23, 1089:5, 1111:14	FROM [2] - 1028:5, 1098:6	gather [1] - 1036:30
fires [1] - 1031:18			front [2] - 1029:47, 1078:14	gathered [1] - 1111:4
first [48] - 992:39, 994:8, 995:41, 1001:36, 1003:33, 1016:8, 1017:1,			frustrates [1] - 1005:40	gender [1] - 1045:18

G

gain [1] - 997:28
Gardam [2] - 1037:25,
1056:1
Gardener [1] -
1099:43
gather [1] - 1036:30
gathered [1] - 1111:4
gender [1] - 1045:18
general [14] - 997:20,
1000:1, 1002:39,
1002:40, 1027:12,
1031:40, 1034:10,

1034:14, 1034:44, 1035:40, 1036:36, 1038:8, 1046:41, 1119:30	guess [9] - 1006:1, 1022:32, 1046:19, 1046:44, 1065:16, 1067:21, 1067:33, 1083:11, 1121:2	1049:27, 1052:46, 1053:8, 1053:14, 1058:20, 1058:38, 1059:15, 1059:23, 1059:27, 1059:35, 1061:11, 1073:45, 1076:28, 1077:13, 1080:21, 1080:39, 1081:2, 1081:36, 1081:46, 1085:39, 1117:25, 1117:27, 1121:16, 1121:25, 1121:32, 1121:41	1105:26, 1106:3, 1107:21, 1109:2, 1110:27, 1110:34, 1110:42, 1115:22, 1117:20	996:5, 1016:5, 1016:28
generally [6] - 1033:35, 1034:24, 1034:40, 1037:47, 1052:10, 1120:36	guidance [2] - 1083:10, 1119:27		high [40] - 992:41, 996:23, 998:7, 998:8, 998:10, 1000:5, 1005:1, 1008:2, 1016:34, 1051:36, 1060:17, 1068:32, 1076:8, 1079:16, 1079:17, 1112:19, 1112:20, 1112:26, 1112:32, 1112:42, 1112:43, 1113:7, 1113:12, 1113:13, 1113:22, 1117:31, 1117:32, 1117:39, 1117:40, 1118:7, 1119:8, 1119:15, 1120:16, 1120:17, 1120:20, 1120:37, 1120:40, 1120:44, 1121:5, 1121:12	Hon [1] - 991:26 honest [11] - 1000:13, 1033:39, 1038:1, 1057:31, 1058:14, 1064:18, 1067:36, 1090:5, 1096:42, 1107:11, 1107:15 honestly [1] - 1104:20 honour [1] - 1110:23 hope [2] - 1003:34, 1068:4 hopefully [4] - 1032:11, 1051:25, 1068:6, 1068:25 hour [3] - 1008:13, 1008:33 hours [10] - 996:46, 997:9, 1006:23, 1014:27, 1015:16, 1015:17, 1015:21, 1015:35, 1016:5 Howes [1] - 1006:16 Howse [42] - 999:16, 1002:16, 1002:21, 1006:14, 1006:21, 1006:24, 1006:29, 1008:25, 1009:39, 1010:6, 1015:41, 1015:43, 1018:30, 1019:45, 1020:2, 1020:31, 1024:10, 1024:32, 1024:34, 1024:44, 1027:27, 1062:14, 1072:1, 1077:14, 1077:17, 1078:6, 1084:10, 1084:16, 1084:32, 1084:40, 1102:6, 1102:13, 1102:18, 1102:21, 1104:13, 1106:4, 1106:31, 1107:5, 1108:15, 1109:9, 1115:27, 1116:33 HOWSE [1] - 1028:5 Howse's [2] - 1020:21, 1109:10 HR [1] - 1014:9 HSQ [1] - 1099:43 Hughes [1] - 992:7 hundred [1] - 1074:46 hunter [1] - 1086:16 HUNTER [16] - 1010:32, 1010:35, 1010:37, 1011:43, 1012:41, 1013:7, 1016:18, 1085:43, 1085:45, 1086:20,
generated [1] - 1007:31	H			
generously [1] - 994:32	half [3] - 1066:32, 1066:34, 1086:23			
Genetic [1] - 1064:30	halfway [1] - 1098:27			
gentle [2] - 1107:9, 1107:13	hammers [3] - 1057:17, 1096:4, 1096:5	held [6] - 1002:36, 1002:37, 1060:39, 1071:10, 1099:41, 1106:7		
gentleman [1] - 1107:17	hand [4] - 1044:13, 1057:18, 1088:3, 1088:6	Helen [3] - 1021:12, 1021:13, 1021:14		
George [1] - 991:15	handling [1] - 1091:1	help [12] - 992:45, 1013:47, 1018:41, 1018:43, 1033:40, 1033:46, 1038:22, 1052:38, 1079:20, 1079:21, 1082:40, 1100:41		
gist [1] - 1105:16	hands [1] - 1058:47	helpers [1] - 1019:26	high-end [1] - 1076:8	
given [21] - 996:3, 1003:28, 1007:20, 1008:28, 1012:15, 1026:46, 1027:1, 1031:8, 1034:4, 1046:27, 1052:14, 1068:23, 1068:37, 1068:44, 1069:13, 1077:4, 1101:1, 1101:21, 1106:42, 1110:20, 1111:21	happily [1] - 1006:39	helpful [7] - 993:1, 1003:39, 1075:30, 1083:4, 1083:11, 1104:39, 1114:43	high-quality [3] - 1112:32, 1112:42, 1112:43	
glad [1] - 1025:18	happy [6] - 1024:3, 1068:19, 1074:45, 1075:1, 1082:37, 1095:12	helping [1] - 1120:31	higher [3] - 1060:10, 1060:20, 1066:31	
goal [2] - 1008:19, 1012:16	hard [3] - 1010:15, 1010:18, 1106:12	helps [2] - 1074:44, 1118:8	highest [2] - 1087:40, 1116:10	
grab [1] - 999:5	harder [1] - 1064:2	herself [2] - 998:24, 998:27	highlight [1] - 1115:34	
grams [2] - 1040:19, 1040:34	hardware [1] - 1041:7	Hickey [17] - 992:23, 996:17, 998:46, 999:4, 999:35, 999:41, 1004:32, 1010:30, 1013:33, 1016:12, 1024:11, 1028:30, 1101:46, 1117:18, 1117:28, 1117:36, 1120:40	highlighted [2] - 1055:24, 1083:8	
grand [1] - 999:38	head [4] - 1045:19, 1049:3, 1050:18, 1095:25	helping [1] - 1120:31	highlighting [1] - 1095:36	
granted [1] - 1007:20	health [3] - 1077:18, 1100:18, 1100:27	helps [2] - 1074:44, 1118:8	highly [3] - 1031:42, 1040:47, 1047:26	
graph [7] - 1035:3, 1035:4, 1035:5, 1087:31, 1091:37, 1091:41	Health [1] - 1029:28	herself [2] - 998:24, 998:27	history [3] - 1061:29, 1092:37, 1093:6	
grasp [1] - 1006:42	hear [4] - 1014:10, 1030:25, 1038:21, 1117:4	HICKEY [38] - 992:25, 992:29, 992:31, 994:7, 994:17, 995:13, 995:19, 995:24, 996:15, 996:19, 999:37, 999:43, 1004:38, 1004:45, 1005:7, 1005:31, 1005:45, 1006:5, 1006:38, 1006:45, 1010:27, 1016:14, 1102:1, 1102:3, 1104:10, 1104:36, 1104:42, 1105:6, 1105:22,	hit [4] - 1054:8, 1055:39, 1066:30, 1119:33	
grass [1] - 1076:15	heard [14] - 1004:39, 1005:2, 1006:7, 1025:30, 1045:30, 1077:44, 1078:2, 1084:6, 1103:18, 1106:33, 1107:27, 1112:33, 1116:33, 1116:44		hits [1] - 1039:42	
grateful [2] - 1009:18, 1120:32	hearings [1] - 1084:6		hmm [1] - 1092:39	
great [3] - 1023:33, 1031:6, 1079:38	Hedge [8] - 991:33, 1028:13, 1029:15, 1052:38, 1059:33, 1081:32, 1117:22, 1121:23		hoc [1] - 1073:3	
greater [1] - 1051:20	HEDGE [39] - 1029:17, 1029:22, 1029:24, 1029:40, 1029:45, 1031:24, 1033:25, 1035:39, 1036:47, 1042:8, 1043:30, 1044:39, 1049:6,		Hodge [1] - 991:30	
greatly [1] - 1049:21			hold [2] - 1060:29, 1108:6	
Gregg [2] - 1021:12, 1021:13			holding [1] - 999:8	
grid [5] - 1076:13, 1076:18, 1076:28, 1076:29, 1076:30			Holding [1] - 992:7	
grips [1] - 1111:28			holds [1] - 1060:4	
groundwork [1] - 1027:9			hollow [1] - 1040:4	
group [3] - 1037:32, 1075:44, 1113:15			HOLT [2] - 992:6, 992:13 Holz [1] - 1111:7 home [4] - 994:36,	

1087:30, 1088:3, 1088:9, 1088:13, 1088:19, 1091:21 Hunter [6] - 1011:39, 1019:43, 1085:41, 1087:27, 1088:17, 1091:37 hypothesis [1] - 1097:22	imagine [3] - 1031:19, 1045:46, 1070:29 immediate [1] - 1117:13 immediately [5] - 1062:2, 1071:32, 1075:22, 1094:17, 1105:40 immensely [1] - 1033:41 impact [4] - 1031:5, 1063:24, 1076:8, 1109:15 impactor [7] - 1039:29, 1039:32, 1039:42, 1055:38, 1056:44, 1089:3, 1090:10 impending [1] - 1003:29 implement [3] - 997:32, 1069:34, 1085:33 implementation [5] - 1064:29, 1080:28, 1084:20, 1085:20, 1085:21 implemented [20] - 997:34, 997:36, 1057:47, 1058:15, 1062:5, 1069:19, 1081:5, 1083:2, 1085:17, 1092:8, 1094:17, 1094:42, 1096:8, 1096:12, 1102:29, 1102:33, 1105:11, 1105:22, 1105:24, 1105:43 implicit [3] - 1003:23, 1008:40, 1111:46 implicitly [1] - 1008:42 implied [1] - 1105:3 importance [1] - 1003:35 important [41] - 1003:30, 1003:36, 1004:8, 1004:15, 1008:31, 1016:21, 1016:23, 1016:30, 1016:31, 1018:41, 1027:15, 1031:2, 1031:47, 1032:41, 1033:41, 1033:44, 1038:46, 1057:32, 1057:33, 1058:43, 1068:15, 1070:3, 1089:39, 1091:3, 1096:34, 1096:46, 1100:10, 1100:27, 1100:33, 1106:15,	1106:24, 1107:3, 1108:4, 1108:8, 1109:12, 1112:27, 1112:32, 1112:37, 1113:1, 1113:18, 1121:12 impossible [1] - 1008:20 impractical [1] - 1078:13 impression [6] - 1104:28, 1106:45, 1112:22, 1112:23, 1116:38, 1119:26 improved [1] - 1082:10 improvements [2] - 1082:21, 1083:13 improves [1] - 1076:21 improving [1] - 1082:18 IN [1] - 991:6 inability [2] - 1015:31 incident [8] - 1030:47, 1034:38, 1036:8, 1075:15, 1075:32, 1076:8, 1076:10, 1109:7 incidents [1] - 1030:39 include [1] - 1090:45 included [2] - 1018:31, 1049:13 includes [2] - 1042:5, 1057:17 including [8] - 998:30, 998:31, 999:23, 1037:14, 1045:17, 1082:2, 1093:19, 1094:24 inconvenience [3] - 997:41, 998:40, 999:47 incorporated [1] - 1022:38 incorrect [2] - 1001:18, 1001:28 incorrectly [1] - 1001:30 increase [1] - 1063:29 increasing [1] - 1086:30 indeed [3] - 1005:9, 1005:18, 1043:11 independently [1] - 1091:11 indicate [3] - 1035:6, 1039:9, 1041:22 indicated [1] -	1077:17 indicates [2] - 1035:35, 1042:3 indication [3] - 1035:18, 1047:19, 1047:20 indications [1] - 1061:40 individual [1] - 1075:44 individually [1] - 1061:24 individuals [4] - 1030:44, 1031:19, 1075:45, 1076:9 inducted [1] - 1101:30 industrial [1] - 1086:38 influence [1] - 1055:11 informally [1] - 1073:8 information [31] - 993:34, 1001:11, 1003:31, 1022:24, 1027:21, 1032:17, 1045:17, 1045:21, 1047:7, 1047:14, 1050:10, 1051:6, 1051:14, 1065:21, 1066:15, 1067:18, 1071:2, 1072:20, 1072:35, 1072:36, 1073:4, 1073:8, 1079:45, 1079:46, 1091:18, 1097:26, 1098:39, 1098:44, 1108:41, 1111:4, 1111:35 informed [1] - 1084:10 informs [1] - 1093:42 Ingrid [1] - 1037:23 Ingrid's [1] - 1073:30 inhibition [1] - 1087:45 initial [2] - 1062:5, 1063:13 inner [1] - 1039:25 input [2] - 1100:38, 1112:9 inquiries [1] - 1018:14 inquiries [1] - 1099:27 INQUIRY [1] - 991:4 Inquiry [1] - 992:9 inside [2] - 1039:32, 1090:9 insofar [1] - 1005:11 inspecting [1] - 1047:6 Inspector [4] - 1027:2,	1027:8, 1027:17, 1027:19 instance [6] - 1006:11, 1006:15, 1008:41, 1024:5, 1104:40, 1113:3 instances [2] - 1018:32, 1025:27 instant [1] - 1022:24 instead [2] - 1069:19, 1076:45 instructed [1] - 992:7 instruction [3] - 1092:42, 1094:24, 1096:9 instructions [2] - 1006:38, 1010:47 instrument [17] - 1061:11, 1061:15, 1061:22, 1062:11, 1063:20, 1063:36, 1064:13, 1064:21, 1064:41, 1064:42, 1064:44, 1064:45, 1064:47, 1085:32, 1085:33, 1085:36, 1085:37 instruments [4] - 1059:10, 1059:43, 1064:43, 1094:38 insufficient [7] - 1013:1, 1023:15, 1023:28, 1023:31, 1024:24, 1024:44, 1105:40 intact [1] - 1075:24 intel [2] - 1051:11, 1109:35 intelligence [4] - 1020:23, 1030:18, 1051:19, 1110:12 intend [3] - 1080:23, 1097:22, 1106:44 intended [1] - 1121:36 intending [2] - 996:2, 997:12 interacting [2] - 1096:38, 1097:28 interaction [4] - 1035:42, 1035:44, 1079:42, 1080:17 interactions [2] - 1017:28, 1078:6 interest [3] - 1027:22, 1104:24, 1104:32 interested [3] - 1010:41, 1052:42, 1106:6 interesting [2] - 1097:25, 1105:3
---	--	--	---	--

interests [1] - 1027:18
interim [1] - 1013:3
interior [1] - 1035:25
intermediary [1] -
1005:19
internal [3] - 1034:45,
1040:1, 1040:11
internally [2] - 1040:9,
1091:33
interpret [5] - 1004:13,
1007:32, 1040:44,
1050:7, 1119:38
interpretation [3] -
1030:7, 1033:31,
1120:12
interpretations [2] -
1118:3, 1119:5
interpreted [1] -
1085:19
interpreting [5] -
1027:10, 1118:20,
1118:22, 1119:29,
1119:32
interrogate [1] -
1109:36
interrupting [1] -
1094:32
interstate [1] -
1070:20
intertwined [1] -
1121:14
intervals [1] - 997:28
intervening [1] -
1042:39
interview [2] -
1111:34, 1112:5
interviews [3] -
1111:5, 1111:14,
1111:32
intimidated [1] -
1107:40
intimidating [2] -
1107:45, 1107:46
INTO [1] - 991:6
introduced [1] -
1043:7
introduction [2] -
1054:35, 1063:35
invaluable [1] -
1100:38
investigate [1] -
1097:22
investigated [1] -
1055:45
investigating [2] -
1071:3, 1071:4
investigation [4] -
1036:34, 1067:19,
1082:3, 1097:31
investigations [1] -

1031:25
investigators [3] -
1036:31, 1036:32,
1036:37
involve [2] - 1031:43,
1093:36
involved [12] -
1017:17, 1067:25,
1067:26, 1068:18,
1068:19, 1069:11,
1071:40, 1078:34,
1078:36, 1086:9,
1091:1, 1099:43
involved [1] -
1077:18
involvement [1] -
1067:30
involves [5] - 1051:34,
1060:27, 1061:15,
1086:43, 1119:21
involving [1] -
1100:17
IOs [2] - 1070:41,
1071:3
irritates [1] - 1005:40
isolate [2] - 1060:1,
1061:16
isolated [1] - 1060:41
isolates [1] - 1060:5
issue [35] - 993:37,
995:32, 995:42,
996:11, 998:6,
999:38, 1000:11,
1002:11, 1002:19,
1002:25, 1002:26,
1003:13, 1012:29,
1018:13, 1022:10,
1033:3, 1043:20,
1051:3, 1054:44,
1055:24, 1059:38,
1066:18, 1066:39,
1069:40, 1078:7,
1089:22, 1089:44,
1103:37, 1104:20,
1104:40, 1108:10,
1108:25, 1108:33,
1108:47, 1119:20
issues [18] - 992:31,
1017:4, 1017:32,
1021:25, 1023:46,
1063:6, 1065:43,
1068:16, 1070:14,
1072:33, 1082:30,
1082:36, 1083:18,
1083:20, 1083:33,
1093:32, 1100:18,
1107:3
items [4] - 1076:30,
1087:10, 1087:32,
1088:29

itself [4] - 1021:16,
1042:9, 1061:23,
1121:2

J

Jacqui [2] - 1061:35,
1102:25
January [1] - 1044:27
job [8] - 1007:7,
1007:13, 1008:42,
1016:25, 1016:26,
1016:29, 1026:16,
1074:40
jobs [2] - 1026:17,
1033:42
John [13] - 1014:43,
1077:24, 1077:33,
1077:43, 1078:9,
1082:27, 1082:36,
1082:43, 1083:3,
1083:6, 1083:14,
1100:35, 1100:43
Johnstone [5] -
999:17, 1009:26,
1009:27, 1019:45,
1093:20
joined [1] - 1030:13
Jones [1] - 991:32
Joshua [1] - 991:32
journal [5] - 1007:43,
1007:45, 1008:3,
1008:21, 1008:34
journals [2] - 1008:43,
1009:3
journey [1] - 1030:31
July [2] - 1054:23,
1058:7
June [11] - 1010:42,
1011:21, 1011:25,
1049:42, 1065:24,
1067:15, 1072:17,
1092:19, 1092:31,
1094:7, 1096:31
JUNE [1] - 1098:7
justice [1] - 1032:35
justifiable [1] -
1100:32
justified [3] - 1104:5,
1104:31, 1104:44
justify [1] - 1017:36
Justin [52] - 1008:11,
1010:16, 1013:1,
1014:31, 1017:16,
1018:30, 1019:45,
1021:27, 1021:38,
1021:43, 1022:13,
1022:17, 1023:36,
1024:2, 1026:32,
1026:33, 1026:42,

1026:47, 1027:9,
1027:12, 1027:27,
1062:14, 1072:14,
1072:21, 1077:17,
1078:8, 1082:46,
1083:2, 1084:27,
1084:47, 1102:6,
1102:25, 1102:41,
1102:46, 1103:44,
1105:32, 1105:36,
1105:45, 1106:19,
1107:42, 1108:18,
1108:19, 1108:25,
1108:43, 1108:47,
1109:9, 1109:11,
1109:13, 1109:18,
1113:46, 1116:44
JUSTIN [1] - 1028:5
Justin's [3] - 1021:37,
1107:28, 1114:5

K

K-E-L-L-E-R [1] -
1029:18
KC [3] - 991:26,
991:30, 992:6
keep [7] - 1008:34,
1009:3, 1040:6,
1043:40, 1083:26,
1083:27, 1108:46
keeping [1] - 1008:43
KELLER [2] - 1029:20,
1029:42
Keller [29] - 992:4,
992:8, 1016:6,
1016:42, 1017:1,
1017:28, 1027:1,
1028:17, 1029:17,
1029:24, 1037:2,
1053:14, 1059:35,
1073:46, 1074:2,
1074:26, 1074:27,
1085:45, 1086:17,
1091:25, 1093:10,
1095:15, 1095:31,
1099:29, 1101:40,
1102:5, 1104:47,
1121:16, 1121:18
Keller's [3] - 1044:7,
1059:39, 1081:39
kept [2] - 1025:27,
1044:1
Kerry [1] - 1081:18
Kerry-Anne [1] -
1081:18
kind [4] - 1009:36,
1014:22, 1061:41,
1112:43
kinds [1] - 1116:23

Kirsten [3] - 1021:6,
1021:7, 1089:46
knocked [1] - 1014:46
knowing [2] -
1017:38, 1052:42
knowledge [8] -
993:25, 1008:34,
1025:37, 1059:10,
1076:19, 1079:21,
1086:45, 1088:28
known [4] - 1033:5,
1051:8, 1090:35,
1107:5
knows [1] - 1076:16
KPIs [2] - 1000:44,
1001:2
Kristina [4] - 1067:25,
1067:27, 1067:31,
1067:45
Kristina's [1] -
1067:30
Kylie [25] - 998:1,
1001:39, 1002:26,
1002:32, 1002:41,
1002:45, 1009:26,
1016:44, 1018:18,
1018:22, 1019:23,
1019:44, 1024:43,
1066:19, 1066:42,
1078:10, 1078:33,
1083:1, 1106:20,
1107:43, 1108:34,
1113:45, 1114:19,
1115:12, 1120:8

L

lab [37] - 996:24,
996:30, 998:24,
1000:36, 1018:3,
1018:7, 1021:16,
1021:17, 1034:9,
1034:10, 1034:11,
1034:23, 1034:32,
1035:42, 1038:33,
1038:39, 1044:33,
1053:5, 1054:16,
1067:25, 1069:42,
1070:18, 1070:37,
1071:8, 1073:40,
1078:47, 1080:5,
1082:2, 1083:20,
1086:39, 1110:21,
1110:23, 1112:44,
1113:24, 1114:46,
1120:34, 1120:35
lab's [2] - 1065:20,
1079:7
laboratory [38] -
998:28, 1010:42,

1029:31, 1030:5, 1030:34, 1030:35, 1031:3, 1031:27, 1031:32, 1032:4, 1034:35, 1034:37, 1034:41, 1037:4, 1037:26, 1037:31, 1039:16, 1041:10, 1060:11, 1063:7, 1070:21, 1070:22, 1070:24, 1079:16, 1079:29, 1088:32, 1089:16, 1091:11, 1091:19, 1092:1, 1094:20, 1095:6, 1109:15, 1109:16, 1112:38, 1112:39, 1117:46, 1120:38	1092:45 leader [8] - 1020:17, 1020:32, 1020:33, 1020:39, 1021:34, 1104:6, 1108:10, 1108:46 leaders [2] - 1093:19, 1093:23 leading [1] - 1006:1 leads [1] - 1112:44 learned [2] - 1007:2, 1009:34 learnt [1] - 1034:13 least [6] - 1048:1, 1057:24, 1089:7, 1095:21, 1096:9, 1104:45 leave [12] - 992:3, 992:8, 992:11, 999:23, 1015:10, 1018:21, 1060:46, 1063:2, 1063:3, 1082:12, 1082:15 led [5] - 1002:27, 1014:1, 1017:10, 1053:6, 1106:5 left [10] - 996:20, 996:21, 1025:19, 1034:16, 1044:13, 1054:12, 1054:15, 1083:4, 1083:14, 1087:40 left-hand [1] - 1044:13 leftover [1] - 1060:3 legitimate [1] - 1106:13 length [1] - 1080:23 less [9] - 1008:18, 1015:35, 1043:45, 1062:32, 1070:8, 1070:29, 1116:13, 1116:18, 1116:19 Level [1] - 991:15 level [26] - 992:41, 998:7, 998:8, 998:10, 1000:5, 1047:26, 1049:45, 1050:1, 1053:21, 1060:10, 1060:17, 1060:20, 1061:41, 1063:29, 1063:32, 1063:40, 1064:35, 1064:46, 1066:31, 1069:45, 1070:7, 1070:42, 1070:46, 1083:6, 1089:31, 1089:34 levels [5] - 996:23, 1005:1, 1045:37, 1064:2, 1064:15	liable [1] - 1023:9 liaise [3] - 1017:46, 1018:10, 1018:16 liaising [2] - 995:31, 1022:33 liaison [4] - 1018:10, 1018:15, 1036:13, 1072:29 liberated [1] - 1061:18 lie [1] - 1005:21 lies [2] - 1006:16, 1111:46 life [2] - 1032:25, 1052:5 light [2] - 1067:40, 1105:13 likelihood [4] - 1051:17, 1051:43, 1052:20 likely [6] - 998:19, 1058:36, 1076:2, 1076:5, 1089:26, 1105:14 limit [3] - 1100:3, 1100:20, 1100:24 limitation [1] - 1100:16 limited [3] - 999:4, 1019:5, 1086:46 line [42] - 993:43, 997:46, 998:38, 998:42, 998:43, 1007:2, 1007:41, 1009:10, 1009:24, 1009:33, 1014:29, 1014:31, 1017:15, 1020:12, 1021:27, 1021:34, 1022:18, 1024:12, 1048:5, 1056:46, 1057:14, 1066:18, 1077:17, 1105:35, 1105:47, 1108:28, 1108:42, 1109:7, 1109:44, 1111:46, 1113:30, 1113:32, 1113:37, 1113:39, 1114:4, 1114:7, 1114:11, 1114:18, 1114:19, 1115:10, 1115:18, 1120:7 lines [5] - 993:9, 1004:9, 1013:2, 1047:34, 1106:8 linked [6] - 1046:2, 1046:5, 1046:9, 1052:27, 1052:30, 1089:29 liquid [10] - 1039:30, 1039:36, 1055:38,	1060:1, 1060:2, 1060:3, 1060:27, 1060:28, 1060:31, 1069:20 list [6] - 1000:28, 1009:13, 1018:31, 1081:33, 1098:29 listed [5] - 1048:41, 1049:1, 1050:22, 1053:18, 1057:16 listen [9] - 1082:37, 1082:38, 1083:4, 1106:16, 1106:32, 1107:34, 1108:11, 1108:20, 1116:44 listened [7] - 1103:6, 1103:10, 1106:31, 1108:1, 1116:32, 1116:33, 1116:38 listening [1] - 1083:2 lists [1] - 1037:18 literally [1] - 1035:24 litigated [4] - 1030:36, 1032:34, 1032:36, 1033:20 lives [1] - 1103:31 Livingstones [2] - 1082:3, 1082:8 Lloyd [1] - 1019:45 load [2] - 1051:6, 1061:22 located [4] - 1031:40, 1032:4, 1041:35, 1080:11 location [2] - 1045:18, 1046:10 locations [1] - 1045:11 locked [7] - 996:28, 996:30, 996:35, 996:47, 997:7, 997:15, 999:32 logged [2] - 1080:24, 1080:37 look [58] - 1001:47, 1003:17, 1007:23, 1031:8, 1035:2, 1035:5, 1043:8, 1044:6, 1045:11, 1045:36, 1047:14, 1047:16, 1047:17, 1048:4, 1049:27, 1049:42, 1050:2, 1050:4, 1050:13, 1052:11, 1052:35, 1056:17, 1066:11, 1066:12, 1069:37, 1071:29, 1074:44, 1075:1, 1075:5, 1075:24, 1076:13,	1076:16, 1079:47, 1083:11, 1085:33, 1085:36, 1087:30, 1088:11, 1089:30, 1089:36, 1089:43, 1089:47, 1093:10, 1095:16, 1095:31, 1096:44, 1097:26, 1098:17, 1099:39, 1100:33, 1104:40, 1105:35, 1105:46, 1110:25, 1110:39, 1115:33, 1117:2 looked [13] - 1019:22, 1035:9, 1056:7, 1056:9, 1062:3, 1062:35, 1062:37, 1066:8, 1069:25, 1085:31, 1099:11, 1104:26, 1106:27 looking [13] - 1004:17, 1031:7, 1044:3, 1045:18, 1047:10, 1051:35, 1069:11, 1086:3, 1087:44, 1089:32, 1089:38, 1090:29, 1097:17 lose [2] - 1015:20, 1078:46 lost [3] - 1015:16, 1032:24, 1033:46 louder [1] - 1030:24 love [4] - 1016:26, 1033:39, 1078:43, 1106:14 loved [1] - 1033:46 low [19] - 1045:37, 1049:45, 1049:47, 1050:1, 1053:21, 1061:41, 1063:29, 1063:32, 1063:43, 1064:7, 1064:15, 1064:34, 1064:46, 1069:45, 1070:7, 1070:42, 1070:46, 1089:31, 1089:34 low-level [9] - 1053:21, 1061:41, 1063:29, 1064:46, 1070:7, 1070:42, 1070:46, 1089:31, 1089:34 lower [5] - 1051:37, 1062:11, 1063:39, 1064:1, 1116:15 lowest [1] - 1087:19 lunch [1] - 1059:35 lunchtime [1] - 1083:43 lysis [2] - 1061:13,
--	---	---	--	---

1061:26	1017:16, 1020:11, 1020:43, 1020:47, 1021:12, 1021:27, 1021:35, 1022:18, 1066:19, 1100:2, 1100:19, 1105:36, 1105:47, 1106:47, 1108:28, 1108:42, 1113:32, 1114:18, 1114:19, 1115:10, 1115:18, 1120:7	1104:23, 1105:10	meeting [27] - 1001:40, 1002:33, 1002:42, 1017:44, 1066:44, 1067:4, 1067:8, 1067:27, 1071:10, 1071:33, 1071:39, 1072:20, 1072:21, 1072:22, 1073:2, 1074:22, 1074:25, 1099:41, 1101:9, 1101:23, 1102:12, 1111:2, 1111:6, 1111:8, 1111:21, 1111:33, 1112:7	Michael [1] - 991:30
M				
machine [2] - 1039:31, 1054:36	managers [10] - 1005:8, 1008:30, 1009:10, 1085:3, 1106:16, 1111:37, 1113:30, 1113:38, 1113:39, 1114:11	matters [4] - 993:26, 996:22, 1010:32, 1102:8	meetings [17] - 1067:29, 1067:44, 1071:9, 1071:16, 1071:21, 1071:22, 1071:43, 1072:3, 1072:23, 1072:25, 1074:16, 1080:13, 1080:16, 1080:18, 1082:43, 1099:7, 1111:16	micro [5] - 1011:11, 1011:15, 1012:22, 1012:24, 1012:44
Magistrates [1] - 991:14	managing [18] - 997:2, 997:3, 998:14, 998:19, 998:23, 998:26, 1004:35, 1005:34, 1005:39, 1005:42, 1008:14, 1008:18, 1013:4, 1014:19, 1020:12, 1101:32, 1101:36, 1101:39	maximise [1] - 1016:35	member [3] - 999:10, 1004:21, 1091:14	micro-concentrated [2] - 1011:15, 1012:44
magnetic [1] - 1061:18	manner [4] - 1000:35, 1014:7, 1022:45, 1081:40	McNevin [11] - 1057:44, 1059:9, 1059:18, 1092:15, 1093:14, 1093:30, 1094:23, 1096:12, 1096:30, 1097:37, 1098:6	members [7] - 998:44, 999:21, 1037:5, 1058:26, 1078:33, 1089:42, 1093:15	micro-concentration [2] - 1012:22, 1012:24
main [3] - 1031:24, 1035:44, 1084:47	mannered [3] - 1107:18, 1107:19, 1107:33	McNevin's [3] - 1086:13, 1092:30, 1096:9	memorandum [1] - 1099:12	microcon [12] - 1007:21, 1007:29, 1010:46, 1011:2, 1011:3, 1011:4, 1011:26, 1011:31, 1012:30, 1026:24, 1061:8
maintain [2] - 1016:23, 1016:24	manual [2] - 1060:9, 1060:11	mean [40] - 1018:3, 1024:47, 1032:21, 1032:25, 1032:34, 1033:44, 1034:20, 1043:12, 1043:16, 1044:33, 1046:30, 1048:17, 1049:31, 1049:42, 1055:19, 1056:8, 1057:31, 1058:47, 1059:6, 1060:19, 1061:5, 1066:35, 1066:38, 1073:34, 1075:4, 1080:15, 1085:1, 1085:24, 1089:15, 1100:10, 1100:39, 1103:24, 1104:8, 1107:17, 1107:38, 1114:19, 1118:13, 1120:18, 1120:27, 1121:29	memorise [1] - 1050:17	microconned [6] - 1007:33, 1007:34, 1011:1, 1011:40, 1012:2, 1012:5
maintaining [1] - 1005:35	manuals [1] - 1014:9	meaning [1] - 1104:3	memory [4] - 1020:26, 1050:36, 1061:6, 1105:39	microconning [9] - 1007:21, 1010:45, 1011:7, 1011:31, 1012:13, 1012:15, 1012:26, 1012:28, 1025:37
maintains [1] - 1037:45	March [10] - 1020:6, 1045:5, 1048:5, 1049:8, 1049:27, 1054:30, 1063:18, 1098:21, 1098:30, 1109:7	meaningful [2] - 1089:36, 1090:33	mental [2] - 1046:20, 1046:21	mid [2] - 1092:19, 1092:31
major [1] - 1053:21	marine [1] - 1047:28	meanings [2] - 1034:2, 1103:32	mention [2] - 1058:34, 1093:24	mid-June [2] - 1092:19, 1092:31
majority [1] - 1019:5	marked [2] - 1070:22, 1095:12	means [8] - 1033:13, 1043:8, 1045:10, 1047:43, 1048:6, 1064:39, 1097:44, 1107:18	mentioned [7] - 1001:39, 1002:33, 1031:47, 1040:34, 1065:18, 1080:22, 1084:24	middle [4] - 1037:4, 1047:29, 1079:24, 1105:18
man [2] - 1107:9, 1107:14	marker [1] - 1066:28	meant [4] - 1074:20, 1085:29, 1118:5, 1119:38	message [1] - 996:1	midst [1] - 1062:24
manage [2] - 1008:12, 1079:7	marrow [5] - 1040:5, 1040:6, 1040:15, 1041:39, 1041:43	measures [2] - 1118:10, 1121:8	messages [1] - 1024:9	Miele [1] - 1086:43
managed [1] - 1103:15	massive [1] - 1031:20	measured [3] - 995:8, 995:28, 1000:36	met [1] - 1073:13	might [88] - 992:34, 992:45, 993:30, 994:2, 1000:16, 1003:20, 1005:8, 1005:9, 1006:6, 1008:21, 1008:39, 1008:41, 1009:1, 1010:33, 1013:26, 1018:22, 1018:23, 1019:6, 1022:42, 1032:21, 1032:37, 1032:38, 1032:39, 1034:8, 1034:36, 1034:38, 1035:24, 1036:1, 1038:10, 1041:27, 1043:8, 1043:15, 1046:7, 1046:34, 1047:7,
MANAGEMENT [1] - 1098:6	match [1] - 1051:28	mechanical [1] - 1058:43	method [11] - 1059:39, 1061:12, 1061:31, 1063:7, 1063:19, 1069:17, 1069:18, 1089:6, 1091:29, 1094:21, 1102:15	
management [51] - 996:10, 1001:40, 1002:42, 1004:27, 1008:35, 1009:6, 1009:13, 1013:41, 1014:37, 1017:39, 1018:19, 1021:33, 1026:30, 1036:30, 1037:19, 1066:44, 1068:29, 1074:34, 1077:1, 1077:39, 1078:3, 1078:33, 1085:2, 1086:17, 1092:33, 1093:16, 1093:42, 1094:25, 1097:39, 1098:21, 1098:36, 1098:44, 1098:47, 1100:29, 1101:31, 1111:14, 1111:24, 1111:29, 1111:44, 1112:1, 1112:17, 1112:26, 1112:31, 1113:11, 1117:30, 1117:37, 1117:38, 1118:8, 1119:24, 1120:34, 1121:7	matching [1] - 1051:40	meet [6] - 1002:29, 1003:18, 1004:9, 1008:19, 1017:41, 1017:42	methods [3] - 1069:6, 1087:35, 1088:41	
manager [31] - 997:46, 998:38, 998:42, 998:43, 1005:10, 1008:39, 1009:24, 1014:30, 1014:31,	material [1] - 1096:44		metric [2] - 995:9, 995:28	
	maternity [2] - 1082:12, 1082:15			
	matter [9] - 1014:18, 1031:16, 1034:44, 1046:34, 1046:36, 1046:40, 1098:11,			

