

interpretation of any findings of an independent assessment, and to assist with risk communication to the community of Jervis Bay under the existing cost-recovery model.”

As I understand it, Geoff has already conveyed at least part of this message to DIRD and/or defence (about the need to meet). The second message needs to be communicated as soon as possible, either by email or at the meeting. Geoff please advise how you wish to proceed.


Paul

Dr Paul Kelly

ACT Chief Health Officer & Deputy Director-General |

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ACT
Government
Health



From: Heckenberg, Mark

Sent: Friday, 5 August 2016 1:56 PM

To: Jones, Greg; Power, David

Cc: Kelly, Paul (Health)

Subject: FW: EPA PFC Samples [SEC=UNCLASSIFIED]

Hi Greg and David,

To keep you informed please find below and attached the latest correspondence in relation to the PFAS issues in JBT.

Whilst we (as the EPA) weren't asked to respond to [REDACTED] request below I think it prudent that we make our position clear to DIRD – that is reiterate my comments to [REDACTED] to DIRD.

In the interests of transparency I also concur with [REDACTED] comment that the findings of our assessment be communicated to the Community by DIRD as soon as possible.

I would appreciate your comments/direction.

Regards

Mark Heckenberg | Manager, Contaminated Sites | Environmental Quality

Phone: 02 6207 2151 | Email: mark.heckenberg@act.gov.au

Construction, Environment and Workplace Protection | Access Canberra | ACT Government

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From: Kelly, Paul (Health)

Sent: Friday, 5 August 2016 11:56 AM

To: Heckenberg, Mark <Mark.Heckenberg@act.gov.au>

Cc: Rutledge, Geoffrey <Geoffrey.Rutledge@act.gov.au>; Peffer, Dave <Dave.Peffer@act.gov.au>

Subject: RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Hi Mark,

I'm dealing with a range of more urgent matters at the moment and seriously understaffed due to illness and leave, so I haven't yet responded to this email.

I just tried to call you, but in short, I am totally in agreement with your stance. By way of contrast: NSW and Williamtown: 3,550 page report by an independent environmental consultant; Qld and Oakey: international environmental campaigner and class actions; Jervis bay: a ½ page email by a Commonwealth public servant on their last day on the job. Whilst this information is helpful, it is not the level of detail required for a human health risk assessment.

Defence needs to commission and pay for an independent investigation as you have suggested. DIRD needs to coordinate the messaging with the community. ACT EPA and ACT Health need sufficient input into the framing of the consultancy, and reasonable opportunity to review the findings and any recommendations.

I reiterate that we need urgent action on the part of DIRD/Defence

Geoff, following our phone-call a week ago, where are we up to with:

1. