

**Cathie Allen**

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**From:** Cathie Allen  
**Sent:** Tuesday, 28 March 2017 5:18 PM  
**To:** Paul Csoban  
**Subject:** RE: Confirmation of instructions.

Hi Paul

I've tracked my changes below.

Cheers  
 Cathie

**Cathie Allen**

Managing Scientist – Police Services Stream

Forensic & Scientific Services,  
 Health Support Queensland, **Department of Health**

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**From:** Paul Csoban  
**Sent:** Tuesday, 28 March 2017 2:37 PM  
**To:** Cathie Allen  
**Subject:** FW: Confirmation of instructions.

Hi Cathie  
 Can you please reviews and send back any amendments to me please.  
 I will do the same  
 Thanks  
 Paul

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**From:** Louise Syme [[mailto:\[REDACTED\]](mailto:[REDACTED])]  
**Sent:** Tuesday, 28 March 2017 1:44 PM  
**To:** Paul Csoban  
**Subject:** Confirmation of instructions.

Dear Paul,

Thank you for your time yesterday. I have provided below a summary of the information you provided yesterday and framed a number of questions to be answered in our advice. Could you please advise whether the summary and draft questions accurately reflect your concerns?

## Background

Scientists employed within the Forensic Reporting and Intelligence Team (Reporting Team) of Forensic and Scientific Services (FSS) are responsible for preparing reports to the Queensland Police Service, providing scientific [witness] statements and appearing to give expert evidence as required.

The FFS FSS has had a standard operating procedure (SOP) for the analysis of sexual assault kits. Prior to 2008 that SOP involved the following steps (the old process):

1. The swab is removed from its ~~swab casing vial~~, ~~moistened with distilled water~~ and ~~rolled~~ ~~abbed~~ on a microscope slide. If sperm was identified on that slide, the swab was sent for DNA analysis.
2. If sperm was not identified on that slide, ~~water would be added to the swab~~ and the swab would be rolled across paper. Presumptive testing would then be conducted on that paper. If ~~sperm~~ ~~seminal fluid~~ was ~~detected~~ ~~identified~~ on the paper, the swab would be sent for DNA analysis.
3. If no ~~sperm~~ ~~seminal fluid~~ was identified in the presumptive test, the swab would then be used for cell testing.

In June 2010 the SOP was amended to involve the following steps (the new process):

1. Dilution of the swab in ~~a the vial~~ ~~with nanopure water and mixed.~~ ~~in which it was provided.~~ ~~The swab was then removed from the vial and rolled across~~ ~~A drop of the water is removed and placed onto~~ a microscope slide (the slide test). If sperm is identified on that slide, the swab is sent for DNA analysis.
2. If sperm is not identified on that slide, ~~the swab is be returned to the vial and~~ the vial would be “vortexed” ~~in the hope~~ to extract sperm that had penetrated the swab. A sample of the fluid after vortexing is used for presumptive testing. If ~~sperm~~ ~~seminal fluid~~ is identified on that test, the swab is sent for DNA analysis.
3. If no sperm ~~or seminal fluid~~ is identified in ~~either the slide test or~~ the presumptive test, the swab is then be used for cell testing.
4. Swabs sent for DNA analysis ~~whereby both the swab and the remaining fluid are processed to separate the sperm from epithelial cells. During this processing, sperm are spun to the bottom of the tube before another slide is prepared.~~ ~~then undergo a procedure to remove the water used for dilution thereby returning the any sperm sample to its concentrated state.~~

The new process was introduced with a view to preserving ~~as much sample as possible for DNA profiling whilst still undertaking a slide test and presumptive tests.~~ ~~larger sample for testing and analysis.~~ As the new process ~~retains the fluid and~~ ~~dilutes~~ the sperm sample, where only a low number of sperm have been collected presumably only a small number of sperm will be used in each stage of testing- allowing for a greater number of sperm to be available for DNA analysis if appropriate.

