

s22

From: PFAS Coordination Unit
Sent: Wednesday, 24 April 2019 2:45 PM
To: 'Sue Trevenar'; Kayla Smurthwaite
Cc: RSPH – PFAS Health Study; PFAS Coordination Unit; KIRK, Martyn; Rosemary Korda @ Anu; s22; Hsei Di Law; s22
Subject: RE: PFAS Health Study Data Linkage - Proposed Candidate Outcomes [SEC=OFFICIAL]
Attachments: Data Linkage Candidate Outcomes (DOH).xlsx

Good afternoon Sue/Kayla,

Thank you for your patience on this – we've included some feedback on the data linkage study proposed outcomes below.

- Noting that only 9 cancers are included. Is there data available for linkage on head and neck, ovarian, uterine cancer and bowel cancer? If there is linked data available, was it excluded on the basis that there is no data to support an association with PFAS or for some other reason?
- Some minor typos. Gestational is incorrectly spelled a couple of times and there is reference to an APC data source which is not on the abbreviation list – could it be clarified if AECD or ACD or APDC was meant.

If you have any questions, please let us know.

Kind regards,

s22

PFAS Coordination Unit

Environmental Health, Radiation and Nuclear Safety Policy Section
 Regulatory Policy Branch | Office of Health Protection
 Department of Health | pfas@health.gov.au

From: Sue Trevenar
Sent: Thursday, 18 April 2019 8:24 AM
To: s22
Cc: RSPH – PFAS Health Study ; PFAS Coordination Unit ; Kayla Smurthwaite ; KIRK, Martyn ; Rosemary Korda @ Anu ; s22 ; Hsei Di Law
Subject: FW: PFAS Health Study Data Linkage - Proposed Candidate Outcomes [SEC=No Protective Marking]

Good morning s22 ,

I wanted to send a reminder that we requested feedback from your office on the proposed candidate outcomes for the data linkage study. With the changeover of staff this may have slipped under the radar.

Kayla is currently on leave and will return to the office on Wednesday 24 April. If you have any questions please let me know.

Kind regards,

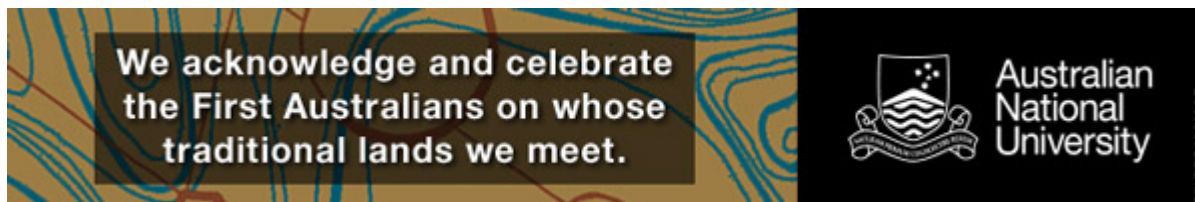
Sue

Sue Trevenar
 Senior Research Officer
 National Centre for Epidemiology & Population Health
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<http://nceph.anu.edu.au/>

My office hours are:
 Mondays-Fridays 8:00am to 2:30pm



From: Kayla Smurthwaite <kayla.smurthwaite@anu.edu.au>
Sent: Friday, 5 April 2019 11:13 AM
To: s22 <s22@health.gov.au>
Cc: Rosemary Korda <Rosemary.Korda@anu.edu.au>; Martyn Kirk <Martyn.Kirk@anu.edu.au>; RSPH – PFAS Health Study <pfas.health.study@anu.edu.au>; PFAS Coordination Unit <PFAS@Health.gov.au>; s22 <s22@health.gov.au>
Subject: PFAS Health Study Data Linkage - Proposed Candidate Outcomes

Good morning s22 ,

I have attached a document outlining the proposed candidate outcomes for the PFAS Health Study data linkage component. All inclusions at this stage are subject to approvals from state linkage nodes, ethics committees and data custodians. In addition, all inclusions are based on power analysis in Katherine, which has the largest population size (and maximal power). Some candidate outcomes will be excluded in the smaller townships of Williamstown and Oakey due to insufficient power. This will be detailed in the data linkage protocol.

Could your team please provide comments on this list of outcomes by Thursday 18 April. Please let us know if you have any questions in the meantime.

Warm regards,
Kayla Smurthwaite

[The PFAS Health Study](#)

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s22

From: s22
Sent: Tuesday, 18 June 2019 11:33 AM
To: 'Kayla Smurthwaite'
Cc: KIRK, Martyn; s22 PFAS Coordination Unit
Subject: TRIM: RE: Data linkage study [SEC=OFFICIAL]

Hi Kayla

No worries – I thought that may have been the case. We just wanted to check and make sure.

Thanks for your help with the invoice.

Kind regards

s22

s22

Departmental Officer
 Environmental Health, Radiation and Nuclear Safety
 Regulatory Policy Branch | Office of Health Protection
 Australian Government Department of Health |  s22
 s22 [@health.gov.au](mailto:s22@health.gov.au)

From: Kayla Smurthwaite
Sent: Friday, 14 June 2019 5:03 PM
To: s22
Cc: KIRK, Martyn
Subject: RE: Data linkage study [SEC=OFFICIAL]

Hi s22 ,

We were advised to remove this section and add the information into the project plan instead, as it is not information which should be publically released on our website. It is included in the risk mitigation table in the original project plan.

I will organise for the invoice to be raised for the protocol as soon as I receive confirmation from your team that the deliverable has been accepted.

Warm regards,
 Kayla

From: s22 s22 [@health.gov.au](mailto:s22@health.gov.au)
Sent: Friday, 14 June 2019 4:19 PM
To: Kayla Smurthwaite <kayla.smurthwaite@anu.edu.au>; s22
Cc: Martyn Kirk <Martyn.Kirk@anu.edu.au>; s22 s22 [health.gov.au](mailto:s22@health.gov.au); s22
 s22 [@health.gov.au](mailto:s22@health.gov.au); PFAS Coordination Unit <PFAS@Health.gov.au>; Rosemary Korda
 <Rosemary.Korda@anu.edu.au>; Hsei Di Law <hsei-di.law@anu.edu.au>
Subject: RE: Data linkage study [SEC=OFFICIAL]

Hi Kayla

Thanks very much for sending the amended Data Linkage Protocol through.