1047:9, 1051:7, 1051:18, 1053:6, 1053:20, 1053:37, 1053:45, 1054:1, 1055:11, 1055:33, 1056:10, 1063:24, 1063:36, 1064:45, 1065:25, 1066:41, 1067:9, 1069:4, 1069:18, 1070:29, 1070:32, 1071:19, 1071:36, 1075:22, 1076:13, 1076:14, 1076:16, 1076:31, 1078:38, 1079:27, 1079:35, 1079:41, 1086:32, 1089:31, 1089:32, 1090:23, 1091:2, 1095:31, 1096:21, 1099:39, 1108:17, 1114:2, 1114:13, 1114:26, 1116:5, 1116:34, 1118:32, 1119:30, 1119:31, 1120:30, 1121:16, 1121:33	1050:10 mixed [30] - 1041:18, 1041:23, 1042:21, 1042:39, 1043:37, 1047:43, 1048:23, 1049:33, 1049:43, 1050:32, 1050:47, 1052:3, 1052:11, 1052:18, 1052:25, 1052:26, 1052:32, 1052:39, 1053:16, 1053:28, 1054:17, 1063:24, 1063:30, 1063:32, 1064:10, 1064:13, 1064:22, 1069:33, 1070:35, 1089:13 mixes [2] - 1050:3, 1050:38 mixture [19] - 1035:7, 1042:29, 1047:38, 1048:10, 1048:33, 1048:40, 1048:42, 1049:19, 1052:31, 1053:20, 1053:21, 1053:36, 1053:45, 1055:5, 1070:36, 1076:25, 1085:22, 1085:23, 1109:34 mixtures [25] - 1041:26, 1041:32, 1041:33, 1042:27, 1042:46, 1043:30, 1049:18, 1049:41, 1050:27, 1050:42, 1050:44, 1053:6, 1055:12, 1064:14, 1064:17, 1066:13, 1066:31, 1069:36, 1070:5, 1070:10, 1070:23, 1072:38, 1074:15, 1083:22, 1097:11 mmm-hmm [1] - 1092:39 mobile [1] - 1023:46 mode [1] - 1032:41 module [2] - 1004:40, 1004:46 Moeller [2] - 1037:23, 1037:31 moment [10] - 1028:36, 1044:16, 1069:24, 1080:5, 1098:17, 1106:43, 1115:7, 1120:1, 1120:15, 1120:35 Monday [1] - 1119:1 month [3] - 1010:1, 1067:16, 1067:18	months [12] - 1003:6, 1015:3, 1016:8, 1016:9, 1017:7, 1017:35, 1046:41, 1046:43, 1049:10, 1068:22, 1068:24, 1070:29 months' [1] - 1022:43 morning [5] - 992:6, 1000:31, 1028:9, 1028:29, 1109:18 mortem [4] - 1033:30, 1051:27, 1051:28, 1094:46 mortuary [38] - 1036:4, 1036:15, 1038:30, 1038:33, 1038:38, 1039:22, 1074:33, 1074:35, 1074:41, 1075:5, 1075:7, 1075:27, 1075:38, 1076:46, 1077:1, 1077:20, 1077:26, 1083:7, 1083:10, 1090:45, 1091:1, 1091:14, 1098:15, 1098:22, 1098:37, 1098:43, 1099:1, 1099:9, 1099:27, 1099:42, 1099:44, 1100:2, 1100:3, 1100:11, 1100:19, 1100:30, 1101:12, 1101:28 most [11] - 998:19, 1014:4, 1016:44, 1037:31, 1062:29, 1073:16, 1073:21, 1073:29, 1086:37, 1087:40, 1089:42 mostly [1] - 1030:36 mother/father/ missing [1] - 1051:46 mount [1] - 1039:30 mouth [1] - 1106:45 move [9] - 996:27, 1006:39, 1041:13, 1063:5, 1071:6, 1081:46, 1085:9, 1109:6, 1109:30 moved [1] - 1026:21 moves [1] - 1039:33 moving [1] - 1065:1 multi [3] - 1035:24, 1035:33, 1035:34 multi-source [2] - 1035:33, 1035:34 multi-sources [1] - 1035:24	multiple [3] - 1014:11, 1035:20, 1041:18 mum [1] - 1051:33 murder [1] - 1032:24 must [9] - 1017:12, 1035:34, 1038:40, 1058:12, 1084:21, 1086:45, 1087:43, 1087:45, 1118:36 mutilated [1] - 1075:15 mutual [1] - 1080:9	1025:20, 1027:5, 1065:13, 1085:31, 1105:12, 1105:26, 1109:4, 1110:23 needs [11] - 1017:41, 1017:42, 1017:44, 1022:26, 1022:27, 1039:9, 1047:18, 1053:26, 1068:31, 1069:25, 1106:26 negative [2] - 1073:1, 1103:36 never [32] - 1000:4, 1000:8, 1000:12, 1002:11, 1002:19, 1002:26, 1003:13, 1003:40, 1004:2, 1006:17, 1008:32, 1008:36, 1013:34, 1013:36, 1017:23, 1026:32, 1026:33, 1042:41, 1043:37, 1054:8, 1068:2, 1075:3, 1075:34, 1084:9, 1089:43, 1107:10, 1107:24, 1107:27, 1107:28, 1112:25, 1112:31, 1112:33 nevertheless [3] - 1108:3, 1110:19, 1114:37 Neville [5] - 1027:2, 1027:6, 1027:8, 1027:17, 1027:19 New [2] - 1071:19, 1071:27 new [22] - 999:2, 1015:4, 1015:7, 1043:7, 1043:26, 1058:15, 1061:47, 1062:8, 1069:18, 1069:34, 1080:28, 1081:4, 1085:31, 1085:33, 1085:35, 1085:37, 1102:28, 1105:10, 1105:19, 1105:43, 1117:13 newly [1] - 1105:11 news [3] - 1006:35, 1006:36, 1093:27 next [17] - 1023:5, 1039:46, 1047:34, 1048:4, 1056:26, 1061:30, 1062:7, 1063:2, 1063:17, 1073:29, 1074:32, 1094:19, 1100:1, 1108:43, 1114:4, 1118:43, 1119:1
--	--	--	---	---

N

name [5] - 1029:24,
1074:9, 1086:9,
1086:13, 1118:43
Nanopure [1] -
1087:22
natural [2] - 1106:11,
1109:47
near [3] - 1023:16,
1024:45, 1039:15
necessarily [5] -
1006:10, 1014:16,
1065:9, 1065:13,
1104:18
necessary [10] -
1017:36, 1031:2,
1032:6, 1032:45,
1083:33, 1100:46,
1108:46, 1110:28,
1110:30, 1110:46
need [47] - 996:46,
997:8, 999:8,
999:30, 1000:2,
1000:22, 1003:32,
1003:44, 1004:11,
1009:1, 1012:25,
1013:3, 1014:32,
1015:13, 1022:30,
1022:47, 1026:24,
1029:6, 1029:47,
1032:6, 1038:17,
1038:41, 1041:11,
1046:12, 1052:43,
1052:44, 1060:39,
1060:45, 1061:21,
1062:26, 1068:29,
1069:37, 1070:38,
1071:19, 1076:39,
1085:36, 1090:30,
1095:25, 1096:5,
1101:11, 1109:35,
1109:38, 1110:3,
1116:28, 1116:31,
1116:47
needed [11] - 994:2,
1003:42, 1017:17,

ng/µL ^[1] - 1045:32	November ^[16] - 994:21, 1000:29, 1017:12, 1017:18, 1028:44, 1028:46, 1029:5, 1042:22, 1042:35, 1047:38, 1047:39, 1047:40, 1048:40, 1049:14, 1085:11, 1109:31	1064:3, 1072:41	office ^[3] - 1010:17, 1102:13, 1103:12	1049:18, 1049:31, 1049:34, 1049:37, 1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
nitrogen ^[4] - 1039:30, 1039:36, 1055:38, 1069:20	nuisance ^[1] - 1001:47	obtained ^[20] - 1027:20, 1031:11, 1032:10, 1039:26, 1045:23, 1045:27, 1048:10, 1048:11, 1048:33, 1049:2, 1050:27, 1051:15, 1052:32, 1061:40, 1093:7, 1096:39, 1105:15, 1105:28, 1109:33, 1110:1	officer ^[1] - 1072:29	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
no-one ^[3] - 1077:1, 1078:47, 1080:18	number ^[46] - 995:10, 997:19, 1000:43, 1001:1, 1018:13, 1018:14, 1019:23, 1019:34, 1023:47, 1026:47, 1027:17, 1027:39, 1027:46, 1028:36, 1030:16, 1030:43, 1031:42, 1032:23, 1038:20, 1041:19, 1041:23, 1045:29, 1051:21, 1056:7, 1056:9, 1058:34, 1063:29, 1068:3, 1069:39, 1087:8, 1087:14, 1087:33, 1087:40, 1090:33, 1093:8, 1095:7, 1100:3, 1100:20, 1100:30, 1110:30, 1118:2, 1119:4, 1119:5, 1119:33, 1119:38	obtaining ^[7] - 1038:26, 1042:29, 1046:36, 1053:16, 1062:30, 1076:21, 1085:22	official ^[1] - 1015:44	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
non ^[6] - 1025:30, 1025:31, 1033:36, 1070:15, 1070:19, 1071:7	none ^[1] - 1033:36	obvious ^[1] - 992:33	often ^[14] - 1009:9, 1032:17, 1033:21, 1036:12, 1036:39, 1057:32, 1062:29, 1071:18, 1072:42, 1077:29, 1114:34, 1120:29, 1120:42, 1120:44	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
non-bone ^[1] - 1033:36	normal ^[5] - 1008:5, 1021:18, 1041:6, 1041:9, 1079:15	obviously ^[11] - 1018:35, 1040:47, 1041:10, 1042:5, 1045:18, 1048:20, 1052:41, 1066:18, 1066:39, 1089:21, 1108:3	oil ^[1] - 1060:43	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
non-conformance ^[2] - 1025:30, 1025:31	normally ^[7] - 1030:44, 1036:26, 1039:21, 1040:28, 1040:35, 1070:2, 1114:12	occasion ^[7] - 999:47, 1008:20, 1014:28, 1023:21, 1076:24, 1080:8, 1117:36	older ^[3] - 1031:38, 1041:34, 1047:21	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
non-fresh ^[2] - 1070:15, 1070:19	north ^[2] - 1033:2, 1072:32	occasionally ^[1] - 1042:41	omitted ^[1] - 1028:28	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
non-processing ^[1] - 1071:7	notation ^[1] - 1048:6	occasions ^[2] - 1030:33, 1073:7	once ^[12] - 1001:39, 1002:34, 1002:41, 1004:11, 1007:29, 1038:37, 1039:2, 1062:39, 1065:10, 1076:10	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
none ^[1] - 1117:2	notations ^[1] - 1049:31	occupational ^[1] - 1100:18	one ^[124] - 993:44, 994:13, 994:45, 995:15, 996:27, 999:30, 1000:16, 1000:38, 1001:7, 1002:36, 1002:37, 1003:25, 1003:42, 1004:17, 1004:40, 1005:10, 1005:34, 1007:39, 1008:12, 1008:13, 1008:30, 1014:4, 1015:44, 1017:11, 1017:46, 1019:26, 1021:21, 1022:15, 1027:16, 1027:32, 1027:42, 1027:43, 1027:45, 1028:1, 1028:43, 1029:46, 1034:21, 1034:24, 1034:36, 1034:38, 1034:45, 1034:47, 1035:5, 1035:18, 1037:10, 1040:25, 1043:13, 1045:6, 1045:23, 1045:33, 1048:9, 1048:23, 1048:29, 1048:34, 1048:42,	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
normal ^[5] - 1008:5, 1021:18, 1041:6, 1041:9, 1079:15	note ^[10] - 1011:2, 1019:24, 1045:26, 1046:21, 1058:33, 1092:32, 1092:37, 1093:24, 1096:26, 1097:43	occupy ^[1] - 999:13	one's ^[1] - 1104:20	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
normally ^[7] - 1030:44, 1036:26, 1039:21, 1040:28, 1040:35, 1070:2, 1114:12	noted ^[1] - 1056:46	occur ^[3] - 1005:20, 1042:46, 1043:23	one-26th ^[1] - 1116:22	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
north ^[2] - 1033:2, 1072:32	notes ^[6] - 997:20, 998:25, 998:30, 998:31, 999:3, 999:7	occurred ^[4] - 1011:21, 1044:22, 1055:19, 1061:44	one-90th ^[1] - 1116:23	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
notation ^[1] - 1048:6	nothing ^[10] - 992:21, 1022:26, 1064:16, 1079:47, 1083:24, 1084:12, 1084:34, 1104:47, 1106:4, 1108:14	occurring ^[3] - 1041:33, 1042:46, 1043:22	one-tenth ^[1] - 1116:22	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
notations ^[1] - 1049:31	o'clock ^[1] - 1015:9	occurs ^[1] - 1030:46	ones ^[10] - 1021:35, 1033:46, 1041:27, 1044:39, 1044:42, 1045:34, 1050:44, 1050:45, 1072:44, 1078:25	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
note ^[10] - 1011:2, 1019:24, 1045:26, 1046:21, 1058:33, 1092:32, 1092:37, 1093:24, 1096:26, 1097:43	oath ^[1] - 992:27	October ^[1] - 991:20	ongoing ^[4] - 998:35, 1015:2, 1015:5, 1108:17	1049:38, 1050:2, 1050:45, 1051:1, 1052:7, 1052:29, 1055:17, 1055:22, 1056:18, 1058:39, 1059:15, 1060:1, 1060:4, 1060:16, 1060:44, 1062:5, 1063:46, 1064:26, 1064:44, 1067:25, 1069:15, 1070:36, 1070:40, 1073:1, 1074:43, 1075:36, 1076:31, 1077:1, 1077:23, 1077:33, 1078:47, 1080:1, 1080:18, 1081:36, 1083:42, 1084:25, 1085:13, 1085:14, 1085:16, 1085:25, 1087:40, 1089:28, 1089:30, 1089:32, 1089:33, 1090:23, 1091:16, 1092:10, 1093:35, 1095:42, 1095:44, 1098:14, 1105:47, 1106:15, 1106:43, 1109:18, 1109:21, 1109:36, 1116:22, 1121:13
noted ^[1] - 1056:46	obligation ^[2] - 1004:33, 1015:44	OCTOBER ^[2] - 1029:42, 1121:46	online ^[1] - 992:19	104

1047:34, 1054:11, 1056:26, 1058:21, 1059:40, 1060:39, 1061:24, 1063:18, 1117:28	orally [2] - 1071:9, 1080:23	1025:33	1030:5, 1030:28, 1037:2, 1037:5, 1038:7, 1041:16, 1056:39, 1057:6, 1057:17, 1058:18, 1059:41, 1061:30, 1063:5, 1063:18, 1063:23, 1063:28, 1064:33, 1065:4, 1065:30, 1065:41, 1072:10, 1073:45, 1074:34, 1077:14, 1077:32, 1077:37, 1078:12, 1078:32, 1083:19, 1083:44, 1084:7, 1084:8, 1084:25, 1084:31, 1085:9, 1086:24, 1092:43, 1093:30, 1094:19, 1098:16, 1098:19, 1098:31, 1099:18, 1099:40, 1100:1, 1101:6, 1101:16, 1101:21, 1102:11, 1109:6, 1109:30, 1111:1, 1112:14, 1113:28, 1115:35, 1117:29	1121:32
Operator [11] - 994:11, 994:43, 995:5, 995:14, 995:20, 1018:26, 1019:40, 1023:3, 1039:47, 1095:7, 1102:10	order [9] - 1001:34, 1008:19, 1010:46, 1011:2, 1015:12, 1015:14, 1022:12, 1022:43, 1104:21	overnight [3] - 992:18, 1010:33, 1028:30		partake [1] - 1114:14
OPERATOR [3] - 994:15, 995:17, 995:22	orders [1] - 1007:29	oversees [2] - 1020:22, 1020:23		partial [4] - 1045:9, 1045:15, 1076:25
opinion [11] - 1000:47, 1017:38, 1021:28, 1021:36, 1042:24, 1072:25, 1073:21, 1103:4, 1103:19, 1106:36, 1108:7	ordinarily [1] - 1060:21	overview [1] - 995:40		partially [2] - 1014:12
opinion's [1] - 1101:21	ordinary [2] - 1035:43, 1079:25	own [2] - 1089:12, 1097:37		participate [2] - 1009:19, 1009:29
opportunities [5] - 1114:10, 1114:17, 1114:32, 1115:9, 1115:17	organic [15] - 1059:42, 1059:46, 1060:12, 1060:27, 1060:32, 1060:34, 1060:35, 1060:39, 1061:37, 1062:6, 1063:7, 1063:19, 1105:38, 1108:11	owned [1] - 1052:19		participated [1] - 1112:5
opportunity [4] - 1007:23, 1027:11, 1077:44, 1114:25	organisation [1] - 1114:14	oxidant [1] - 1098:11		particular [55] - 992:45, 994:24, 995:8, 996:11, 996:29, 999:13, 1000:17, 1002:19, 1003:13, 1007:42, 1009:11, 1021:27, 1021:41, 1032:1, 1032:37, 1045:21, 1045:34, 1046:22, 1049:45, 1050:23, 1050:26, 1051:9, 1051:20, 1061:14, 1061:35, 1061:40, 1064:25, 1071:26, 1076:1, 1076:17, 1076:30, 1079:43, 1084:29, 1086:23, 1086:46, 1091:16, 1091:19, 1103:4, 1108:24, 1108:33, 1108:47, 1109:11, 1109:14, 1109:25, 1109:38, 1109:41, 1109:42, 1110:43, 1113:16, 1113:21, 1114:29, 1114:42, 1115:36, 1118:43, 1121:33
opposed [1] - 1092:24	organisational [1] - 1020:17			paragraphs [6] - 1030:4, 1055:30, 1056:26, 1058:20, 1082:30, 1084:5
opposite [1] - 1014:8	organise [2] - 1074:25, 1114:28			paraphrase [1] - 1024:10
opted [1] - 1098:46	original [4] - 995:43, 1043:16, 1055:47, 1056:1			parents [1] - 1051:32
optimise [1] - 1086:1	originally [1] - 1050:37			Parry [1] - 1067:26
option [4] - 1010:45, 1070:37, 1077:30, 1078:28	otherwise [1] - 1111:27			parry [5] - 1062:46, 1068:38, 1121:25, 1121:26, 1121:33
options [5] - 1056:7, 1056:10, 1070:19, 1070:44, 1078:3	ought [6] - 992:36, 1009:4, 1043:11, 1052:40, 1104:25, 1105:4			part [42] - 1000:30, 1007:47, 1008:42, 1009:1, 1018:11, 1024:28, 1026:16, 1030:30, 1034:45, 1037:35, 1038:17, 1039:25, 1039:26, 1040:1, 1042:17, 1048:47, 1055:36, 1057:2, 1058:43, 1059:18, 1063:46, 1065:9, 1065:14, 1067:41, 1068:13, 1069:23, 1069:26, 1074:16, 1075:23, 1076:17, 1086:18, 1090:7, 1090:28, 1096:10, 1096:25, 1097:17, 1105:19, 1109:44, 1110:15, 1111:31, 1121:12,
OQI [35] - 1022:7, 1022:11, 1022:22, 1022:26, 1054:44, 1055:3, 1055:6, 1055:7, 1065:18, 1065:20, 1065:28, 1065:33, 1065:43, 1066:2, 1066:5, 1066:22, 1067:13, 1067:17, 1067:21, 1067:26, 1067:30, 1067:47, 1068:2, 1068:11, 1068:13, 1068:15, 1068:23, 1068:38, 1069:26, 1069:43, 1070:28, 1070:30, 1070:31, 1090:28, 1097:17	ourselves [1] - 1089:41			parties [2] - 992:20, 1111:44
OQIs [1] - 1022:15	outcome [5] - 1089:36, 1091:27, 1093:24, 1097:31, 1108:21			parts [3] - 1040:12, 1060:3, 1091:27
	outcomes [5] - 1064:24, 1073:1, 1082:39, 1083:11, 1083:12			pass [1] - 1027:17
	outline [2] - 1081:47, 1109:19			passage [2] - 992:39, 992:45
	outlining [1] - 1001:17			passed [1] - 1016:34
	output [5] - 1000:44, 1001:2, 1004:7, 1008:36, 1009:9			passion [2] - 1033:39, 1033:45
	outside [5] - 1008:4, 1008:36, 1018:3, 1018:7, 1021:16			passionate [1] - 1108:3
	outstanding [4] - 1000:43, 1001:1, 1001:17, 1001:31			past [3] - 1017:5, 1043:30, 1055:11
	overhearing [1] -			paternal [1] - 1051:45
				paternity [2] - 1051:46, 1114:44
				path [1] - 1070:45
				pathologist [9] -