The SOP remained largely unchanged until August 2016 when further risk mitigation processes ~~implemented to ensure that all samples were processed~~ ~~were written into the procedure.~~ ~~Whilst the SOP was amended in 2010, the manual detailing the SOP was not amended until August 2016.~~ ~~I’m not sure what you’re trying to say. The new process was implemented and documented in the SOP in 2010. A risk mitigation step wasn’t implemented until August 2016. The SOP has been updated on the following occasions: 20/09/2010, 22/02/2011, 15/11/2013, 29/07/2015 and 09/03/2017.~~

A member of the Reporting Team (the scientist) raised concerns regarding the new process being “bad science” around ~~March~~ ~~June~~ 2016. In response to those concerns the FFS implemented risk minimisation processes for the analysis of sexual assault kits ~~in August 2016, after some preliminary investigation into the process.~~ In particular, the FFS has been sending swabs for DNA analysis irrespective of whether sperm was identified on the slide test or presumptive test. As a result, approximately 650 swabs have been analysed with approximately 2% (approximately 13) of those swabs being found to contain sperm. At present the FFS cannot confirm whether positive DNA analysis has been possible on those swabs. ~~These results are still being reviewed and a report will be compiled in the next 2 weeks.~~

The scientist made complaints regarding the personal conduct of a colleague in ~~August~~ ~~November~~ 2016. Since that time the scientist has made claims for personal injury and been involved in meetings with the FFS regarding her concerns. Crown Law is not instructed to act in relation to any of those matters.

In the course of her communications with the FSS regarding her complaints and injury claims, the scientist has also raised concerns that the FSS has been relying on “bad science” for the period between 01/01/2008 June 2010 and August 2016 present. Those concerns include, but may not be limited to, concerns that:

1. The new process has resulted in sperm samples not being effectively detected by the slide test or presumptive test and therefore samples are not being sent for DNA analysis and evidence is not detected. being over diluted with the effect that some samples have not been sent for DNA analysis because the diluted sample did not result in the identification of sperm on either the slide test or presumptive test.
2. As the new process is not as effective, the samples most at risk of being missed, as the samples were low numbers of sperm are. The new process won't detected that there's sperm or seminal fluid and therefore won't be sent for DNA analysis. As the sperm sample is more diluted using the new process, there is a lower probability of sperm being identified on the slide test or presumptive test and therefore an increased probability that swabs containing low sperm numbers are not being sent for DNA analysis.
3. There may be 60 cases which require re-examination because of an ineffective process over dilution. (However, the basis for this figure has not been explained or investigated.)

In response to the concerns raised by the scientist, FSS increased its risk minimisation processes in August 2016. The FSS has also sought a review by the Institute of Environmental Science and Research Limited (ESR) and undertaken complementary internal work testing the science. The FSS remains of the view that the new process represents the best process currently available for the analysis of sexual assault kits and a practice consistent with those used in benchmark organisations.

After a period away from the workplace, the scientist has returned to work and is undertaking a project in another forensic field. She has indicated that she wishes to return to her substantive role, including undertaking work as an expert witness for the FSS. The scientist has previously indicated that she would be satisfied that the new process is appropriate if the ESR report supports that position, however that position has now changed, although the scientist hasn't been provided with the outcome of the ESR review. However, the FSS is concerned that the scientist has been inconsistent in her position over the new process. Accordingly, the FSS has ongoing concerns about the evidence the scientist may give in sexual assault prosecutions and the impact of that evidence on the scientist's reputation and effectiveness as an expert witness, the outcome of prosecutions (future and past) and the reputation of the FSS.

We are asked to advise on the following:

1. If the scientist gave evidence that the new process was “bad science”, what would be the effect of that evidence on:
  - a. the relevant prosecution;
  - b. the outcome of past prosecutions;
  - c. the reputation and effectiveness of the scientist as an expert witness; and
  - d. the reputation of the FSS and effectiveness of other FSS scientists as expert witnesses.

I would be happy to discuss any of this information as required.

Louise Syme

Senior Principal Lawyer

Advocacy - Galligan Chambers

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