Based on a preliminary evaluation comparing the protocol to the WHO criteria, all the sections are there except the "Problems Anticipated" section? Is this information contained in another section of the protocol?

Thanks again and have a great weekend.

Kind regards

s22







s22

Departmental Officer
Environmental Health, Radiation and Nuclear Safety
Regulatory Policy Branch | Office of Health Protection
Australian Government Department of Health |  s22
s22 [@health.gov.au](mailto:s22@health.gov.au)

From: Kayla Smurthwaite <kayla.smurthwaite@anu.edu.au>

Sent: Friday, 14 June 2019 1:59 PM

To: s22

Cc: KIRK, Martyn <martyn.kirk@anu.edu.au>; s22  s22  [@health.gov.au](mailto:s22@health.gov.au); s22 
s22  [@health.gov.au](mailto:s22@health.gov.au); s22  s22  [@health.gov.au](mailto:s22@health.gov.au); PFAS Coordination Unit
<PFAS@Health.gov.au>; Rosemary Korda @ Anu <rosemary.korda@anu.edu.au>; Hsei Di Law <hsei-di.law@anu.edu.au>

Subject: RE: Data linkage study [SEC=OFFICIAL]

Good afternoon s22 ,

Please find attached the amended version of the data linkage protocol. This is the final version of the protocol which will be considered by the AIHW ethics committee and other state-based committees.

Please let us know if you would like any further clarification on the changes.

Warm regards,

Kayla Smurthwaite







[The PFAS Health Study](#)

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From: s22

Sent: Tuesday, 11 June 2019 5:34 PM

To: Kayla Smurthwaite <kayla.smurthwaite@anu.edu.au>

Cc: Martyn Kirk <Martyn.Kirk@anu.edu.au>; s22  s22  [@health.gov.au](mailto:s22@health.gov.au); s22 
s22  [@health.gov.au](mailto:s22@health.gov.au); s22  s22  [@health.gov.au](mailto:s22@health.gov.au); PFAS Coordination Unit
<PFAS@Health.gov.au>

Subject: RE: Data linkage study [SEC=OFFICIAL]

Thanks Kayla,

We note the issue and the related change and look forward to fully considering the amended version.

Regards

s22 | Director
s22

Environmental Health, Radiation and Nuclear Safety Policy Section | Regulatory Policy Branch | Office of Health Protection
Department of Health

Telephone: s22

Email: s22@health.gov.au

Post: GPO Box 9848, Canberra ACT 2601

Office location: Level 5, Scarborough House, Atlantic St, Phillip, ACT | MDP 1060

From: Kayla Smurthwaite <kayla.smurthwaite@anu.edu.au>

Sent: Tuesday, 11 June 2019 2:54 PM

To: s22

Cc: KIRK, Martyn <martyn.kirk@anu.edu.au>; s22 s22 @health.gov.au; s22

s22 @health.gov.au; s22 s22 @health.gov.au; PFAS Coordination Unit
<PFAS@Health.gov.au>

Subject: Data linkage study [SEC=No Protective Marking]

Good afternoon s22,

We have recently received feedback on the PFAS Health Study data linkage protocol from the Population Health Research Network (PHRN). The PHRN considered it unfeasible to link Commonwealth to all state/territory admitted patient and perinatal data within the timeframe of our study. The PHRN considers multi-jurisdictional linkages at this scale to be highly complex and untested; and while not impossible, will require ongoing and long-term negotiations.

This has impacted only on the health outcomes involving hospitalisations and during the perinatal period. In response, we have proposed a slight variation to the linkage flow for perinatal outcomes that will still allow us to deliver results in the planned timeframe.

However, we have not found an alternative to the original design that will allow us to analyse hospitalisation outcomes as part of the data linkage study. We will continue to negotiate with the PHRN around multi-jurisdictional linkage of admitted patient data, however, it is unlikely that we will include the originally proposed hospitalisation outcomes during our December 2020 delivery.

We will send through an amended version of the research protocol on Friday 14 June for you to review.

Warm regards,

Kayla Smurthwaite

[The PFAS Health Study](#)

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s22

From: s22
Sent: Wednesday, 20 October 2021 12:14 PM
To: KIRK, Martyn; Sue Trevenar; RSPH - PFAS Health Study
Cc: s22; LUM, Gary; PURDY, Lara
Subject: FW: Health's final comments on ANU PFAS reports [SEC=OFFICIAL]
Attachments: Final Health Comments ANU PFAS Reports.docx

Hi Martyn and team,

We have now read all of the reports together for a final review. In general we think the reports are reading well, however we note that there are several terms that are used for the Investigated PFAS Management Areas across the three reports. These include, PFAS management areas, exposure area, exposure communities and exposure towns. Ideally we would like to see the same terminology unless the references are intended to mean something different in which case they should all be defined in the glossary. Appreciate if these could be made consistent across reports or addressed in the glossary.

A couple of other specific things we picked up in each of the reports are outlined in the attached – *Final Health Comments ANU PFAS Reports*.

Also for your awareness, we have shared the draft reports with other Commonwealth Departments for their review of any redline issues or factual inaccuracies. We noted that the reports are not for broader distribution at this time. We expect to be able to provide responses to you early in the week starting 25 October. I note that following this we will need revisions very quickly so that we are able to progress final versions to the Minister and get approval to release these if we are to work to our preferred release timeframes.

Happy to discuss.

Kind regards,

s22

s22

From: s22
Sent: Tuesday, 14 September 2021 10:49 AM
To: 'Sue Trevenar'
Cc: PFAS Coordination Unit; RSPH - PFAS Health Study; PURDY, Lara; LUM, Gary; s22; KIRK, Martyn
Subject: Additional Health feedback on ANU PFAS Data Linkage Report [SEC=OFFICIAL]

Good morning Sue,

Thank you for the update, we look forward to receiving the final Blood Serum and Cross sectional survey reports.

s22

Here are our final comments regarding the Data Linkage Report.