1038:10, 1038:38, 1074:40, 1074:44, 1075:26, 1076:4, 1076:20, 1078:16, 1100:44	1100:20, 1101:28, 1108:8, 1118:31, 1118:32, 1119:8	1110:5	pick [5] - 1015:14, 1015:23, 1018:42, 1091:13, 1091:17	1100:16, 1104:3, 1104:47, 1105:44, 1106:26, 1107:32, 1111:22, 1113:44, 1116:30
pathologists [8] - 1036:16, 1038:14, 1038:15, 1038:20, 1038:29, 1074:36, 1098:23	per [21] - 994:28, 994:34, 995:32, 995:44, 996:8, 1008:13, 1008:14, 1008:15, 1015:17, 1017:14, 1049:18, 1049:23, 1056:41, 1056:45, 1057:10, 1058:9, 1074:46, 1094:20, 1094:23, 1100:25	permissions [1] - 1032:6	picture [3] - 1061:4, 1063:46, 1099:17	pointed [1] - 1043:24
pathology [2] - 1039:5, 1071:11	perceive [2] - 1000:6, 1058:39	permits [1] - 1108:36	piece [3] - 1021:47, 1084:16, 1118:42	points [4] - 992:37, 996:20, 1036:12, 1043:26
Paula [4] - 1020:47, 1021:3, 1021:9, 1021:10	perceived [1] - 1077:7	perpetrator [1] - 1112:46	pieces [5] - 1039:43, 1045:16, 1045:21, 1058:35, 1115:47	Police [3] - 1011:18, 1085:46, 1101:39
Paula's [1] - 1021:31	perception [4] - 998:21, 1013:42, 1014:1, 1014:21	person [46] - 998:15, 998:16, 998:20, 1000:5, 1005:17, 1005:18, 1005:27, 1014:34, 1021:38, 1023:45, 1024:3, 1032:8, 1033:5, 1034:3, 1034:21, 1034:24, 1034:47, 1037:17, 1037:18, 1041:28, 1046:14, 1046:28, 1047:8, 1051:2, 1051:5, 1051:8, 1051:20, 1051:46, 1052:19, 1053:30, 1053:39, 1053:45, 1054:1, 1054:3, 1054:4, 1073:29, 1079:7, 1084:47, 1085:22, 1085:23, 1095:22, 1107:19, 1107:31, 1107:37, 1108:4, 1119:10	pinpoint [1] - 1055:23	police [26] - 993:13, 996:42, 1007:25, 1009:11, 1021:39, 1021:40, 1027:13, 1031:41, 1035:45, 1036:9, 1036:11, 1036:12, 1036:17, 1036:18, 1036:19, 1036:22, 1046:7, 1046:31, 1047:5, 1071:19, 1076:34, 1077:29, 1084:28, 1109:45, 1110:12
pause [1] - 995:25	perceptions [2] - 1005:3, 1013:43	person's [2] - 1034:45, 1121:6	pipette [2] - 1060:40, 1060:44	polite [1] - 1014:17
pay [3] - 1015:17, 1015:20, 1015:27	perfect [1] - 994:18	personal [3] - 1002:7, 1026:39, 1082:41	Pippia [1] - 1081:18	pop [1] - 1085:5
PDF [1] - 1028:36	perfectly [1] - 1104:29	personally [5] - 1002:11, 1074:41, 1082:11, 1082:39, 1100:24	pitting [1] - 1086:26	popping [2] - 1050:5, 1056:6
PDL [1] - 1114:47	perform [9] - 999:45, 999:46, 1018:44, 1026:1, 1026:4, 1051:34, 1051:47, 1061:6, 1061:8	persons [5] - 1032:1, 1032:21, 1046:29, 1054:1, 1094:47	place [8] - 997:19, 1011:30, 1039:8, 1063:44, 1094:26, 1095:6, 1096:18, 1100:47	portion [1] - 1016:5
peaks [15] - 1035:4, 1035:5, 1043:8, 1043:11, 1045:11, 1050:5, 1056:3, 1056:6, 1061:41, 1064:46, 1089:31, 1089:34, 1090:16, 1090:23, 1090:32	performance [10] - 1009:19, 1086:39, 1113:28, 1113:39, 1113:45, 1113:46, 1114:1, 1114:3, 1114:12, 1119:45	perspective [3] - 1000:2, 1024:26, 1082:41	placed [4] - 997:27, 1004:26, 1039:28, 1039:30	portions [1] - 1014:47
pears [1] - 992:47	performed [3] - 1031:2, 1060:24, 1087:39	phases [2] - 1060:1, 1060:2	plainly [1] - 1001:7	poses [1] - 1058:38
pejorative [1] - 1103:36	performing [3] - 1038:16, 1067:47	phased [1] - 1061:11	Plains [1] - 1038:34	position [5] - 1011:45, 1015:42, 1085:2, 1100:12, 1108:15
pen [2] - 999:2, 999:20	performs [1] - 1037:22	phase [4] - 1060:3, 1060:37, 1060:39, 1060:40	plan [3] - 1008:30, 1074:29, 1119:45	positions [1] - 999:13
pens [4] - 997:20, 998:24, 998:30, 998:31	perhaps [16] - 1003:10, 1014:2, 1036:7, 1044:11, 1053:2, 1053:14, 1059:27, 1085:9, 1091:37, 1095:5, 1098:26, 1099:22, 1104:18, 1104:19, 1111:19, 1112:30	photos [1] - 1075:4	plane [7] - 1030:43, 1031:14, 1031:16, 1031:18, 1078:27, 1100:39	positive [6] - 1080:15, 1082:39, 1083:13, 1107:35, 1117:45, 1120:36
people [53] - 993:27, 994:28, 996:5, 997:42, 998:2, 999:12, 1002:40, 1005:17, 1006:32, 1007:9, 1014:32, 1017:17, 1019:7, 1021:22, 1021:28, 1021:35, 1022:30, 1022:33, 1022:44, 1022:46, 1025:24, 1026:37, 1026:38, 1026:40, 1031:6, 1033:40, 1033:46, 1034:28, 1036:33, 1037:10, 1037:13, 1037:30, 1052:42, 1052:43, 1053:37, 1053:38, 1067:39, 1071:11, 1072:42, 1073:2, 1075:13, 1075:36, 1078:27, 1086:16, 1098:29, 1100:3, 1100:11,	period [9] - 998:35, 1015:10, 1015:16, 1016:33, 1042:39, 1046:39, 1046:47, 1055:21, 1082:7	physically [2] - 1060:8, 1080:11	plate [2] - 1061:23, 1079:30	possibilities [1] - 1079:41
	permission [10] - 1005:38, 1007:19, 1011:18, 1013:3, 1074:33, 1098:44, 1099:9, 1110:4,		planned [1] - 1121:25	possible [22] - 1003:28, 1003:31, 1011:14, 1031:6, 1032:12, 1035:6, 1035:10, 1044:35, 1045:16, 1048:29, 1067:42, 1077:47, 1078:2, 1078:20, 1079:28, 1079:35, 1080:41, 1090:2, 1091:15, 1100:44, 1105:32, 1111:8
			planning [1] - 1074:30	possible' [1] - 1083:9
			platform [6] - 1077:25, 1077:45, 1077:46, 1078:1, 1078:7, 1100:47	possibly [8] - 1032:27, 1045:33, 1059:7, 1091:17, 1097:10, 1097:24, 1105:42, 1107:22
			pleasant [2] - 1023:44, 1107:46	post [10] - 997:20,
			Plus [1] - 1090:20	
			point [44] - 993:21, 995:44, 996:15, 998:5, 999:41, 1005:25, 1005:31, 1007:39, 1009:5, 1014:33, 1017:44, 1018:41, 1023:46, 1027:7, 1032:25, 1032:47, 1039:4, 1042:32, 1052:39, 1054:5, 1055:15, 1055:18, 1056:15, 1056:16, 1061:27, 1072:35, 1074:23, 1075:29, 1075:42, 1088:15, 1088:17, 1088:33, 1090:39,	

998:25, 998:30,
998:31, 999:2,
999:7, 1033:30,
1051:28, 1087:14,
1094:46
post-it [6] - 997:20,
998:25, 998:30,
998:31, 999:2, 999:7
post-mortem [3] -
1033:30, 1051:28,
1094:46
postdates [1] -
1096:19
potential [3] -
1012:26, 1058:28,
1077:28
potentially [7] -
998:17, 1011:19,
1014:20, 1022:17,
1027:12, 1027:21,
1036:15
powder [13] - 1039:34,
1040:1, 1040:18,
1040:36, 1041:45,
1042:6, 1042:17,
1048:9, 1055:39,
1097:1, 1097:27,
1102:31, 1116:26
PP21 [1] - 1090:19
practical [2] -
1025:36, 1078:28
practice [1] - 1080:6
practise [1] - 1061:5
pre [2] - 1061:13,
1061:26
pre-lysis [2] -
1061:13, 1061:26
precise [1] - 1052:43
precisely [2] -
1007:15, 1111:20
preference [4] -
1076:47, 1100:2,
1100:4, 1100:20
preferred [2] -
1101:33, 1101:34
preparation [1] -
1120:16
prepared [1] - 1092:32
preponderance [1] -
1035:17
presence [2] -
1089:21, 1100:44
present [11] - 1016:25,
1024:20, 1035:7,
1039:23, 1063:41,
1067:7, 1111:15,
1111:25, 1111:37,
1113:17, 1118:33
presentation [3] -
1111:40, 1111:43,
1114:13
presented [1] -
1111:36
presenters [1] -
1080:19
presently [4] - 994:4,
1006:12, 1009:27,
1093:4
presents [1] - 1004:3
pressure [1] - 1008:3
pressures [4] -
1004:36, 1005:9,
1008:28, 1008:40
pretty [5] - 1035:28,
1085:13, 1100:15,
1105:33, 1106:38
prevent [1] - 1007:36
previous [9] -
1017:11, 1017:14,
1057:46, 1075:6,
1076:11, 1082:26,
1089:26, 1090:3,
1090:34
previously [8] -
1014:7, 1014:42,
1017:9, 1026:21,
1043:23, 1064:35,
1083:44, 1099:6
primary [2] - 1016:32,
1091:29
printed [2] - 1065:38,
1080:30
prioritise [4] -
1003:45, 1004:8,
1004:17, 1008:31
priority [5] - 1008:35,
1009:7, 1084:25,
1113:13, 1120:37
privy [3] - 1032:18,
1091:18, 1097:42
proactively [1] -
1114:32
probable [1] - 1071:35
problem [29] - 998:35,
1000:17, 1004:3,
1004:35, 1006:16,
1007:11, 1035:35,
1041:25, 1042:24,
1042:33, 1052:46,
1052:47, 1053:28,
1053:36, 1055:5,
1055:17, 1055:26,
1065:26, 1067:15,
1069:30, 1083:23,
1090:19, 1101:20,
1102:45, 1106:20,
1107:2, 1108:42,
1117:1
problematic [3] -
1063:44, 1064:1,
1078:26
problems [15] -
1043:34, 1049:4,
1052:41, 1053:5,
1053:6, 1063:13,
1063:36, 1066:7,
1066:10, 1074:15,
1080:9, 1083:12,
1083:25, 1092:11,
1121:11
procedural [1] -
1012:29
procedure [16] -
997:33, 997:34,
997:37, 997:41,
1010:37, 1010:43,
1011:6, 1011:7,
1022:11, 1045:40,
1045:44, 1069:34,
1095:21, 1096:10,
1096:25, 1110:16
procedures [3] -
1011:29, 1011:31,
1109:40
proceed [1] - 1031:1
proceeded [1] -
1077:38
process [87] -
1007:20, 1007:25,
1010:41, 1012:30,
1017:17, 1017:35,
1018:35, 1019:32,
1019:34, 1020:10,
1021:21, 1022:16,
1032:3, 1037:36,
1038:8, 1038:9,
1042:44, 1051:5,
1051:7, 1051:10,
1054:31, 1055:36,
1056:2, 1056:15,
1057:15, 1057:23,
1057:32, 1058:15,
1058:44, 1060:9,
1060:16, 1060:17,
1060:19, 1061:7,
1061:8, 1061:14,
1062:4, 1062:39,
1063:42, 1064:47,
1065:15, 1068:19,
1069:12, 1069:24,
1069:43, 1069:46,
1070:2, 1070:32,
1070:39, 1071:17,
1076:39, 1077:5,
1084:5, 1084:9,
1084:11, 1084:19,
1084:34, 1085:33,
1086:33, 1086:47,
1090:7, 1092:22,
1094:41, 1094:46,
1095:1, 1096:43,
1097:14, 1097:33,
1102:28, 1102:33,
1102:34, 1105:10,
1105:12, 1105:19,
1105:26, 1105:43,
1106:24, 1108:11,
1109:40, 1109:44,
1109:47, 1111:13,
1111:20, 1111:47,
1115:41, 1117:8,
1117:13
processed [1] -
1022:2
processes [9] -
993:35, 1007:30,
1007:36, 1034:14,
1042:44, 1060:11,
1060:21, 1069:37,
1070:33
processing [19] -
1005:38, 1013:1,
1023:16, 1024:24,
1024:45, 1026:17,
1026:25, 1040:33,
1040:38, 1059:36,
1070:4, 1070:13,
1071:7, 1072:37,
1080:15, 1109:20,
1109:45, 1109:46,
1110:2
produced [2] -
1024:15, 1087:10
producing [3] -
1112:19, 1117:31,
1119:15
product [1] - 1100:16
professional [10] -
1007:42, 1009:2,
1009:4, 1010:23,
1016:20, 1073:11,
1114:11, 1114:17,
1114:26, 1119:37
professionals [1] -
1036:25
profile [62] - 1007:31,
1027:20, 1031:11,
1032:7, 1032:10,
1033:1, 1035:2,
1035:28, 1035:29,
1035:33, 1038:26,
1043:2, 1043:3,
1043:32, 1043:37,
1045:3, 1045:10,
1045:20, 1045:24,
1046:22, 1046:36,
1047:43, 1047:47,
1048:11, 1048:24,
1048:25, 1048:47,
1049:33, 1049:44,
1050:32, 1050:47,
1051:26, 1051:27,
1051:28, 1051:33,
1052:4, 1052:12,
1052:18, 1052:25,
1052:26, 1053:16,
1053:21, 1053:28,
1053:33, 1053:37,
1063:37, 1064:2,
1064:3, 1064:13,
1064:44, 1070:25,
1070:35, 1076:21,
1076:22, 1085:6,
1087:10, 1089:38,
1089:41, 1120:20,
1120:24
profile" [1] - 1007:36
profileable [1] -
1088:16
profiled [2] - 1032:7,
1046:24
Profiler [1] - 1090:20
profiles [34] - 1023:27,
1023:33, 1024:16,
1027:10, 1041:18,
1041:23, 1042:21,
1042:40, 1043:11,
1048:24, 1048:32,
1048:35, 1049:2,
1050:4, 1053:29,
1053:37, 1054:18,
1061:39, 1061:42,
1063:25, 1063:30,
1063:31, 1064:4,
1064:10, 1064:23,
1069:33, 1070:42,
1072:41, 1073:18,
1089:21, 1089:25,
1089:26, 1090:35,
1119:29
profiling [4] - 1032:47,
1033:3, 1061:45,
1090:25
progress [1] - 1109:14
progressively [1] -
1082:13
Project [5] - 1055:32,
1063:12, 1091:26,
1092:38, 1096:35
project [26] - 1030:30,
1055:31, 1055:46,
1055:47, 1056:1,
1056:2, 1056:13,
1056:27, 1069:10,
1086:1, 1086:10,
1086:36, 1088:34,
1089:8, 1090:15,
1090:16, 1092:41,
1093:35, 1093:40,
1093:42, 1093:46,