Final Data Linkage Report comments

- Plain Language Summary –
 - 1st sentence - *Per- and polyfluoroalkyl substances (PFAS) are man-made chemicals that (may) have potential adverse effects on the environment and human health.*
 - 3rd para - *Over the three separate studies, for all most of the health outcomes studied we did not conclude that rates were consistently higher in the towns than the comparison areas.* – edits suggested to make this statement stronger.
 - 5th para - *In addition, some findings could have arisen just by chance. (chance could be further explained here)*
 - Conclusion
 - *'In light of the above, while there were higher rates of some health outcomes in individual towns, there was insufficient evidence to conclude that PFAS contamination living in these towns likely caused them.'*
 - *'Regardless, current and previous residents of these areas may be concerned about the observed higher rates of some outcomes'* – This sentence is used throughout and in our view is counterproductive and likely to achieve the opposite of what we think is intended.
 - We think it would be beneficial if you replaced it with an affirmative statement about what the study does do e.g. this study is consistent with previous studies in that it does not identify any conclusive disease causation role for the exposure to the PFAS species commonly found in the exposure pathways in Australia.
- Technical summary –

- Background – ‘From 2013 to 2017, the Australian Government identified **significant** PFAS contamination affecting the local environments of Katherine in NT, Oakey in Qld, and Williamstown in NSW’. The Introduction also uses the word ‘significant’ in this context and should be deleted.
- Conclusion
 - While there were higher rates of some adverse outcomes in individual PFAS **Management Areas**, we cannot rule out that these were due to confounding.
 - We think the conclusion could be strengthened by capturing what the study found, e.g. ‘Overall the study found no consistent links between PFAS contamination and the health outcomes observed. While there was weak support in these studies for a small number of health outcomes, these were not consistent across the three PFAS Management Areas.’

Thanks again for the opportunity to review these drafts and for all the efforts made by the ANU PFAS Study team. Happy to discuss any of our comments and feedback.

Kind regards,

s22 and team

s22
Environmental Health and Climate Change Policy Section
Please note – I do not work Fridays

Environmental Health and Health Protection Policy Branch | Office of Health Protection
Australian Government Department of Health
T: s22 | E s22@health.gov.au
Location: Scarborough House 5.264 | PO Box 9848, Canberra ACT 2601, Australia

The Department of Health acknowledges the traditional owners of country throughout Australia, and their continuing connection to land, sea and community. We pay our respects to them and their cultures, and to elders both past and present.

From: Sue Trevenar <susan.trevenar@anu.edu.au>
Sent: Tuesday, 14 September 2021 10:10 AM
To: s22 s22@health.gov.au
Cc: PFAS Coordination Unit <PFAS@Health.gov.au>; RSPH - PFAS Health Study <pfas.health.study@anu.edu.au>; PURDY, Lara <Lara.Purdy@health.gov.au>; LUM, Gary <Gary.Lum@health.gov.au>; s22 s22; KIRK, Martyn <martyn.kirk@anu.edu.au>
Subject: FW: Health feedback on ANU PFAS Blood Serum and Cross Sectional Survey draft reports [SEC=OFFICIAL]

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Hi s22,

Thanks for the feedback. We are incorporating your suggestions into the reports and are hoping to finalise all feedback by early next week. We will complete another internal review before submitting final versions to you.

We wanted to check if there was any additional feedback on the Data Linkage Report, specifically the Plain Language Summary.

Kind regards,
Sue

From: s22 s22@health.gov.au
Sent: Friday, 10 September 2021 4:15 PM
To: Martyn Kirk <martyn.kirk@anu.edu.au>; Sue Trevenar <susan.trevenar@anu.edu.au>; RSPH - PFAS Health Study <pfas.health.study@anu.edu.au>

Cc: PURDY, Lara <Lara.Purdy@health.gov.au>; Gary Lum <Gary.Lum@health.gov.au>; s22
s22; PFAS Coordination Unit <PFAS@Health.gov.au>

Subject: Health feedback on ANU PFAS Blood Serum and Cross Sectional Survey draft reports [SEC=OFFICIAL]

Dear Martyn,

Thank you for all the work you and the team have put into these reports. Please find below our consolidated comments and feedback on the Blood Serum and Cross Sectional Survey draft reports. Please also find attached, comments and feedback in track changes from our Communications team on the two corresponding summaries.

Happy to make a time to meet with the team to discuss once you've had a read through if you think this would be beneficial. Please note we will send comments on the final Data Linkage Report shortly.

s22

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Many thanks again for the opportunity to review these reports.

Kind regards,

s22 and team

s22
Environmental Health and Climate Change Policy Section
Please note – I do not work Fridays

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Australian Government Department of Health
T: s22 | E: s22@health.gov.au
Location: Scarborough House 5.264 | PO Box 9848, Canberra ACT 2601, Australia

The Department of Health acknowledges the traditional owners of country throughout Australia, and their continuing connection to land, sea and community. We pay our respects to them and their cultures, and to elders both past and present.

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s22

From: s22
Sent: Friday, 13 August 2021 1:15 PM
To: KIRK, Martyn
Cc: RSPH - PFAS Health Study; Sue Trevenar; Rosemary Korda @ Anu; Hsei Di Law; s22; LUM, Gary; PURDY, Lara
Subject: RE: Draft PFAS Data Linkage Report for departmental review [SEC=OFFICIAL]

Dear Martyn,

Thank you for providing the initial draft of the Data Linkage Study Report for our review and comment. You and the team have done a terrific job to develop a thorough draft with good readability and effective use of graphs, tables and text to communicate complex results through a variety of modes. We thought that the format breaks up the information well with the use of figures and visuals to support the text.

As mentioned previously, it is very helpful to be able to get across the data content early and the presentations you gave us, as well as this draft, have really helped. Noting that the editing process is still underway, we provide the following comments for your consideration.

- It would be good to give the context for why/how the three 'PFAS management areas' were used. For example, a brief statement about why the investigation areas of RAAF Base Williamtown, NSW and Army Aviation Centre, Oakey, QLD and RAAF Base Tindal, Katherine, NT, were used in the study. Consideration should also be given to the term used for these areas and consistency.
- Some of the statistical terms could be better explained, noting we haven't seen the plain language summary yet, it would be good to explain in simple terms things like Relative Risk and how this compares to the crude numbers and terms like Person-years for example.
- The value of having the three different exposure sites and the importance of looking across the three for consistency could be better highlighted and also drawn out earlier in the report. Similarly the report would be improved through greater consistency in discussion and analysis of confounding factors.
- We suggest that consideration be given to bringing the final results summary paragraph to the beginning of each study section so that the key findings are highlighted upfront. As individuals may focus only on these key findings it may be useful to include when and why a particular town is not included in a set of key findings.
- The Voluntary Indigenous Identifier coverage statistics could be updated, although this might depend on when the data was drawn for analysis. Replacing the sentence on coverage (info box 4) with the current stats would read:
 - By March 2021, about 873,000 people were enrolled on the VII database. This represents 75% of the estimated total population of Aboriginal and Torres Strait Islander people in Australia (Department of Health, 2021).
- We suggest a small edit on page 43 (note page numbers throughout are from the pdf provided) of Study 2 on Childhood Development Outcomes to clarify as follows: "Of particular note was the higher absolute risks of vulnerability in all domains in the NT and QLD study populations (*both in exposed and comparison areas*)."
- On page 46 and 47 in Study 3 on cancer and cause-specific mortality outcomes it might be worth explaining somewhere why the candidate cancers and outcomes were chosen (i.e. biological plausibility, literature associating them with PFAS etc).
- Data on prostate, kidney and lung cancers and still births need to be carefully explained. For example, why results may look very 'high' but a conclusion is drawn that a link cannot be made to PFAS. We are concerned that as it reads, without further explanation, communities may focus on these figures resulting in undue alarm. We also note that table 10 indicates that higher than expected numbers of all but one specified cancer were observed in Katherine, and across all investigation areas higher than expected incidents of all cancers were seen (pages 54 and 55). We think these numbers could be better explained, as they will be of particular interest to communities. As it reads, not being able to draw clear conclusions about the direct link with PFAS seems contrary to the data in table 10 for example.
- The wording of some paragraphs could be reframed. For example, the first paragraph on p.64, it would be useful to include some of the qualifiers in the first sentence rather than leaving the reassurance statement to the last sentence. We suggest something could be added to the conclusion on page 64 for sensitivity which acknowledges that while the study found that there was not adequate evidence to support a causal relationship with adverse outcomes and living in PFAS management areas, communities are likely to be concerned about the adverse outcomes such as still birth and risk of vulnerability in children in Oakey regardless of the likely cause.

- Where current evidence has suggested associations which are not consistently found across the investigation areas it would be beneficial if an explanation or discussion is provided each time, as currently this only occurs in some instances.
- Findings such as those contained in the 5th paragraph of p. 65, as well as 'consistency of findings with other studies' (p.65-6), and conclusion (p.66) are key in terms of messaging but at the moment, get a bit buried. We hope to see these findings given prominence in the executive summary, and the summary/discussion in each of the three sections could also highlight these sentiments more.
- The conclusion lightly touches on how the study contributes to the knowledge in this space but we would like to see this better articulated to highlight the significance of 'null findings' and the importance of this data being consistent with known associations and supporting current understanding etc. Expanding on what this study tells us with reference to the broader context, and why was it worthwhile doing. This will help readers better see the value of the study's findings.
- In anticipation of the executive summary, we hope that this clearly articulates that the study is consistent (or at least not inconsistent) with other international studies in not identifying any conclusive disease causation role for the exposure to the PFAS species commonly found in the exposure pathways in Australia. It would be beneficial if the value of this study is demonstrated early in that it provides a level of health assurance that while we take a precautionary approach, residents of the exposure sites and Australians in general are not in any immediate danger. Also worth noting that this study also provides a good reference point for the rest of Australia including its off shore territories.

We look forward to reviewing further drafts and receiving the remaining draft reports. I also note that we are meeting on Monday and we are happy to discuss these comments further then or as you are amending.

Kind regards,

s22

From: Martyn Kirk <martyn.kirk@anu.edu.au>

Sent: Tuesday, 27 July 2021 10:20 PM

To: s22 s22 @health.gov.au; s22 s22 @health.gov.au; LUM, Gary <Gary.Lum@health.gov.au>

Cc: RSPH - PFAS Health Study <pfas.health.study@anu.edu.au>; Sue Trevenar <susan.trevenar@anu.edu.au>;

Rosemary Korda @ Anu <rosemary.korda@anu.edu.au>; Hsei Di Law <Hsei-di.Law@anu.edu.au>

Subject: Draft PFAS Data Linkage Report for departmental review

REMINDER: Think before you click! This email originated from outside our organisation. Only click links or open attachments if you recognise the sender and know the content is safe.

Hi s22 and Gary,

please find attached a first draft of the PFAS Health Study data linkage report for departmental review. The draft report is at a medium stage of drafting, but we don't expect the results or our interpretation to change markedly between this and the final version. In reviewing the document, I would spend less time on the grammar and style and focus on the bigger picture results.

Please note, we are yet to do the following:

1. Plain language and executive summaries
2. Front-end material (abbreviations, glossary etc)
3. Reporting on sensitivity analyses for Study 3 (cancer and mortality outcomes)

We have sent the draft report out to the PFAS Health Study team for review today. They will give us feedback within the next two weeks. After incorporating feedback we will send it through to the editor and complete final formatting and editing.

We will look forward to hearing back from you.

Warm regards

Martyn

Professor Martyn Kirk
National Centre for Epidemiology and Population Health
The Australian National University

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s22

From: s22 s22 @industry.gov.au>
Sent: Monday, 26 November 2018 11:15 AM
To: s22
Cc: s22 ; Lindsey Mackay; s22 @measurement.gov.au
Subject: RE: SQ18-001272.docx (NMI comments) [DLM=For-Official-Use-Only]
Attachments: SQ18-001272 Question response NMI.DOCX

Dear s22

Comments from NMI colleagues attached. NMI's testing is ISO17025 accredited and we've tried to emphasise that here, rather than ISO15189.