1094:14, 1094:17, 1096:31, 1096:41, 1120:17	providing [2] - 1070:44, 1108:41	quality [38] - 1020:11, 1020:18, 1020:40, 1020:43, 1020:47, 1021:2, 1021:3, 1021:6, 1021:12, 1038:26, 1048:35, 1065:20, 1089:35, 1089:45, 1112:20, 1112:26, 1112:32, 1112:42, 1112:43, 1113:7, 1113:12, 1113:22, 1117:32, 1117:37, 1117:42, 1118:11, 1118:31, 1120:15, 1120:16, 1120:17, 1120:20, 1120:40, 1120:44, 1121:2, 1121:9, 1121:12	1079:30, 1085:46, 1112:47	1106:6, 1106:12, 1106:18, 1106:22, 1107:3, 1107:32, 1108:9, 1113:28
projects [1] - 1097:26	public [1] - 1031:40		QUEENSLAND [1] - 991:6	raised [51] - 997:40,
promise [1] - 1026:45	pulled [1] - 1089:34		questioned [5] - 1014:15, 1014:18, 1019:35, 1078:18	997:42, 998:38, 1002:11, 1002:19,
promptly [7] - 1003:12, 1004:4, 1006:30, 1006:31, 1006:33, 1006:35	punishment [1] - 1014:23		questioning [7] - 993:43, 1006:27, 1014:23, 1020:13, 1024:11, 1097:11, 1105:44	1002:26, 1003:13, 1003:15, 1019:11, 1019:33, 1019:34, 1021:23, 1021:25, 1022:7, 1022:13, 1022:15, 1022:17,
prone [2] - 1041:7, 1058:30	pure [1] - 1088:16		questions [21] - 995:30, 998:17, 1000:46, 1009:17, 1010:27, 1010:33, 1013:7, 1013:16, 1014:6, 1024:8, 1025:19, 1025:35, 1025:36, 1085:39, 1085:47, 1091:21, 1102:5, 1102:7, 1104:3, 1115:22, 1117:29	1022:27, 1023:20, 1026:47, 1027:2, 1038:9, 1054:44, 1055:6, 1062:14, 1063:6, 1063:13, 1065:20, 1065:24, 1065:25, 1065:28, 1065:43, 1066:1, 1066:5, 1066:18, 1067:10, 1067:14, 1067:15, 1068:2,
proof [2] - 1033:8, 1116:47	purely [1] - 1112:2		quick [3] - 1016:1, 1025:17, 1121:3	1077:33, 1080:27, 1081:21, 1081:37, 1082:31, 1082:46, 1083:23, 1083:24, 1102:45, 1103:37, 1108:42, 1108:43
proper [1] - 1016:6	purifies [1] - 1060:5		quickly [9] - 1003:28, 1003:36, 1003:44, 1004:15, 1022:39, 1039:33, 1061:29, 1068:14, 1117:47	raising [8] - 1024:2, 1065:18, 1066:1, 1066:22, 1081:13, 1083:27, 1085:10, 1116:39
properly [10] - 1039:4, 1039:7, 1041:11, 1057:34, 1062:26, 1086:29, 1097:27, 1103:16, 1111:46, 1117:43	purpose [6] - 1005:29, 1032:46, 1037:44, 1071:16, 1071:39, 1092:2		quiet [1] - 1080:18	random [1] - 1036:39
property [2] - 1039:3, 1075:29	purposes [4] - 992:35, 995:9, 1033:15, 1090:27		quit [1] - 1015:23	range [7] - 1023:34, 1033:34, 1034:8, 1035:43, 1036:33, 1043:10, 1100:17
proposal [4] - 1093:47, 1094:17, 1094:25, 1096:37	pursuant [2] - 1005:37, 1089:6		quite [31] - 992:47, 994:32, 998:3, 1017:33, 1017:34, 1034:34, 1034:38, 1036:21, 1038:1, 1042:43, 1046:34, 1057:30, 1060:23, 1062:10, 1066:9, 1080:12, 1081:15, 1081:29, 1083:25, 1083:40, 1090:24, 1102:31, 1102:43, 1103:37, 1106:12, 1111:9, 1111:10, 1116:46, 1117:45, 1120:29	rape [1] - 1024:14
proposed [3] - 1021:47, 1047:46, 1069:16	pushed [1] - 1002:28		quoted [1] - 1001:30	rare [1] - 1043:31
proposition [1] - 1114:10	put [36] - 1000:47, 1001:3, 1005:36, 1006:38, 1008:11, 1008:20, 1010:47, 1011:2, 1013:34, 1013:41, 1014:44, 1019:29, 1019:40, 1022:28, 1022:35, 1023:46, 1050:3, 1057:45, 1057:46, 1058:4, 1059:39, 1061:45, 1065:26, 1065:27, 1067:43, 1079:16, 1080:32, 1090:7, 1090:8, 1090:11, 1096:13, 1102:43, 1105:1, 1106:44, 1115:33, 1115:40			rarely [1] - 1043:23
propositions [1] - 1104:25	putting [10] - 1005:41, 1006:33, 1006:42, 1006:43, 1060:47, 1076:31, 1104:2, 1104:3, 1110:24, 1118:20			rate [2] - 1049:19, 1049:23
proprietary [1] - 1086:43				rather [15] - 995:45, 996:4, 1002:37, 1013:34, 1015:34, 1016:9, 1043:21, 1072:3, 1073:3, 1097:39, 1111:6, 1111:47, 1112:20, 1112:45, 1117:32
prosecution [1] - 1023:10				ratio [2] - 1051:43, 1052:20
protocol [3] - 1005:37, 1085:47, 1086:2				ratios [1] - 1051:18
protocols [4] - 1057:14, 1087:9, 1087:15, 1094:26				re [2] - 1019:30, 1117:23
protocols" [1] - 1056:47				re-examination [2] - 1019:30, 1117:23
provide [12] - 1029:46, 1032:15, 1048:34, 1051:13, 1051:14, 1051:35, 1051:39, 1064:5, 1072:36, 1075:4, 1109:35, 1110:39				
provided [16] - 992:18, 993:35, 1001:11, 1018:47, 1027:21, 1028:29, 1029:34, 1039:8, 1048:35, 1051:12, 1071:2, 1080:36, 1083:10, 1109:34, 1109:39, 1117:42				
provides [1] - 1079:11				

Q

QHSS [2] - 1034:11,
1034:23
QIAGEN [1] - 1061:13
QIASymphony [3] -
1061:12, 1061:13,
1062:25
QP [1] - 1089:30
QPS [11] - 993:6,
995:9, 1000:35,
1071:11, 1084:10,
1084:18, 1084:21,
1084:33, 1109:36,
1110:21, 1117:31

R

radar [1] - 1071:34
raise [19] - 994:24,
1005:25, 1022:25,
1027:5, 1067:10,
1078:7, 1082:45,
1083:33, 1084:42,
1103:25, 1103:26,

reached [1] - 1103:24	1110:40, 1117:5	1033:29, 1034:9,	1085:10, 1099:25,	1072:44, 1120:27
read [17] - 993:35,	reasonings [1] -	1034:22, 1037:22,	1111:31, 1118:2,	released [1] - 1077:47
1007:47, 1008:21,	1014:13	1037:24, 1039:16,	1119:16	releasing [1] -
1008:33, 1009:2,	reasons [10] -	1046:35, 1056:47,	refers [1] - 1093:35	1120:30
1013:26, 1018:26,	1006:12, 1018:40,	1057:14, 1057:15,	refresh [1] - 1020:26	relevance [1] - 1053:9
1027:39, 1080:31,	1074:39, 1078:12,	1059:20, 1069:6,	refusal [1] - 1014:36	relevant [7] - 1000:22,
1094:3, 1095:37,	1082:45, 1100:30,	1069:7, 1072:4,	refused [5] - 1014:12,	1007:47, 1008:21,
1096:3, 1096:42,	1100:32, 1105:27,	1072:43, 1078:35,	1014:47, 1015:15,	1008:33, 1022:31,
1098:35, 1098:38,	1110:44	1078:37, 1078:47,	1115:11, 1115:19	1022:44, 1036:23
1099:29, 1100:5	receipt [1] - 1037:19	1079:2, 1079:32,	regarded [1] - 1024:37	relevantly [1] -
reading [7] - 992:34,	receive [5] - 1008:29,	1079:37, 1079:43	regarding [1] -	1020:33
996:38, 1007:1,	1025:22, 1032:8,	recrushing [1] -	1098:39	reliable [1] - 1076:3
1007:40, 1007:43,	1042:39, 1044:29	1043:17	regime [11] - 1058:38,	reliant [1] - 1002:24
1008:3, 1008:43	received [5] - 1006:13,	red [1] - 1042:4	1058:45, 1059:37,	reluctant [1] - 1069:12
reads [1] - 1101:7	1014:11, 1023:22,	redacted [3] -	1067:41, 1068:6,	remained [1] - 1010:4
reagent [1] - 1089:8	1072:19, 1099:31	1019:43, 1027:34,	1069:25, 1069:36,	remaining [5] -
reagents [2] -	receives [1] - 1006:22	1050:11	1091:18, 1096:18,	1012:18, 1012:27,
1061:15, 1088:35	recent [4] - 1023:18,	Redlich [1] - 992:7	1096:47, 1097:43	1012:31, 1056:46,
real [3] - 1033:38,	1024:46, 1031:30,	Reece [8] - 991:31,	register [10] -	1057:10
1033:45, 1036:30	1046:34	992:1, 992:15,	1025:27, 1025:29,	remains [34] -
realised [3] - 1023:30,	recently [14] - 1003:5,	1007:3, 1009:34,	1025:31, 1039:5,	1030:30, 1030:38,
1062:4, 1065:26	1011:17, 1014:4,	1013:9, 1013:19,	1042:24, 1044:43,	1031:7, 1031:32,
really [47] - 995:44,	1016:1, 1016:2,	1028:26	1080:23, 1080:25,	1031:33, 1031:39,
996:4, 999:38,	1016:42, 1016:44,	REECE [28] - 992:3,	1092:46, 1118:15	1031:41, 1031:43,
1012:9, 1021:40,	1041:28, 1046:14,	992:17, 1013:11,	registered [2] -	1032:4, 1032:6,
1022:22, 1023:41,	1050:9, 1063:30,	1013:13, 1013:15,	1039:4, 1039:7	1032:13, 1032:26,
1025:17, 1027:10,	1093:31, 1105:11,	1013:22, 1013:26,	regrettably [1] -	1032:37, 1033:11,
1033:39, 1042:23,	1114:40	1013:31, 1016:20,	1103:31	1033:28, 1037:26,
1042:28, 1043:20,	recognise [1] -	1018:5, 1018:9,	regular [2] - 997:28,	1039:10, 1041:29,
1044:35, 1057:33,	1029:36	1019:15, 1019:21,	1025:45	1041:31, 1046:8,
1059:5, 1064:47,	recollection [2] -	1019:29, 1025:12,	regularly [1] - 1038:20	1046:32, 1046:35,
1066:30, 1066:36,	1002:46, 1102:42	1025:17, 1027:24,	reinforced [1] -	1047:19, 1047:32,
1067:30, 1067:39,	recommend [4] -	1027:34, 1027:39,	1067:31	1074:44, 1075:2,
1068:26, 1070:5,	1014:44, 1075:26,	1027:45, 1028:3,	rejects [1] - 1014:35	1075:7, 1075:17,
1072:33, 1076:14,	1076:17, 1091:28	1028:8, 1028:13,	related [1] - 1051:44	1075:19, 1075:23,
1077:6, 1078:28,	recommendation [4] -	1028:17, 1028:28,	relates [5] - 1070:13,	1077:2, 1097:32
1078:43, 1079:12,	1017:15, 1067:43,	1028:35, 1028:42,	1070:15, 1084:5,	remember [19] -
1079:18, 1080:18,	1091:30, 1091:46	1029:3	1098:16, 1121:32	992:43, 993:2,
1082:17, 1082:40,	recommendations	refer [6] - 1022:46,	RELATING [1] -	1003:19, 1013:43,
1083:1, 1090:36,	[12] - 1055:8,	1029:47, 1050:14,	1098:7	1015:39, 1022:16,
1095:25, 1100:40,	1067:35, 1067:36,	1056:8, 1093:34,	relating [1] - 1118:4	1024:28, 1042:29,
1106:13, 1106:14,	1068:4, 1068:5,	1098:30	relation [10] - 1005:33,	1047:46, 1061:42,
1107:10, 1108:14,	1068:11, 1068:17,	reference [12] - 993:8,	1014:26, 1021:21,	1062:43, 1067:4,
1111:39, 1113:1,	1068:23, 1068:26,	1001:37, 1018:27,	1022:10, 1033:7,	1084:15, 1084:41,
1114:43, 1116:17	1068:28, 1070:31,	1019:21, 1032:9,	1057:8, 1074:6,	1084:47, 1103:42,
reapply [1] - 1015:4	1091:36	1032:13, 1033:4,	1081:34, 1115:27,	1111:8, 1117:32,
reason [15] - 1003:43,	record [6] - 1019:29,	1033:14, 1033:20,	1121:27	1121:33
1010:20, 1021:41,	1022:40, 1027:40,	1051:40, 1098:18,	relationship [6] -	reminding [1] -
1024:2, 1027:11,	1089:42, 1096:9,	1098:25	1009:36, 1009:46,	1025:22
1056:1, 1077:4,	1097:38	referenced [1] -	1010:4, 1010:5,	remove [3] - 1039:19,
1090:15, 1092:5,	recorded [1] - 1013:27	1027:26	1026:41, 1036:21	1040:7, 1077:7
1093:44, 1100:8,	records [3] - 1044:36,	references [1] -	relationships [2] -	removed [8] -
1104:26, 1105:15,	1071:19, 1071:27	1088:31	1010:23, 1073:11	1040:12, 1040:15,
1110:43, 1115:4	recover [2] - 1046:8	referred [6] - 1013:39,	relative [1] - 1051:44	1047:18, 1050:41,
reasonable [2] -	recovered [2] -	1028:30, 1093:38,	relatively [1] - 1061:38	1051:9, 1060:37,
1005:36, 1096:32	1046:6, 1046:33	1093:39, 1096:27,	relatives [1] - 1051:35	1077:27, 1078:31
reasonably [3] -	recovery [28] -	1099:23	relatives' [1] - 1064:4	removing [3] -
1106:5, 1108:16,	1020:18, 1020:40,	referring [10] - 996:4,	relaxation [1] -	1063:43, 1063:47,
1116:6	1025:39, 1026:10,	1024:20, 1050:21,	1068:37	1088:25
reasoning [2] -	1026:11, 1026:13,	1056:43, 1057:3,	release [3] - 1002:28,	renegotiate [1] -