Lindsey and s22 are copied so you can email them directly with any follow-up questions, given your timeline is probably tight.

Best wishes

s22

NMI Canberra

s22

s22

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From: s22 [mailto:s22 @health.gov.au]
Sent: Friday, 23 November 2018 5:26 PM
To: s22
Cc: s22
Subject: SQ18-001272.docx [SEC=UNCLASSIFIED]

Hi s22,

Thanks for the chat before.

Please find attached the QoN with the proposed answer for NMI in red.

As discussed, if I could have it back by Monday please, that would be much appreciated.

Thanks again

s22

s22

Director | Global Health Protection & Environmental Health Coordination
 Health Protection Policy Branch | Office of Health Protection
 Department of Health | s22 | s22
 s22 @health.gov.au

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From: s22 s22 @industry.gov.au>
Sent: Friday, 19 October 2018 12:53 PM
To: s22
Subject: RE: SMH article on PFAS blood testing [DLM=For-Official-Use-Only]

Thanks s22

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From: s22 [mailto:s22 @health.gov.au]
Sent: Friday, 19 October 2018 12:52 PM
To: s22 s22 @industry.gov.au>
Subject: FW: SMH article on PFAS blood testing [SEC=UNCLASSIFIED]

Hi s2

FYI this will be coming to you shortly through Dept of an Industry.

I am out of the office at the moment but will touch base with you when I get back shortly.

Cheers
s22

s22
Director, GHPEHC
Health Protection Policy Branch
Office of Health Protection
Department of Health
s22

Sent with BlackBerry Work
(www.blackberry.com)

From: News <News@health.gov.au>
Date: Friday, 19 Oct 2018, 12:11
To: s22 s22 @health.gov.au>
Cc: News <News@health.gov.au>
Subject: FW: FW: SMH article on PFAS blood testing [SEC=UNCLASSIFIED]

Should we be answering this or Industry? And are those TPs you sent the response? Who is the relevant minister also ?

K

s22
Media Adviser
Department of Health inc the TGA
Aged Care
Office of Sport
T: s22 Mobile: s22
news@health.gov.au

From: s11C
Sent: Friday, 19 October 2018 11:31 AM
To: Communications@measurement.gov.au; News
Subject: Fwd: FW: SMH article on PFAS blood testing [SEC=UNCLASSIFIED]

Hi,

In regards to the below email could I please have a response by the Department of Health and NMI by close of business today.

- When did NMI identify the "error" referred to in the email? How was the error discovered? What was the error?
- When did NMI inform the client about the error? When did it inform Laverty?
- What action has been taken in relation to the employee who made the error? How has NMI revised its processes?
- What is the correct PFHxS result for the client according to the sample taken by Laverty?
- Did NMI had any contact from the Department of Health or Department of Premier and Cabinet or Department of Defence or any other relevant third party prior to its identification of the error?

Cheers
s11C

From: s22 s22
Date: 18 October 2018 at 8:21:21 am AEDT
To: s11C
Subject: SMH article on PFAS blood testing [SEC=UNCLASSIFIED]

Good morning s11C ,

I would be grateful if you could please pass on the following information to the CRG members.

- On 13 October 2018, the Sydney Morning Herald published an article questioning the reliability of PFAS blood testing. (<https://www.smh.com.au/national/toxic-chemical-willamtown-tests-health-defence-20181012-p509e8.html>)
- The National Measurement Institute (NMI) has advised that there was an error in its report to the client, Laverty Pathology, for the PFHxS result reported in the media. This reporting error has since been rectified. NMI has also advised that this was the only error in that particular report, and have since checked and can confirm that all other PFAS serum reports to Laverty in 2018 are correct. NMI believes the reporting issue was the result of a one-off human error, and not associated with the quality of its chemical analysis.
- Please note that all chemical analyses (including the PFAS serum test) have a degree of measurement uncertainty. Two tests taken from the same patient sample may report levels that differ by plus or minus 20% or more as a result of the test methodology.
- Testing for the Australian Government's Voluntary Blood Testing Program is conducted by Sullivan Nicolaides Pathology, a Sonic Healthcare laboratory. Sullivan Nicolaides Pathology is a nationally accredited laboratory for the testing of perfluorinated compounds in human serum samples. As part of this accreditation, Sullivan Nicolaides Pathology complies with all relevant testing regulations including participation in external proficiency testing programs and the use of externally certified standard reference materials. Comprehensive quality control processes are in place to ensure the reliability of the results provided to all patients. This reliability includes calculating the measurement uncertainty for an analysis result.

Cheers
s22

s22

Director | Global Health Protection & Environmental Health Coordination
 Health Protection Policy Branch | Office of Health Protection
 Department of Health | s22 | s22
 s22

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--
 s11C

Investigative Journalist

s11C

Level 4 | One Darling Island Rd | Pyrmont | Sydney | 2009

s11C [@fairfaxmedia.com.au](mailto:info@fairfaxmedia.com.au) | www.fairfaxmedia.com.au | [Subscribe to the SMH](#)



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s22

From: s22 s22 @industry.gov.au>
Sent: Friday, 19 October 2018 2:09 PM
To: s22
Subject: RE: SMH article on PFAS blood testing [DLM=For-Official-Use-Only]

Dear s22

We're clearing some text within NMI on the assumption that a response will be provided, but haven't yet gone to our media team with it.

Here's the draft text, any feedback welcome – and I realise you're out of office.

-When did NMI identify the "error" referred to in the email?

NMI analysts identified the error on Monday 15 October.

How was the error discovered?

NMI analysts checked the specific test data mentioned in the SMH report of 13 October to confirm that it had been correctly reported.

What was the error?

The test for PFHxS involves analysis of branched and linear isomers. Analysts manually integrate the isomer peaks from instrument chromatographs to obtain the value of PFHxS. Human error in carrying out the integration led to the incorrect value for branched PFHxS being determined and recorded.

-When did NMI inform the client about the error? When did it inform Laverty?

NMI's client is Laverty Pathology and contacted Laverty on Monday 15 October 2018.

-What action has been taken in relation to the employee who made the error?

No action has been taken in relation to the employee who made the error. The employee informed Laverty that they would speak directly to the patient if requested.

How has NMI revised its processes?

NMI has applied its standard approach to improving its processes in response to an identified error. An internal Corrective Action Report has been raised and has determined that:

- The error was not a systematic error (i.e. it was a one-off human error only occurring for this sample).
- The identification of PFHxS isomers from instrument read-outs is done manually but is normally checked by the initial analyst and the checking analyst.
- In this case it was missed by both analysts, resulting in the reporting of a higher PFHxS value.
- All data provided by NMI to Laverty in 2018 have been checked and no similar errors were found. Analyses done prior to 2018 used a different method that did not involve the manual integration step.
- NMI updated its checking procedure to specifically check on the PFAS isomer identifications on Monday 15 October.

-What is the correct PFHxS result for the client according to the sample taken by Laverty?

Laverty Pathology is the owner of the analysis data and should be approached for this information.

-Did NMI had any contact from the Department of Health or Department of Premier and Cabinet or Department of Defence or any other relevant third party prior to its identification of the error?

NMI identified the error on its own accord on 15 October, when its analysts checked the specific test data mentioned in the SMH report of 13 October to confirm that it had been correctly reported.

After identifying the error, NMI informed its client, Laverty Pathology of the error, and the Australian Government Department of Health.

Over recent years, NMI has been in contact with the Australian Government Department of Health, the NSW Department of Premier and Cabinet (the Chief Scientist of NSW), and the Department of Defence.

Best wishes

s2

NMI Canberra

s22

s22

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s22

From: s22 s22 @industry.gov.au>
Sent: Wednesday, 17 October 2018 6:02 PM
To: s22
Subject: RE: Media mention of NMI and PFAS [DLM=For-Official-Use-Only]

Thanks s22

Likewise, much appreciated.

s22

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From: s22 [mailto:s22 @health.gov.au]
Sent: Wednesday, 17 October 2018 5:57 PM
To: s22 s22 @industry.gov.au>
Cc: Lindsey Mackay <Lindsey.Mackay@measurement.gov.au>; s22
 s22 @measurement.gov.au>
Subject: RE: Media mention of NMI and PFAS [DLM=For-Official-Use-Only]

Thanks s22 – much appreciated.

Yes we will provide these to the IDC and the other stakeholders listed below.

Cheers

s22

From: s22 [mailto:s22 @industry.gov.au]
Sent: Wednesday, 17 October 2018 5:56 PM
To: s22
Cc: Lindsey Mackay; s22 @measurement.gov.au
Subject: FW: Media mention of NMI and PFAS [DLM=For-Official-Use-Only]

Dear s22

Here's our suggested, cleared edits, apologies for the formatting – see below.
 Will you provide them to the IDC?

I'll run our Senate Estimates brief past you hopefully tomorrow.

Best wishes

s22

NMI Canberra

s22

s22

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From: s22 [mailto:s22@health.gov.au]
Sent: Wednesday, 17 October 2018 5:21 PM
To: s22 s22@industry.gov.au>
Subject: RE: Media mention of NMI and PFAS [DLM=For-Official-Use-Only]

Hi s22

As discussed, dot points to go to:

- PFAS Taskforce for inclusion in weekly report to Ministers.
- PFAS IDC
- CRG
- Defence and HNE NSW as they are in Williamstown tomorrow.

Happy for you to amend accordingly.

-
- On 13 October 2018, the Sydney Morning Herald published an article questioning the reliability of PFAS blood testing. <https://www.smh.com.au/national/toxic-chemical-williamtown-tests-health-defence-20181012-p509e8.html>
 - The National Measurement Institute (NMI) has advised that there was an error in its report to the client, Lavery Pathology for the PFHxS result reported in the media. This reporting error has since been rectified. NMI has also advised that this was the only error in that particular report, and have since checked and can confirm that all other PFAS serum reports to Lavery to ensure they in 2018 are correct. NMI believes the reporting issue was the result of a one-off human error, and not associated with the quality of its chemical analysis.
 - Please note that [all chemical analyses \(including the PFAS serum test\) have a degree of measurement uncertainty](#). Two tests taken from the same patient sample may report levels that differ by plus or minus 20% or more as a result of the test methodology.
 - Testing for the Voluntary Blood Testing Program is conducted by Sullivan Nicolaides Pathology, a Sonic Healthcare laboratory. Sullivan Nicolaides Pathology is a nationally accredited laboratory for the testing of perfluorinated compounds in human serum samples. As part of this accreditation Sullivan Nicolaides Pathology complies with all relevant testing regulations including participation in external proficiency testing programs and the use of externally certified standard reference materials. Comprehensive quality control processes are in place to ensure the reliability of the results provided to all patients. [This reliability includes calculating the measurement uncertainty for an analysis result](#).

 Cheers
 s22

From: s22 [mailto:s22@industry.gov.au]
Sent: Tuesday, 16 October 2018 10:10 AM
To: s22
Subject: RE: Media mention of NMI and PFAS [DLM=For-Official-Use-Only]

Thanks s22

s22 or s22

s2
 ~

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From: s22 [mailto:s22@health.gov.au]
Sent: Tuesday, 16 October 2018 10:05 AM
To: s22 s22@industry.gov.au>
Cc: Lindsey Mackay <Lindsey.Mackay@measurement.gov.au>; NORRIS, Sarah <Sarah.Norris@health.gov.au>
Subject: RE: Media mention of NMI and PFAS [DLM=For-Official-Use-Only]

Hi s22

Thanks for your email.

I will call you this afternoon to discuss.