1014:14	1053:1, 1066:36,	1072:40	1109:44, 1109:46,	1050:40, 1061:34,
renew [1] - 1015:7	1071:43, 1072:2,	resampling [3] -	1112:43, 1113:7,	1118:21, 1118:22,
repeat [3] - 1113:20,	1073:35, 1079:3,	1042:47, 1043:17,	1113:22, 1117:9,	1118:30
1115:15, 1117:8	1079:42, 1080:7,	1061:43	1117:41, 1117:42,	reviews [5] - 1009:19,
repeated [4] - 1066:7,	1080:26, 1081:7,	residual [2] - 1087:33,	1120:17, 1120:21	1113:28, 1113:39,
1084:35, 1084:43,	1085:15, 1093:19,	1088:25	resulted [4] - 1049:33,	1119:5, 1120:12
1104:11	1093:23, 1118:3,	residue [1] - 1089:26	1049:43, 1082:21,	rework [16] - 1001:42,
repeatedly [2] -	1120:8	resolution [4] -	1092:42	1002:43, 1003:11,
1066:10, 1108:20	reports [8] - 1020:44,	1070:14, 1097:18,	resulting [1] - 1069:33	1004:13, 1007:26,
replace [1] - 1080:31	1020:47, 1021:3,	1112:45, 1113:22	results [37] - 1009:9,	1007:29, 1012:46,
reply [2] - 995:43,	1021:9, 1021:10,	resolvable [2] -	1009:11, 1024:21,	1013:4, 1023:29,
1084:27	1021:14, 1079:34,	1043:1, 1043:31	1030:7, 1033:32,	1084:28, 1109:32,
replying [1] - 994:43	1085:12	resolve [1] - 1081:30	1036:36, 1051:15,	1109:33, 1110:2,
report [27] - 1004:13,	represent [1] -	resolved [6] -	1052:39, 1052:42,	1110:8, 1110:9
1020:43, 1032:16,	1070:31	1032:22, 1055:3,	1061:32, 1064:22,	reworked [1] - 1110:4
1034:4, 1037:6,	representative [1] -	1069:43, 1070:28,	1066:11, 1072:44,	reworking [4] -
1043:2, 1043:37,	1111:15	1081:21, 1081:28	1072:45, 1085:5,	1003:32, 1010:38,
1048:24, 1048:25,	representatives [2] -	respect [9] - 993:32,	1087:2, 1087:13,	1012:39, 1012:41
1048:31, 1048:33,	1111:25, 1112:6	998:11, 1003:15,	1096:39, 1102:26,	Rhys [2] - 1067:26,
1051:12, 1051:18,	represented [2] -	1006:6, 1021:31,	1102:29, 1110:22,	1067:45
1051:19, 1051:37,	1035:4, 1111:39	1027:19, 1033:36,	1112:20, 1112:27,	RICE [24] - 1091:23,
1052:3, 1052:29,	reprimanded [2] -	1102:19, 1108:36	1112:32, 1113:12,	1091:25, 1093:4,
1054:6, 1054:7,	1013:35, 1013:37	respond [4] - 995:39,	1117:32, 1117:37,	1094:7, 1094:13,
1056:7, 1056:8,	reprocess [1] -	1005:39, 1005:43,	1117:39, 1118:4,	1095:12, 1095:18,
1063:11, 1065:33,	1072:34	1006:3	1118:21, 1118:30,	1095:28, 1095:35,
1109:36, 1110:12,	reprocessing [2] -	responded [2] -	1119:15, 1120:40,	1095:41, 1095:46,
1112:10, 1120:17	1042:47, 1043:17	1001:4, 1013:36	1120:45, 1121:12	1096:3, 1096:17,
reported [9] - 1010:38,	request [23] - 992:18,	responding [1] -	resume [1] - 1028:15	1096:24, 1097:46,
1011:11, 1012:47,	1003:17, 1003:21,	995:29	retain [2] - 1058:31,	1098:4, 1098:14,
1045:29, 1045:32,	1003:33, 1004:8,	responds [1] -	1058:36	1099:14, 1099:20,
1048:30, 1050:47,	1004:10, 1005:12,	1006:23	retained [1] - 1050:32	1099:36, 1099:39,
1051:10, 1052:36	1005:37, 1006:21,	response [14] -	retention [1] - 1086:30	1101:26, 1101:36,
reporters [10] -	1006:29, 1007:18,	993:45, 995:2,	return [5] - 996:19,	1101:44
1026:16, 1066:35,	1007:26, 1013:3,	995:6, 995:35,	1001:36, 1004:4,	Rice [3] - 1096:15,
1072:46, 1079:45,	1014:27, 1014:45,	996:3, 1007:2,	1006:47, 1117:27	1099:11, 1101:20
1079:46, 1080:10,	1015:1, 1038:22,	1014:9, 1014:26,	returned [5] - 1005:13,	right-hand [2] -
1111:3, 1118:19,	1061:43, 1084:28,	1016:1, 1017:20,	1014:6, 1048:41,	1088:3, 1088:6
1118:25, 1118:28	1100:43, 1100:44,	1017:37, 1017:38,	1048:42, 1048:45	rightly [1] - 992:47
reporting [58] -	1109:33	1022:25, 1023:22	returning [1] -	Rika [16] - 998:1,
998:44, 1001:23,	requested [5] -	responses [5] -	1120:15	999:16, 1002:6,
1001:41, 1001:42,	1004:16, 1038:10,	993:45, 1014:16,	reverted [1] - 1063:7	1002:24, 1009:26,
1002:1, 1002:20,	1083:9, 1101:1,	1022:30, 1022:46,	review [18] - 993:40,	1015:42, 1016:44,
1002:33, 1002:35,	1113:44	1085:14	1008:13, 1008:36,	1018:18, 1024:43,
1002:39, 1002:43,	requesting [1] -	responsibility [3] -	1009:6, 1009:7,	1027:30, 1066:19,
1003:36, 1008:12,	1003:35	1004:22, 1009:2,	1009:13, 1021:33,	1078:33, 1093:20,
1015:31, 1017:34,	requests [6] -	1113:35	1022:42, 1050:39,	1099:32, 1113:29
1019:5, 1020:22,	1002:15, 1003:11,	responsible [1] -	1113:45, 1113:46,	Rika's [2] - 1019:16,
1020:23, 1020:34,	1003:26, 1004:17,	1004:29	1114:1, 1114:3,	1019:23
1020:36, 1021:40,	1012:33, 1014:46	rest [2] - 1004:27,	1114:12, 1119:31,	ring [1] - 1074:47
1023:31, 1026:21,	require [1] - 1060:9	1109:15	1119:39, 1119:45,	ringing [3] - 1036:41,
1029:28, 1030:6,	required [3] - 1018:21,	restrict [1] - 1101:29	1120:12	1072:30, 1073:2
1030:7, 1030:17,	1039:11, 1104:46	result [28] - 1004:13,	reviewed [4] - 995:40,	risk [4] - 1077:7,
1030:21, 1033:31,	requirement [3] -	1004:14, 1012:22,	1022:40, 1048:30,	1077:28, 1098:40
1033:35, 1034:10,	1000:2, 1018:46,	1012:47, 1013:2,	1110:3	Risk [1] - 1101:10
1034:23, 1036:29,	1109:39	1014:36, 1025:24,	reviewers [1] -	risks [4] - 1058:39,
1037:13, 1037:20,	requirements [2] -	1034:39, 1044:47,	1018:43	1077:18, 1077:22,
1037:21, 1043:34,	1014:38, 1018:16	1045:45, 1048:35,	reviewing [12] - 993:4,	1099:43
1045:39, 1047:13,	requires [2] - 1014:39,	1051:22, 1052:40,	999:8, 1008:15,	robotic [1] - 1061:22
1052:18, 1052:19,	1060:20	1053:11, 1053:17,	1008:18, 1027:10,	role [8] - 1021:18,
1052:41, 1052:47,	resample [1] -	1064:13, 1076:3,	1030:7, 1033:31,	1021:32, 1031:35,

1033:42, 1036:30, 1038:42, 1083:21	1007:21, 1007:22, 1007:23, 1007:26, 1007:30, 1007:33, 1007:35, 1008:13, 1011:2, 1011:4, 1011:10, 1011:14, 1011:19, 1012:2, 1012:14, 1012:15, 1012:22, 1012:26, 1012:27, 1012:41, 1012:43, 1012:46, 1024:18, 1024:23, 1027:20, 1030:34, 1033:4, 1033:13, 1033:14, 1033:20, 1034:21, 1034:25, 1034:29, 1035:10, 1035:16, 1035:26, 1035:32, 1035:44, 1037:6, 1037:23, 1037:36, 1037:41, 1038:11, 1038:25, 1038:38, 1039:2, 1039:3, 1041:45, 1042:18, 1045:24, 1045:25, 1045:26, 1045:27, 1045:34, 1047:15, 1047:24, 1047:39, 1048:5, 1051:40, 1051:44, 1052:21, 1053:17, 1054:26, 1062:20, 1063:38, 1064:43, 1074:45, 1075:28, 1076:15, 1084:26, 1084:27, 1084:29, 1085:20, 1085:25, 1089:40, 1090:12, 1091:7, 1091:8, 1091:10, 1102:44, 1102:46, 1105:41, 1106:9, 1106:40, 1109:32, 1109:45, 1110:3, 1110:8, 1110:9, 1115:35, 1115:36, 1116:35, 1116:36, 1117:6, 1121:3	roles [1] - 1026:21 roll [1] - 1114:3 rolls [1] - 1118:47 room [7] - 1039:15, 1041:12, 1057:39, 1071:23, 1093:33, 1097:13, 1101:24 rooms [1] - 1077:27 root [2] - 1055:4 roster [1] - 1037:44 rough [2] - 1047:9, 1058:30 roughly [1] - 1091:41 round [1] - 1059:15 routine [3] - 1036:26, 1084:11, 1084:33 routinely [2] - 1038:43, 1094:39 rows [2] - 1044:11, 1080:41 rule [2] - 1089:39, 1100:36 rules [1] - 996:45 run [6] - 1041:40, 1048:21, 1062:39, 1064:43, 1087:28, 1090:25 running [2] - 998:28, 1041:42 runs [3] - 1041:43, 1065:11, 1065:15 rush [1] - 1103:12 rushed [1] - 1055:39 rust [1] - 1058:30 rusting [7] - 1041:7, 1058:25, 1058:39, 1086:26, 1089:19, 1094:43, 1097:8 rusty [2] - 1058:24, 1058:35	samplers [2] - 1079:45, 1079:46 samples [73] - 995:10, 1000:43, 1001:1, 1001:31, 1001:43, 1002:43, 1008:14, 1008:15, 1008:17, 1010:38, 1010:43, 1010:45, 1011:27, 1011:31, 1011:40, 1013:4, 1022:1, 1023:28, 1023:29, 1023:33, 1024:6, 1024:15, 1026:25, 1030:35, 1032:9, 1032:13, 1033:8, 1033:15, 1033:19, 1033:30, 1033:36, 1033:37, 1034:32, 1034:35, 1034:44, 1035:41, 1037:46, 1038:3, 1041:24, 1042:40, 1044:2, 1045:31, 1045:40, 1045:41, 1048:41, 1049:2, 1049:27, 1051:40, 1061:23, 1062:38, 1063:42, 1065:12, 1068:34, 1069:45, 1072:34, 1075:8, 1078:16, 1078:18, 1079:8, 1079:32, 1085:11, 1089:27, 1090:34, 1094:47, 1109:19, 1109:20, 1115:28, 1115:37, 1116:1, 1116:28, 1120:13 samples [1] - 1119:32 sampling [20] - 1037:9, 1038:17, 1039:14, 1041:12, 1044:21, 1044:22, 1057:39, 1069:5, 1069:12, 1069:17, 1069:18, 1069:47, 1072:43, 1078:32, 1079:43, 1089:19, 1089:39, 1090:7, 1091:4, 1097:44 sat [2] - 1006:23, 1071:24 satisfied [1] - 1103:13 saturate [1] - 1057:41 saturated [1] - 1057:38 saved [1] - 1029:8 SAVED [1] - 1029:13 saw [3] - 995:42, 1021:44, 1057:19 saws [2] - 1057:18, 1094:39 scene [10] - 1033:19, 1033:36, 1034:25, 1034:29, 1034:44, 1035:11, 1035:41, 1045:31, 1051:40, 1085:24 scenes [1] - 1067:21 schedule [1] - 1113:37 scheme [2] - 999:38, 1035:44 scholarship [1] - 1058:3 school [3] - 1015:11, 1016:33, 1016:34 science [5] - 1055:22, 1084:21, 1090:22, 1105:10, 1108:4 Scientific [1] - 1029:31 scientific [8] - 1024:25, 1069:38, 1072:29, 1085:32, 1106:10, 1106:13, 1112:44, 1116:40 scientifically [3] - 1008:43, 1024:38, 1025:1 scientist [41] - 997:3, 997:4, 998:14, 998:19, 998:23, 998:26, 1004:35, 1005:34, 1005:39, 1005:42, 1007:28, 1008:41, 1009:2, 1009:4, 1010:46, 1011:4, 1013:4, 1014:19, 1016:37, 1018:42, 1020:11, 1020:12, 1021:2, 1021:3, 1021:6, 1029:27, 1030:5, 1030:6, 1035:42, 1037:21, 1039:15, 1059:19, 1060:8, 1071:44, 1080:26, 1101:32, 1101:36, 1101:39, 1106:22, 1106:24, 1118:3 scientists [29] - 1001:42, 1002:2, 1002:20, 1002:35, 1002:43, 1003:37, 1033:35, 1038:10, 1043:34, 1058:10, 1067:38, 1072:2, 1074:35, 1079:42, 1079:43, 1080:7, 1080:12, 1081:7, 1081:17, 1081:37, 1098:22, 1098:37, 1098:47, 1100:38, 1106:23, 1108:5, 1117:31, 1118:33 Scientists [2] - 1112:18, 1119:14 scope [2] - 1008:4, 1100:28 Scott [4] - 1021:6, 1021:7, 1089:46, 1093:20 screen [11] - 1018:27, 1027:32, 1027:42, 1027:43, 1029:35, 1059:40, 1067:13, 1071:47, 1080:32, 1082:25, 1115:34 scroll [12] - 994:17, 994:42, 994:44, 995:5, 995:13, 995:19, 995:24, 995:25, 995:29, 995:35, 1003:10, 1077:15 scrolling [1] - 994:11 scrub [1] - 1059:5 scrubbed [1] - 1059:10 scrubbing [2] - 1058:47, 1070:1 se [1] - 1100:25 search [3] - 1044:43, 1089:35, 1089:47 second [28] - 993:37, 995:14, 1000:21, 1003:33, 1004:1, 1012:19, 1012:31, 1013:40, 1015:12, 1028:44, 1031:25, 1049:38, 1057:2, 1059:37, 1063:26, 1064:28, 1069:22, 1081:38, 1082:12, 1082:16, 1086:24, 1093:30, 1099:17, 1099:40, 1101:21, 1106:43, 1112:15, 1115:35 second-last [5] - 1004:1, 1086:24, 1099:17, 1101:21, 1106:43 secretarial [1] - 999:26 secretariat [1] - 999:26 section [16] - 993:22,
---------------------------------------	--	---	---

S

993:32, 1000:25,
1022:41, 1034:13,
1034:16, 1036:29,
1059:20, 1060:13,
1069:5, 1069:6,
1072:4, 1078:37,
1079:33, 1079:36,
1081:7
sections [2] -
1079:11, 1118:33
see [109] - 994:21,
994:45, 995:6,
995:27, 995:29,
998:5, 999:26,
999:35, 1001:7,
1001:42, 1004:21,
1006:23, 1006:36,
1010:17, 1015:23,
1016:25, 1020:1,
1020:27, 1022:1,
1022:19, 1022:30,
1030:17, 1030:28,
1031:7, 1033:7,
1034:47, 1035:2,
1035:4, 1035:5,
1035:29, 1036:35,
1037:6, 1037:41,
1038:25, 1039:13,
1039:25, 1040:32,
1041:30, 1041:46,
1042:4, 1042:41,
1042:46, 1043:10,
1043:14, 1043:18,
1043:20, 1044:12,
1044:16, 1044:29,
1044:46, 1045:2,
1045:5, 1045:29,
1045:34, 1046:2,
1046:43, 1047:39,
1049:28, 1062:37,
1064:33, 1064:45,
1068:7, 1074:33,
1075:22, 1077:4,
1077:10, 1077:15,
1077:32, 1078:25,
1080:43, 1081:44,
1082:34, 1083:12,
1084:37, 1086:8,
1086:13, 1086:23,
1087:9, 1087:14,
1087:18, 1087:33,
1088:6, 1091:36,
1093:30, 1093:42,
1094:28, 1095:7,
1095:22, 1095:25,
1096:10, 1098:19,
1098:28, 1104:8,
1104:33, 1106:15,
1106:20, 1107:2,
1112:37, 1114:28,
1116:25, 1117:1,
1117:14, 1118:16,
1121:6, 1121:9,
1121:10
seeing [19] - 1016:28,
1041:17, 1041:22,
1041:26, 1041:33,
1043:28, 1054:17,
1055:26, 1061:31,
1063:25, 1064:15,
1064:24, 1066:10,
1066:12, 1070:10,
1090:16, 1090:32,
1097:10, 1097:12
seek [2] - 992:8,
1110:4
seeking [2] - 1053:1,
1109:31
seem [3] - 1014:15,
1056:23, 1098:10
select [1] - 1074:46
selected [2] - 1030:29,
1038:37
selecting [1] -
1038:23
selection [2] -
1038:11, 1074:36
selective [1] - 1100:34
semen [1] - 1065:13
send [7] - 999:21,
1020:1, 1070:37,
1084:26, 1114:34,
1114:37, 1114:38
sending [4] - 995:30,
1014:30, 1024:10,
1114:20
sends [2] - 1114:32,
1120:6
senior [7] - 1007:28,
1020:11, 1021:2,
1021:3, 1021:6,
1059:19, 1106:16
sense [9] - 1006:20,
1040:9, 1045:47,
1046:10, 1061:22,
1101:31, 1106:9,
1116:37, 1116:40
sensibility [1] -
1077:10
sensitive [7] -
1042:43, 1042:45,
1043:27, 1064:41,
1065:2, 1085:17,
1085:26
sensitivity [3] -
1043:5, 1043:6,
1085:26
sent [12] - 1001:16,
1003:17, 1016:6,
1019:36, 1019:44,
1020:2, 1020:6,
1020:39, 1037:40,
1075:28, 1099:31,
1105:36
sentence [7] - 1094:2,
1094:13, 1098:31,
1100:1, 1101:7,
1109:25, 1112:15
separate [3] - 993:17,
1076:32, 1119:4
separately [1] -
1048:21
separates [1] - 1060:5
separation [1] -
1061:7
September [2] -
1065:34, 1077:16
serious [1] - 999:44
Service [1] - 1085:46
services [4] - 1036:7,
1072:29, 1101:37,
1101:40
Services [1] - 1029:31
services' [3] - 993:13,
996:42, 1101:40
session [1] - 1111:24
set [6] - 1032:37,
1036:18, 1037:35,
1082:30, 1092:37,
1102:8
sets [2] - 1034:28,
1037:4
setting [1] - 1056:21
sevens [1] - 1046:16
shall [1] - 1059:25
share [1] - 1106:36
Sharon [5] - 1009:26,
1009:27, 1018:23,
1019:45, 1120:8
Sharon's [2] -
1016:44, 1016:45
shatters [1] - 1039:42
shelves [1] - 999:5
shocked [1] - 1035:17
short [5] - 1005:35,
1016:33, 1055:21,
1102:5, 1106:30
shoulder [1] - 1119:11
show [8] - 1018:26,
1043:10, 1054:40,
1075:4, 1080:36,
1095:12, 1095:15,
1095:28
showed [2] - 1042:27,
1091:40
showing [1] - 1035:33
shown [4] - 1019:42,
1091:27, 1118:39,
1118:40
shows [1] - 1087:31
sick [3] - 996:47,
997:8, 1025:18
side [2] - 1044:13,
1078:47
sign [2] - 1023:8,
1086:16
signature [1] -
1017:23
signed [1] - 1014:5
significance [7] -
1004:31, 1006:27,
1006:36, 1006:43,
1026:25, 1081:32,
1081:36
significant [8] -
1089:22, 1092:1,
1102:31, 1103:41,
1103:43, 1106:21,
1106:26, 1106:37
significantly [2] -
1062:1, 1062:32
signs [2] - 1014:34,
1017:25
siloed [1] - 1079:11
similar [3] - 1001:47,
1027:18, 1061:38
simple [2] - 1060:47,
1064:3
simplest [1] - 1062:29
simply [8] - 1052:46,
1058:41, 1064:40,
1087:22, 1099:23,
1103:24, 1104:14,
1112:22
single [37] - 1035:2,
1035:19, 1035:27,
1035:29, 1043:1,
1043:3, 1043:9,
1043:32, 1045:1,
1045:3, 1045:10,
1046:22, 1048:6,
1048:11, 1048:24,
1048:25, 1048:32,
1048:34, 1048:45,
1049:2, 1049:18,
1049:19, 1049:33,
1049:37, 1051:18,
1051:26, 1052:3,
1052:30, 1052:40,
1064:3, 1064:44,
1070:24, 1075:44,
1076:20, 1091:12,
1120:20, 1120:24
single-source [21] -
1035:2, 1035:29,
1043:1, 1043:3,
1043:32, 1045:3,
1045:10, 1046:22,
1048:11, 1048:24,
1048:25, 1048:32,
1048:34, 1049:2,
1051:26, 1064:3,
1064:44, 1070:24,
1075:22, 1075:26,
1075:29, 1075:37,
1075:39, 1084:11,
1084:33, 1089:44,
1100:40, 1114:4
situations [6] -
1031:24, 1047:31,
1051:3, 1075:14,
1080:3, 1100:37
six [7] - 1006:22,
1015:3, 1016:9,
1017:35, 1033:2,
1046:43, 1049:10
sixteen [2] - 1073:27,
1073:29
size [1] - 999:7
sizes [1] - 1091:40
skeletal [12] -
1030:30, 1030:38,
1031:33, 1032:26,
1037:26, 1041:29,
1047:19, 1074:43,
1075:2, 1075:17,
1075:19, 1075:23
skeleton [1] - 1075:20
skill [3] - 1060:10,
1060:18, 1060:20
skilled [1] - 1073:31
skills [7] - 1033:34,
1034:8, 1034:20,
1061:5, 1100:25,
1114:27, 1114:31
small [6] - 997:27,
1039:27, 1040:21,
1040:22, 1078:19,
1078:20
smaller [1] - 1040:29
smashes [1] - 1039:33
snapshot [1] - 1081:5
snide [2] - 993:45,
996:2
Sofronoff [1] - 991:26
soft [3] - 1047:20,
1109:19, 1109:20
soil [1] - 1076:15

solely [1] - 1005:21	1065:41, 1069:6,	specific [14] - 996:46,	1114:32	1037:35, 1044:7,
solid [1] - 1057:42	1080:34, 1087:27,	997:9, 1005:11,	stage [9] - 992:21,	1047:13, 1048:29,
solution [2] - 1057:38,	1087:43, 1088:9,	1005:12, 1010:47,	1002:44, 1012:39,	1050:22, 1050:23,
1057:41	1091:30, 1093:20,	1011:2, 1023:26,	1012:42, 1013:5,	1051:3, 1051:13,
solutions [1] - 1055:8	1093:47, 1094:32,	1023:43, 1036:41,	1017:27, 1023:30,	1051:19, 1052:24,
solved [1] - 1032:22	1101:16, 1102:37,	1041:5, 1089:18,	1092:17, 1097:21	1055:29, 1059:39,
solving [1] - 1000:17	1105:18, 1108:44,	1089:47, 1096:43,	stainless [1] - 1086:25	1065:19, 1065:27,
someone [19] -	1115:15	1121:34	stakeholders [2] -	1065:30, 1072:1,
1026:36, 1032:24,	sort [22] - 1032:42,	specifically [9] -	1099:41, 1100:17	1077:13, 1077:32,
1036:40, 1046:27,	1034:1, 1036:24,	997:25, 1064:16,	standard [10] -	1080:33, 1081:47,
1051:8, 1068:6,	1038:43, 1047:12,	1065:5, 1065:14,	1018:46, 1019:4,	1082:1, 1082:25,
1072:3, 1079:32,	1047:14, 1047:23,	1068:46, 1078:9,	1041:9, 1045:40,	1083:17, 1083:18,
1082:40, 1082:46,	1054:2, 1058:44,	1084:40, 1084:41,	1045:44, 1089:16,	1083:43, 1085:15,
1083:4, 1099:42,	1066:37, 1067:34,	1096:11	1096:10, 1096:25,	1092:43, 1098:17,
1100:45, 1103:25,	1068:17, 1068:46,	specified [1] -	1109:39, 1110:15	1098:31, 1102:8,
1103:27, 1107:33,	1070:32, 1080:13,	1088:41	standardisation [1] -	1102:10, 1108:45,
1107:47, 1108:19	1083:28, 1089:33,	specify [2] - 1012:25,	1018:41	1110:36, 1111:2,
sometimes [21] -	1097:42, 1118:10,	1012:42	standardised [1] -	1115:31, 1116:34,
999:9, 1002:27,	1118:37, 1120:43	spelt [1] - 1029:17	1018:40	1117:27, 1117:29,
1009:12, 1014:14,	source [42] - 1035:2,	spend [6] - 994:35,	stands [1] - 1045:1	1119:14, 1119:31,
1019:7, 1022:39,	1035:19, 1035:20,	1016:29, 1016:32,	start [15] - 1015:8,	1120:12, 1120:28
1030:36, 1031:13,	1035:27, 1035:29,	1016:35, 1080:16,	1015:9, 1015:13,	STATEMENT [1] -
1031:40, 1032:36,	1035:33, 1035:34,	1103:31	1015:18, 1015:31,	1029:42
1034:36, 1038:23,	1043:1, 1043:3,	spending [1] - 1009:5	1015:34, 1016:34,	statements [13] -
1046:7, 1046:29,	1043:9, 1043:32,	sperm [1] - 1024:20	1044:20, 1066:39,	999:22, 1013:16,
1047:15, 1057:18,	1045:1, 1045:3,	spoken [7] - 997:42,	1070:38, 1073:19,	1018:13, 1018:36,
1071:35, 1075:2,	1045:10, 1046:22,	997:45, 1000:8,	1079:1, 1079:12,	1018:47, 1019:4,
1106:25, 1118:29,	1048:11, 1048:24,	1014:42, 1014:43,	1079:19, 1105:45	1021:32, 1023:8,
1118:31	1048:25, 1048:32,	1017:3, 1088:40	start-to-finish [2] -	1051:38, 1051:39,
somewhat [2] -	1048:34, 1048:45,	spreadsheet [18] -	1079:1, 1079:12	1052:36, 1084:8,
1014:21, 1029:5	1049:2, 1049:18,	1044:2, 1044:8,	started [14] - 1009:46,	1120:11
somewhere [2] -	1049:19, 1049:33,	1044:12, 1044:28,	1025:42, 1034:13,	stating [1] - 1023:10
1047:30, 1075:21	1049:37, 1051:18,	1045:35, 1046:20,	1039:31, 1044:19,	stationery [12] -
soon [3] - 1003:31,	1051:26, 1052:3,	1049:1, 1054:13,	1054:17, 1058:27,	996:28, 996:30,
1051:8, 1068:24	1052:30, 1052:40,	1054:15, 1054:22,	1066:11, 1066:12,	996:35, 996:47,
sooner [1] - 1068:24	1058:28, 1062:3,	1054:40, 1056:32,	1066:25, 1085:5,	997:7, 997:15,
SOP [14] - 1022:36,	1064:3, 1064:44,	1066:7, 1080:24,	1090:19, 1096:27	997:22, 998:11,
1022:37, 1022:38,	1070:24, 1076:20,	1080:33, 1080:35,	starting [6] - 1042:35,	998:34, 1000:2,
1022:41, 1022:42,	1091:12, 1120:20,	1081:6, 1103:40	1044:27, 1063:38,	1000:6, 1000:8
1095:2, 1095:6,	1120:24	SPREADSHEET [1] -	1063:43, 1063:47,	statistic [5] - 1048:34,
1095:21, 1096:13,	source [1] - 1048:6	1080:46	1074:34	1051:35, 1051:36,
1096:28, 1097:3,	sources [1] - 1035:24	square [2] - 1076:30,	starts [4] - 1004:12,	1052:1, 1064:5
1097:4, 1109:42,	sourcing [1] - 1071:27	1076:32	1028:43, 1028:45,	statistical [4] -
1110:45	South [2] - 1071:19,	squarely [1] - 1001:26	1121:26	1032:11, 1051:47,
SOPs [2] - 1022:39,	1071:27	SS [2] - 1045:1,	state [2] - 1011:1,	1114:43, 1121:34
1079:47	space [1] - 1121:35	1045:9	1023:9	statistics [3] -
sorry [42] - 994:12,	spaced [1] - 1055:19	staff [31] - 997:28,	statement [71] - 999:8,	1049:14, 1049:20,
994:26, 996:38,	speaking [4] - 992:43,	998:44, 999:10,	1000:21, 1001:36,	1118:39
998:46, 1001:33,	1027:15, 1037:47,	999:21, 999:24,	1002:27, 1002:40,	stays [1] - 1041:12
1008:45, 1009:5,	1091:41	999:26, 999:27,	1002:44, 1003:19,	steel [1] - 1086:25
1013:19, 1013:29,	speaks [2] - 1043:20,	1001:17, 1017:40,	1004:14, 1004:18,	step [9] - 1002:2,
1018:5, 1019:24,	1080:19	1027:16, 1037:5,	1008:36, 1009:7,	1002:27, 1018:22,
1020:26, 1020:36,	special [3] - 1086:38,	1037:40, 1058:26,	1012:39, 1012:42,	1018:23, 1061:26,
1020:47, 1021:3,	1086:42, 1088:44	1082:3, 1082:8,	1013:4, 1013:40,	1069:15, 1079:21,
1021:4, 1021:13,	specialised [5] -	1086:8, 1089:42,	1018:34, 1018:42,	1097:14
1025:6, 1027:35,	1033:38, 1037:3,	1090:35, 1090:41,	1019:24, 1023:29,	step-by-step [1] -
1027:45, 1028:17,	1038:16, 1041:1,	1090:45, 1091:1,	1023:32, 1024:13,	1097:14
1028:42, 1033:9,	1072:28	1091:14, 1099:27,	1024:28, 1025:5,	steps [3] - 1005:14,
1035:37, 1040:27,	specialists [2] -	1099:42, 1101:12,	1029:34, 1029:37,	1006:8, 1060:16
1064:39, 1064:40,	1036:32, 1036:33	1101:22, 1101:33,	1032:15, 1037:1,	sterile [1] - 1039:28

stick ^[1] - 1019:8	1093:6	1092:41, 1104:11, 1104:15	1026:31, 1026:36, 1119:38	technologies ^[1] - 1043:26
stickies ^[1] - 999:31	submission ^[6] - 1004:32, 1004:38, 1005:7, 1005:14, 1081:33, 1104:18	suite ^[1] - 1000:30	task ^[5] - 1018:44, 1031:20, 1037:22, 1074:41, 1081:22	technology ^[3] - 1043:7, 1043:24, 1065:1
still ^[20] - 1002:34, 1004:12, 1011:16, 1016:4, 1016:32, 1021:32, 1032:9, 1041:28, 1046:23, 1046:40, 1055:6, 1069:36, 1069:37, 1071:34, 1072:37, 1073:35, 1085:25, 1100:47, 1105:34, 1114:47	submit ^[4] - 1007:26, 1014:29, 1014:30, 1017:37	summarised ^[2] - 1085:16, 1111:4	tasks ^[12] - 999:22, 1010:16, 1016:30, 1025:39, 1025:45, 1026:7, 1026:13, 1026:20, 1034:21, 1034:25, 1034:28, 1072:26	teeth ^[22] - 1037:9, 1038:37, 1038:41, 1038:43, 1038:45, 1041:23, 1041:26, 1042:26, 1044:22, 1044:47, 1045:6, 1045:25, 1045:41, 1047:39, 1057:8, 1058:5, 1063:30, 1065:5, 1065:14, 1078:31, 1078:35, 1078:37
stochastic ^[1] - 1043:21	submitting ^[1] - 1006:1	Sunday ^[1] - 1114:42	tea ^[1] - 1028:9	temporary ^[1] - 1070:28
stock ^[9] - 997:20, 999:4, 1040:28, 1040:30, 1040:36, 1062:3, 1094:18, 1102:30, 1116:26	subsequently ^[1] - 1109:33	supported ^[2] - 1016:40, 1114:46	TEAM ^[1] - 1098:6	tend ^[7] - 1036:29, 1036:35, 1036:36, 1047:14, 1051:3, 1063:39, 1118:26
stockpile ^[1] - 1092:1	substance ^[3] - 1005:41, 1092:24, 1104:23	supportive ^[1] - 1115:12	team ^[55] - 994:27, 994:34, 995:30, 996:2, 996:10, 997:15, 997:19, 997:46, 1001:24, 1001:40, 1002:33, 1002:34, 1002:39, 1002:42, 1004:22, 1004:27, 1007:28, 1016:45, 1019:6, 1020:17, 1020:32, 1020:33, 1020:39, 1021:34, 1022:31, 1026:8, 1026:10, 1026:11, 1029:28, 1030:17, 1030:18, 1030:21, 1040:33, 1040:38, 1080:17, 1086:17, 1089:45, 1093:16, 1093:23, 1093:42, 1097:39, 1104:6, 1108:10, 1108:45, 1111:14, 1111:45, 1112:1, 1112:26, 1112:31, 1113:11, 1118:31, 1120:8	tender ^[8] - 1019:13, 1027:30, 1028:28, 1029:40, 1080:39, 1097:46, 1098:2, 1098:4
stop ^[5] - 994:44, 995:5, 1007:10, 1022:2	substances ^[2] - 1058:31, 1060:29	surposed ^[2] - 1009:20, 1076:45	tendered ^[3] - 1019:15, 1027:28, 1028:1	tends ^[3] - 1036:9, 1040:6, 1051:37
stopped ^[2] - 1013:29, 1082:44	substantial ^[1] - 1005:24	surprised ^[1] - 1112:35	tenor ^[1] - 1116:4	tenth ^[1] - 1116:22
stoppers ^[1] - 1087:4	substantive ^[2] - 996:3, 996:19	survey ^[1] - 1085:14	TERGAZYME ^[1] - 1098:7	Tergazyme ^[16] - 1055:45, 1056:18, 1057:38, 1057:40, 1057:41, 1057:44, 1058:8, 1059:4, 1086:37, 1087:18, 1091:45, 1092:1, 1092:11, 1092:18, 1093:32, 1094:18
stopping ^[1] - 1007:16	substrate ^[1] - 1064:1	surveys ^[2] - 1082:3, 1082:9	term ^[2] - 1076:40, 1083:26	terminology ^[3] - 1001:29, 1021:4, 1046:19
store ^[2] - 1040:28, 1041:7	successive ^[1] - 1043:10	Susan ^[1] - 991:33	team's ^[2] - 1004:22, 1015:31	terms ^[17] - 993:26, 1003:40, 1006:9, 1037:9, 1037:13, 1037:30, 1055:20, 1061:1, 1068:27, 1069:5, 1070:4, 1077:10, 1090:4, 1091:41, 1094:22, 1097:32, 1118:7
storing ^[1] - 1093:32	suffered ^[1] - 1033:41	suspect ^[2] - 1033:15, 1093:4	teams ^[15] - 1001:41, 1002:42, 1003:11, 1012:34, 1012:37, 1012:46, 1020:18, 1020:22, 1020:24, 1021:26, 1030:17, 1076:35, 1076:36, 1079:39, 1093:19	
straight ^[1] - 1071:28	sufficient ^[1] - 1081:40	swab ^[1] - 1090:9	tease ^[1] - 1068:26	
strand ^[1] - 1045:12	sufficiently ^[1] - 1090:33	swabbed ^[1] - 1090:27	technically ^[2] - 1001:18, 1001:27	
strategise ^[1] - 1079:43	suggest ^[27] - 995:40, 998:23, 999:37, 1001:6, 1001:7, 1001:26, 1003:13, 1003:39, 1008:9, 1012:21, 1035:41, 1091:28, 1092:15, 1092:17, 1092:30, 1094:22, 1096:8, 1103:35, 1105:8, 1106:3, 1107:5, 1108:14, 1111:5, 1111:27, 1112:4, 1112:25	swabs ^[1] - 1060:21	technique ^[3] - 1059:47, 1062:8, 1062:33	
strategy ^[1] - 1078:2	suggested ^[9] - 993:44, 994:1, 1004:45, 1020:9, 1021:20, 1022:6, 1024:32, 1106:30, 1112:25	sworn ^[1] - 1029:20	techniques ^[3] - 1034:18, 1079:44, 1116:42	
stream ^[4] - 993:13, 996:42, 1101:37, 1101:40	suggesting ^[4] - 999:43, 1070:43, 1077:15, 1099:2	sympathetic ^[1] - 1083:1		
streamline ^[1] - 1071:17	suggestion ^[7] - 994:37, 996:23, 1013:35, 1024:5,	symposium ^[1] - 1114:41		
Street ^[1] - 991:15		system ^[12] - 992:19, 1010:47, 1032:35, 1039:5, 1039:6, 1065:12, 1065:21, 1080:6, 1080:28, 1081:4, 1090:20, 1121:4		
stressful ^[1] - 1017:34				
STRmix ^[1] - 1018:36				
struck ^[1] - 1004:34				
structure ^[2] - 1020:17, 1080:6				
stuck ^[1] - 1022:29				
studies ^[2] - 1088:29, 1089:14				
study ^[6] - 1087:2, 1088:21, 1088:31, 1088:33, 1088:34, 1089:11				
stuff ^[1] - 1118:10				
sub ^[1] - 1115:37				
sub-samples ^[1] - 1115:37				
subject ^[4] - 1035:27, 1091:25, 1092:33,				