Cheers

s22

s22

Director | Global Health Protection & Environmental Health Coordination
 Health Protection Policy Branch | Office of Health Protection
 Department of Health | s22 | s22
 s22 @health.gov.au

From: s22 [mailto:s22@industry.gov.au]
Sent: Monday, 15 October 2018 6:25 PM
To: s22
Cc: Lindsey Mackay; NORRIS, Sarah
Subject: Media mention of NMI and PFAS [DLM=For-Official-Use-Only]

Dear s22

Please see below for some information regarding weekend media reports over the weekend, regarding NMI PFAS serum analyses. I understand you'd discussed the journalist's request on 3-4 October with Dr Lindsey Mackay.

We have informed our Minister's office (Minister Karen Andrews), the department's media team, and have contacted Laverty Pathology, our client for PFAS serum tests. Grateful if you could contact me or Lindsey about next steps.

- NMI was mentioned in a media report (<https://www.smh.com.au/national/toxic-chemical-williamtown-tests-health-defence-20181012-p509e8.html>) on the weekend regarding testing of fire-fighting foam chemicals (PFAS) in blood serum of people living near potentially contaminated Defence sites.
- The Sydney Morning Herald (SMH) report suggests the Government's contractor for delivering serum analyses (Sonic Healthcare) is reporting lower levels of the chemical than when tests are done by NMI on behalf of a different pathology provider, Laverty Pathology. Data comparing PFAS serum levels for two people when tested by Sonic or Laverty/NMI were mentioned in the article.
- NMI has checked its data for the media's quoted result and identified an error in its report to the client, Laverty Pathology. However, it is important to note that the NMI's report to Laverty consisted of 14 different chemical tests, only one of which was incorrectly reported. The SMH journalists have singled out this data point to suggest that the Government's testing program may be unreliable. We have checked all 2018 PFAS serum reports to Laverty and they are correct, with this single exception.
- NMI is implementing checks and process changes to ensure the reliability of its data analysis and reporting for the PFAS tests. NMI believes the issue was the result of a one-off human error, and not associated with the quality of its chemical analysis.

Thanks

Best wishes

s2

s22

Assistant Manager, NMI Canberra
 National Measurement Institute
 Department of Industry, Innovation and Science
 P: s22 | M: s22
 s22 @industry.gov.au

Level 6.052C, Industry House
10 Binara Street, Canberra City ACT 2601
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ABN 74 599 608 295

National Measurement Institute | www.measurement.gov.au
Department of Industry, Innovation and Science | www.industry.gov.au



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s22

From: s22 s22 @industry.gov.au>
Sent: Thursday, 18 October 2018 4:47 PM
To: s22
Subject: RE: s11C from SMH (re PFAS) [DLM=For-Official-Use-Only]

Thanks s22

Much obliged

s2

NMI Canberra

s22

s22

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From: s22 [mailto:s22 @health.gov.au]
Sent: Thursday, 18 October 2018 4:45 PM
To: s22 s22 @industry.gov.au>
Cc: s22 s22 @health.gov.au>; PFAS Coordination Unit <PFAS@Health.gov.au>
Subject: FW: s11C from SMH [SEC=UNCLASSIFIED]

Hi s22

Just a heads up that s11C from SMH just called me regarding the blood testing article.

I referred her to my media team but NMI may get contacted as well.

Someone has provided her a copy of those dot points that we wrote up last night.

- On 13 October 2018, the Sydney Morning Herald published an article questioning the reliability of PFAS blood testing. (<https://www.smh.com.au/national/toxic-chemical-williamtown-tests-health-defence-20181012-p509e8.html>)
- The National Measurement Institute (NMI) has advised that there was an error in its report to the client, Lavery Pathology, for the PFHxS result reported in the media. This reporting error has since been rectified. NMI has also advised that this was the only error in that particular report, and have since checked and can confirm that all other PFAS serum reports to Lavery in 2018 are correct. NMI believes the reporting issue was the result of a one-off human error, and not associated with the quality of its chemical analysis.
- Please note that all chemical analyses (including the PFAS serum test) have a degree of measurement uncertainty. Two tests taken from the same patient sample may report levels that differ by plus or minus 20% or more as a result of the test methodology.
- Testing for the Australian Government's Voluntary Blood Testing Program is conducted by Sullivan Nicolaides Pathology, a Sonic Healthcare laboratory. Sullivan Nicolaides Pathology is a nationally accredited laboratory for the testing of perfluorinated compounds in human serum samples. As part of this accreditation, Sullivan Nicolaides Pathology complies with all relevant testing regulations including participation in external proficiency testing programs and the use of externally certified standard reference materials. Comprehensive quality control processes are in place to ensure the reliability of the results provided to all patients. This reliability includes calculating the measurement uncertainty for an analysis result.

Cheers

s22

s22

Director | Global Health Protection & Environmental Health Coordination
 Health Protection Policy Branch | Office of Health Protection
 Department of Health s22 | s22
 s22 @health.gov.au

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s22

From: s22 s22 @industry.gov.au>
Sent: Friday, 19 October 2018 4:05 PM
To: s22
Cc: Warrington, Bruce - NMI; Lindsey Mackay; s22 ;
 s22 @measurement.gov.au
Subject: NMI responses to SMH questions on PFAS blood testing [DLM=For-Official-Use-Only]

Dear s22

Here are the responses cleared by Bruce Warrington, NMI CEO, and Lindsey Mackay, GM Chemical and Biological Metrology Branch. The text has been only slightly amended compared to the earlier draft.

FYI - Bruce has asked me to also send an email to inform Mary Ann O'Loughlin, our Deputy Secretary, and Jane Urquhart, SCP division.

Happy to discuss.

Best wishes

s22

NMI Canberra

s22

s22

-When did NMI identify the "error" referred to in the email?

NMI analysts identified the error on Monday 15 October.

How was the error discovered?

NMI analysts checked the specific test data mentioned in the SMH report of 13 October to confirm that it had been correctly reported.

What was the error?

This was a human error related to the data analysis. The test for PFHxS involves analysis of branched and linear isomers. Analysts manually integrate the isomer peaks from instrument chromatographs to obtain the value of PFHxS. Human error in carrying out the integration led to the incorrect value for branched PFHxS being determined and recorded.

-When did NMI inform the client about the error? When did it inform Laverty?

NMI's client is Laverty Pathology and NMI contacted Laverty on Monday 15 October 2018.

-What action has been taken in relation to the employee who made the error?

No action has been taken in relation to the employee who made the error. NMI has a quality system that responds to issues of this nature, where the focus is to look at causes, find solutions, and improve processes so as to eliminate errors.

How has NMI revised its processes?

NMI has applied its standard approach to improving its processes in response to an identified error. An internal Corrective Action Report has been raised and has determined that:

- The error was not a systematic error (i.e. it was a one-off human error only occurring for this sample).
- The identification of PFHxS isomers from instrument read-outs is done manually but is normally checked by the initial analyst and the checking analyst. In this case, the error was not detected in internal process checks, resulting in the reporting of a higher PFHxS value.
- All data provided by NMI to Laverty Pathology in 2018 have been checked and no similar errors were found. Analyses done prior to 2018 used a different method that did not involve the manual integration step. The current method provides more information but is more complex.
- NMI updated its checking procedure to specifically check on the PFAS isomer identifications on Monday 15 October.

-What is the correct PFHxS result for the client according to the sample taken by Laverty?

Laverty Pathology is the owner of the analysis data and should be approached for this information.

-Did NMI had any contact from the Department of Health or Department of Premier and Cabinet or Department of Defence or any other relevant third party prior to its identification of the error?

NMI identified the error on its own accord on 15 October 2018, when its analysts checked the specific test data mentioned in the SMH report of 13 October to confirm that it had been correctly reported.

After identifying the error, NMI informed its client, Laverty Pathology of the error, and the Australian Government Department of Health.

NMI works together with the Australian Government Department of Health, the NSW Department of Premier and Cabinet (the Chief Scientist of NSW), and the Department of Defence and is in regular contact on a range of issues.

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s22

From: s22
Sent: Thursday, 18 October 2018 8:54 PM
To: s22 @measurement.gov.au
Subject: RE: s11C from SMH may contact dept or NMI about PFAS [DLM=For-Official-Use-Only]

Hi s22 ,

It's ok I don't need to know the result. I understand that the correct result was comparable to the result reported by the Sonic lab.

These reporting errors can happen so don't worry too much about it. The main thing is that the patient now has the corrected report.

I haven't yet heard anything from the Defence Williamstown consultation today.

Talk soon

s22

s22

Director, GHPEHC
 Health Protection Policy Branch
 Office of Health Protection
 Department of Health
 s22

Sent with BlackBerry Work
 (www.blackberry.com)

From: s22 s22 @measurement.gov.au>
Date: Thursday, 18 Oct 2018, 16:56
To: s22 s22 @health.gov.au>
Subject: FW: s11C from SMH may contact dept or NMI about PFAS [DLM=For-Official-Use-Only]

Hi s22 ,

I have been trying to get confirmation from Laverty to release the corrected PFHxS result to you. The latest correspondence was that the patient was not 'terribly concerned' but I am not sure that is a confirmation as everything is second hand through Laverty. Do you know the outcome of the meeting in Williamstown today? The corrected result is comparable to the Sonic result.

Regards

s22 *(a very embarrassed one-off human)*

s22

Manager, Australian Ultra Trace Laboratory, Chemical and Biological Metrology
 P: s22 | M: s22 | F: s22
 s22 @measurement.gov.au

National Measurement Institute
 105 Delhi Rd, North Ryde, NSW 2113, Australia

GPO Box 2013, Canberra, ACT 2601, Australia
ABN 74 599 608 295

National Measurement Institute | www.measurement.gov.au



**National
Measurement
Institute**

The department acknowledges the traditional owners of the country throughout Australia and their continuing connection to land, sea and community. We pay our respect to them and their cultures and to the elders past and present.

From: s22
Sent: Thursday, 18 October 2018 4:50 PM
To: Mackay, Lindsey <Lindsey.Mackay@measurement.gov.au>; s22
s22 @measurement.gov.au>; MediaTeam <MediaTeam@industry.gov.au>; s22
s22 @measurement.gov.au>
Cc: s22 s22 @industry.gov.au>; s22 s22 @industry.gov.au>
Subject: FW: s11C from SMH may contact dept or NMI about PFAS [DLM=For-Official-Use-Only]

Dear Colleagues

Please note that s11C from the Sydney Morning Herald is aware of NMI's corrected PFAS test result and may contact NMI or the dept.

Best wishes

s2

NMI Canberra

s22

s22

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From: s22 [<mailto:s22@health.gov.au>]
Sent: Thursday, 18 October 2018 4:45 PM
To: s22 s22 @industry.gov.au>
Cc: s22 s22 @health.gov.au>; PFAS Coordination Unit <PFAS@Health.gov.au>
Subject: FW: s11C from SMH [SEC=UNCLASSIFIED]

Hi s22

Just a heads up that s11C from SMH just called me regarding the blood testing article.

I referred her to my media team but NMI may get contacted as well.

Someone has provided her a copy of those dot points that we wrote up last night.

- On 13 October 2018, the Sydney Morning Herald published an article questioning the reliability of PFAS blood testing. (<https://www.smh.com.au/national/toxic-chemical-williamstown-tests-health-defence-20181012-p509e8.html>)
- The National Measurement Institute (NMI) has advised that there was an error in its report to the client, Lavery Pathology, for the PFHxS result reported in the media. This reporting error has since been rectified. NMI has also

advised that this was the only error in that particular report, and have since checked and can confirm that all other PFAS serum reports to Lavery in 2018 are correct. NMI believes the reporting issue was the result of a one-off human error, and not associated with the quality of its chemical analysis.

- Please note that all chemical analyses (including the PFAS serum test) have a degree of measurement uncertainty. Two tests taken from the same patient sample may report levels that differ by plus or minus 20% or more as a result of the test methodology.
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Cheers

s22

s22

Director | Global Health Protection & Environmental Health Coordination

Health Protection Policy Branch | Office of Health Protection

Department of Health s22 | s22

s22 [@health.gov.au](mailto:s22@health.gov.au)

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