T

t's ^[1] - 1117:43
tab ^[1] - 999:9
tail ^[1] - 1001:34
talks ^[1] - 1018:32
tallied ^[2] - 1000:44,
1001:2
tally ^[4] - 1118:39,
1118:40, 1118:46
tap ^[1] - 1119:11
tapes ^[1] - 1060:22
target ^[4] - 1013:41,

test [6] - 1034:39, 1035:4, 1035:6, 1035:16, 1050:38, 1087:45	1063:45, 1064:28, 1069:37, 1078:18, 1085:22, 1109:33	1049:3, 1050:17, 1052:8, 1069:1, 1069:2, 1088:3, 1088:6	1094:23, 1096:32, 1097:28	two [45] - 992:31, 993:16, 994:9, 995:20, 997:21, 1005:16, 1006:5, 1006:8, 1022:15, 1024:15, 1028:29, 1028:36, 1034:37, 1035:4, 1042:25, 1042:30, 1043:9, 1045:5, 1046:4, 1047:38, 1048:1, 1048:45, 1049:32, 1049:33, 1052:14, 1053:29, 1053:37, 1055:6, 1058:38, 1059:47, 1067:37, 1069:47, 1074:42, 1080:41, 1081:6, 1088:40, 1089:30, 1089:33, 1090:23, 1091:9, 1091:36, 1093:19, 1093:34, 1121:25
tested [7] - 1031:32, 1035:1, 1039:9, 1039:11, 1048:13, 1070:21, 1087:32	three-person [2] - 1053:45, 1085:22	topic [6] - 1059:16, 1074:32, 1077:38, 1080:21, 1081:41, 1121:36	triggered [1] - 1090:21	twofold [1] - 1081:36
testified [1] - 1091:11	threshold [2] - 1085:29, 1085:30	touch [6] - 1035:13, 1036:15, 1036:16, 1036:18, 1038:41, 1075:8	trio [1] - 1051:46	type [4] - 1026:40, 1032:33, 1080:17, 1096:11
TESTING [1] - 991:6	thresholds [2] - 1085:35, 1085:36	touching [2] - 1039:10, 1061:24	trouble [1] - 1006:36	types [8] - 1008:17, 1021:41, 1024:9, 1026:43, 1030:33, 1042:25, 1042:30, 1066:41
testing [17] - 1030:35, 1030:38, 1031:1, 1031:45, 1032:5, 1032:27, 1042:42, 1042:43, 1043:10, 1044:4, 1045:16, 1050:36, 1057:24, 1057:45, 1058:9, 1067:42, 1075:29	through-put [1] - 1079:16	towards [1] - 1095:35	troubleshoot [1] - 1066:40	
text [1] - 1098:34	throughout [1] - 1104:11	toxic [1] - 1004:47	true [2] - 1031:30, 1062:27	U
themselves [1] - 1008:43	Tim [5] - 1056:7, 1056:17, 1058:33, 1088:31, 1090:15	track [1] - 1044:35	trust [2] - 1017:40, 1026:38	ultimate [3] - 1005:7, 1015:41, 1104:6
thereabouts [1] - 1095:36	Tim's [1] - 1058:32	tracked [3] - 1118:7, 1118:13, 1119:21	trusted [2] - 1000:1, 1105:13	ultimately [6] - 1002:16, 1004:38, 1005:20, 1017:10, 1024:15, 1103:18
therefore [4] - 1032:46, 1058:40, 1064:42, 1102:47	timeline [1] - 1056:17	trail [1] - 1022:24	try [5] - 1046:47, 1053:32, 1063:12, 1072:41, 1081:8	ultraviolet [1] - 1067:40
they have [8] - 992:19, 1005:18, 1041:35, 1051:9, 1060:28, 1073:12, 1076:5, 1081:40	timely [2] - 1014:7, 1022:45	trained [6] - 1030:29, 1033:26, 1037:5, 1037:41, 1042:36, 1101:30	trying [22] - 998:9, 1006:42, 1016:35, 1033:45, 1033:47, 1044:35, 1046:41, 1048:26, 1055:7, 1060:44, 1066:39, 1068:13, 1072:40, 1079:21, 1081:30, 1094:42, 1097:14, 1103:30, 1110:27, 1111:28, 1111:30	umbrella [2] - 1004:41, 1045:42
they've [2] - 996:35, 1046:32	times [1] - 1119:25	transcript [9] - 992:34, 993:4, 993:8, 996:38, 1007:1, 1007:41, 1009:33, 1019:22, 1024:12	tub [1] - 1059:3	unable [1] - 1002:29
thinking [5] - 994:25, 1084:18, 1085:6, 1099:31, 1108:24	titanium [1] - 1041:8	transfer [1] - 1038:39	tube [4] - 1040:29, 1040:30, 1048:20, 1061:9	unacceptable [2] - 1024:25, 1024:37
third [6] - 1031:25, 1049:41, 1064:29, 1099:40, 1101:6, 1109:7	TO [3] - 1098:6, 1098:7, 1121:45	transferred [2] - 1038:40, 1039:7	Tuesday [1] - 991:20	unclear [2] - 1006:12, 1111:38
this [1] - 1067:28	today [2] - 1034:23, 1073:39	transpires [1] - 1091:47	turn [17] - 1000:20, 1003:11, 1004:6, 1036:47, 1039:46, 1041:16, 1054:21, 1055:29, 1056:26, 1059:37, 1061:29, 1076:41, 1077:13, 1080:21, 1084:4, 1102:10, 1113:27	under [9] - 997:2, 997:3, 1020:27, 1025:21, 1045:39, 1045:41, 1045:45, 1088:33, 1096:4
thoroughly [1] - 1096:6	together [7] - 1045:6, 1048:13, 1048:21, 1050:2, 1071:40, 1080:1, 1080:8	transported [1] - 1040:33	turnaround [18] - 995:8, 995:28, 1000:27, 1000:36, 1005:35, 1112:18, 1112:37, 1113:14, 1113:16, 1117:30, 1117:41, 1118:4, 1119:17, 1119:25, 1120:42, 1120:44, 1121:3, 1121:6	undergone [3] - 1109:45, 1109:46, 1110:1
thoughts [2] - 1067:29, 1085:3	tomorrow [3] - 1031:19, 1100:40, 1121:23	traumatic [2] - 1075:34, 1100:40	turnarounds [1] - 1118:6	understood [4] - 1001:10, 1018:45,
thread [1] - 995:40	took [6] - 993:38, 1066:47, 1067:7, 1082:26, 1091:37, 1106:45	treatment [2] - 1035:40	turned [6] - 1003:27, 1003:36, 1003:44, 1004:15, 1078:19, 1117:46	
three [33] - 1003:6, 1023:21, 1026:46, 1030:44, 1030:45, 1031:24, 1034:28, 1034:37, 1035:5, 1043:14, 1048:10, 1048:24, 1048:31, 1049:28, 1049:37, 1053:45, 1054:11, 1054:13, 1054:15, 1054:16, 1054:39, 1055:10, 1055:18, 1055:25, 1059:36,	tool [1] - 1041:5	tried [4] - 1056:7, 1083:29, 1083:32, 1095:28	turns [1] - 1084:28	
	tools [3] - 1086:32, 1089:5, 1090:27	trifling [1] - 999:38	twice [1] - 1109:12	
	tooth [2] - 1039:3, 1091:10	TriGene [16] - 1056:41, 1056:45, 1057:9, 1058:8, 1087:19, 1087:39, 1088:15, 1089:7, 1089:13, 1093:36, 1093:43, 1094:20,		
	toothbrush [6] - 1051:25, 1051:27, 1051:32, 1052:15, 1052:20, 1064:4			
	top [12] - 995:14, 1023:6, 1039:46, 1044:11, 1045:19,			

1063:12, 1116:4	1014:10, 1014:11,	1065:15, 1105:13,	1076:6	1087:22, 1088:16
undertake [2] -	1015:14, 1015:23,	1120:16	view [24] - 1002:36,	WEDNESDAY [1] -
1003:32, 1114:26	1018:42, 1019:40,	validations [3] -	1004:4, 1010:3,	1121:45
undertaken [2] -	1021:43, 1021:44,	1093:34, 1121:27,	1024:25, 1054:13,	week [26] - 1003:12,
1005:14, 1098:40	1022:42, 1029:35,	1121:33	1057:21, 1057:22,	1005:39, 1005:43,
undertaking [2] -	1032:25, 1033:2,	valuable [1] - 1079:13	1062:25, 1062:27,	1006:3, 1006:24,
1101:10, 1110:20	1044:37, 1055:8,	value [6] - 1023:16,	1065:8, 1070:13,	1008:15, 1008:29,
undertook [1] -	1056:6, 1060:37,	1024:45, 1062:31,	1073:18, 1075:44,	1008:31, 1009:8,
1111:47	1061:9, 1066:15,	1100:9, 1102:32,	1078:26, 1082:7,	1015:12, 1015:29,
unexpected [1] -	1072:42, 1073:39,	1103:38	1082:9, 1082:22,	1015:30, 1047:10,
1100:12	1075:29, 1077:15,	values [5] - 1061:38,	1100:19, 1101:33,	1067:37, 1069:47,
unfortunate [1] -	1078:14, 1083:39,	1062:1, 1062:10,	1104:4, 1104:16,	1118:43, 1118:44,
1024:4	1084:19, 1085:5,	1062:32, 1103:40	1105:1, 1105:10,	1118:47, 1119:1,
unilaterally [1] -	1089:29, 1091:13,	variable [6] - 1031:42,	1112:35	1119:2, 1119:27,
1097:38	1091:17, 1091:46,	1047:27, 1115:27,	viewed [4] - 1008:5,	1119:34, 1119:39,
unique [1] - 1094:36	1092:45, 1114:7,	1116:40, 1116:41	1008:9, 1008:10,	1120:2, 1120:11
unit [12] - 993:7,	1114:12, 1115:33,	variation [12] -	1008:27	weekly [4] - 1071:10,
993:27, 1018:10,	1119:1	1062:20, 1102:44,	viewing [4] - 1077:45,	1118:40, 1118:46,
1018:15, 1036:13,	up-front [1] - 1078:14	1102:46, 1106:9,	1077:46, 1078:1,	1120:3
1058:10, 1071:11,	upcoming [1] -	1106:11, 1106:12,	1078:7	weeks [4] - 1033:2,
1071:12, 1072:30,	1003:30	1106:21, 1106:37,	views [2] - 1008:25,	1046:41, 1047:2,
1114:27, 1114:32	update [3] - 1109:34,	1106:40, 1116:26,	1080:8	1068:22
units [1] - 993:17	1109:42, 1110:11	1116:35, 1117:6	vigorous [1] - 1057:30	weighed [1] - 1040:32
unjustified [3] -	updated [1] - 1067:21	variations [3] -	viruses [1] - 1077:28	weighting [1] -
1104:8, 1104:45,	upset [2] - 1077:21,	1116:22, 1116:23,	visibility [1] - 1022:29	1032:11
1104:46	1082:44	1116:36	visible [5] - 1022:18,	whereas [4] - 1034:23,
unknown [9] -	upsetting [1] -	varied [1] - 1103:39	1118:11, 1118:22,	1036:34, 1041:29,
1030:38, 1032:8,	1083:40	varies [1] - 1034:34	1121:4, 1121:5	1121:9
1032:13, 1051:2,	upwards [1] - 1018:19	variety [1] - 1071:10	visual [1] - 1095:22	whim [2] - 1094:24,
1051:5, 1051:8,	urgency [2] - 1004:10,	various [4] - 1013:43,	visually [1] - 1047:6	1097:37
1052:32, 1053:22,	1004:18	1013:47, 1086:8,	voice [1] - 1005:26	whole [12] - 1054:13,
1113:16	useable [8] - 1007:36,	1087:15	volume [8] - 1012:16,	1071:17, 1079:8,
unless [6] - 1005:17,	1023:27, 1024:15,	verification [7] -	1012:18, 1012:30,	1079:11, 1080:17,
1012:29, 1038:43,	1063:37, 1072:41,	1057:7, 1057:24,	1012:43, 1030:18,	1085:1, 1085:15,
1075:35, 1076:5,	1076:22, 1085:6,	1057:29, 1057:30,	1068:32, 1079:17,	1109:16, 1117:46,
1098:44	1085:11	1058:33, 1088:34,	1079:28	1118:17, 1120:37,
unlike [1] - 1036:28	useful [2] - 1019:22,	1093:36	voted [1] - 1097:40	1121:36
unlock [1] - 999:32	1093:6	Vernon [1] - 1068:38		wholesale [1] -
unreasonable [2] -	uses [2] - 995:9,	version [1] - 1027:34	W	1104:13
1005:42, 1006:3	1057:15	versus [3] - 1047:29,	wait [1] - 1017:37	wide [2] - 1051:7,
unreliable [2] -	usual [1] - 1050:37	1070:8, 1119:5	waited [2] - 1014:8,	1071:10
1053:12, 1053:17	utilised [2] - 1100:47,	vessel [1] - 1042:14	1014:10	wider [2] - 1033:34,
unsound [1] - 1092:12	1102:34	vessels [2] - 1041:42,	waiting [1] - 1114:47	1035:43
unsuitable [5] -	utilises [1] - 1061:16	1042:10	Wales [2] - 1071:20,	willing [3] - 1015:9,
1047:43, 1050:6,	utilising [1] - 1078:3	via [5] - 1002:16,	1071:27	1015:28, 1023:45
1050:46, 1053:19,		1012:33, 1017:9,	Walter [1] - 991:26	Wilson [1] - 1102:13
1070:46		1018:18, 1071:22	wants [2] - 1071:25,	wish [1] - 1114:26
unusual [2] - 1036:14,	V	viable [1] - 1091:46	1072:45	wished [1] - 1109:3
1042:28	vaccinated [1] -	vial [4] - 1055:42,	Warton [2] - 1068:39,	WIT.0003.0261.0001_
up [56] - 994:7,	1101:30	1056:6, 1056:20,	1068:41	R [1] - 1080:47
994:17, 994:42,	valid [1] - 1084:22	1090:5	wash [1] - 1061:17	WIT.0003.0261.0001_
994:44, 995:5,	validate [1] - 1089:12	vials [13] - 1055:32,	washed [4] - 1087:8,	R] [1] - 1080:32
995:13, 995:25,	validated [3] - 1065:5,	1056:11, 1056:14,	1087:31, 1087:32,	WIT.0003.0435.0001
995:29, 995:35,	1105:11, 1105:20	1056:22, 1056:23,	1087:33	[1] - 1102:11
1001:6, 1001:12,	validating [1] - 1068:5	1056:27, 1086:2,	waste [1] - 1108:21	WIT.0003.0435.0001_
1003:12, 1003:16,	validation [11] -	1086:25, 1086:32,	watch [1] - 1076:8	R [3] - 1029:43,
1003:33, 1003:42,	1057:7, 1057:22,	1087:4, 1087:31,	water [7] - 1057:40,	1036:47, 1059:40
1005:39, 1008:34,	1057:28, 1057:31,	1090:2, 1091:29	1057:42, 1059:3,	WIT.0003.0435.0001_
1008:43, 1009:3,	1062:25, 1062:38,	victim [4] - 1030:39,	1060:44, 1075:21,	R] [1] - 1029:36
1013:37, 1014:8,	1063:6, 1063:14,	1030:42, 1075:32,		WIT.0003.0435.0010_

R ^[1] - 1055:30	1003:41, 1004:3,	yearly ^[5] - 1009:19,
WIT.0003.0454.0001 _	1013:38, 1025:15,	1009:20, 1113:39,
R ^[1] - 1044:6	1026:42, 1098:47,	1113:40, 1118:40
WIT.0003.0455.0001	1103:32, 1104:27,	years ^[19] - 998:3,
^[1] - 1065:19	1106:44, 1116:34	1003:7, 1007:7,
WIT.0003.0456.0001]	workforce ^[1] - 995:45	1011:30, 1011:32,
^[1] - 1086:4	workplace ^[4] -	1014:24, 1019:35,
WIT.0003.0457.0001	1016:41, 1026:34,	1023:21, 1031:34,
^[1] - 1088:39	1038:21, 1100:27	1034:3, 1034:36,
WIT.0003.0460.0001-	Workplace ^[13] -	1041:30, 1043:7,
R ^[1] - 1115:34	1082:3, 1082:8,	1043:25, 1047:22,
WIT.0003.0466.0001 _	1111:5, 1111:7,	1054:8, 1073:27,
R ^[1] - 1098:27	1111:13, 1111:15,	1073:40
WIT.0003.0471.0001 _	1111:32, 1111:35,	yes ^[1] - 1110:9
R] ^[1] - 1110:34	1111:36, 1111:37,	yesterday ^[23] -
WIT.0012 ^[1] - 1018:28	1112:2, 1112:6,	992:40, 993:39,
WIT.0012.0025.0001 _	1112:10	994:46, 995:43,
R ^[1] - 1001:37	works ^[6] - 1036:38,	996:20, 997:14,
WIT.0012.0027 ^[1] -	1064:21, 1068:32,	998:8, 1000:31,
1013:17	1068:33, 1079:33,	1001:35, 1001:46,
WIT.0012.0027.0001 _	1096:47	1003:26, 1007:1,
R ^[2] - 1027:28,	workshop ^[2] -	1007:39, 1009:32,
1028:6	1114:41, 1114:43	1013:24, 1013:33,
WIT.0012.0027.0001 _	worry ^[3] - 1019:18,	1019:35, 1019:43,
R] ^[1] - 1027:46	1084:12, 1084:34	1021:41, 1021:47,
WIT.0012.0028.0001 _	worse ^[2] - 1087:22,	1024:11, 1025:19,
R ^[2] - 994:8,	1088:15	1025:36
1000:22	worst ^[2] - 1087:19,	yesterday's ^[1] -
WITHDREW ^[2] -	1087:39	992:33
1028:22, 1121:21	worth ^[1] - 1070:3	yield ^[1] - 1061:32
witness ^[7] - 1004:45,	write ^[4] - 994:21,	young ^[1] - 1016:36
1005:36, 1063:2,	1004:14, 1021:32,	yourself ^[3] - 1037:14,
1095:13, 1095:42,	1022:45	1092:10, 1098:35
1110:29	writing ^[3] - 1009:7,	
WITNESS ^[12] -	1074:21, 1104:12	
1012:39, 1018:7,	written ^[8] - 1003:16,	
1025:14, 1028:22,	1019:37, 1020:31,	
1088:1, 1094:11,	1032:15, 1083:17,	
1099:34, 1101:42,	1084:16, 1109:34	
1105:32, 1108:41,	wrongly ^[1] - 1104:19	
1110:38, 1121:21	wrote ^[1] - 1024:43	
witnesses ^[3] -		
1018:15, 1081:41,		
1121:25		
woman ^[1] - 1016:20		
wonder ^[3] - 1010:33,		
1097:9, 1097:46		
wondered ^[1] - 1062:2		
Woolridge ^[2] -		
1086:3, 1088:38		
word ^[6] - 1034:2,		
1099:5, 1099:8,		
1104:14, 1107:15,		
1120:42		
wording ^[9] - 1013:16,		
1018:34, 1018:36,		
1018:43, 1019:4,		
1019:6, 1019:9,		
1084:7, 1099:3		
words ^[11] - 1001:9,		

Z

zero ^[2] - 1012:27,
1119:1

zoom ^[11] - 1000:23,
1001:38, 1030:3,
1037:2, 1038:7,
1044:11, 1047:34,
1054:11, 1054:12,
1055:30, 1084:4

Y

year ^[30] - 1010:1,
1010:42, 1011:22,
1011:25, 1017:12,
1022:40, 1023:24,
1031:33, 1034:33,
1034:34, 1037:46,
1037:47, 1041:35,
1047:21, 1052:6,
1053:26, 1058:25,
1064:25, 1066:6,
1066:32, 1066:34,
1067:34, 1069:46,
1072:31, 1074:30,
1077:16, 1078:5,
1078:15, 1079:10,
1118:17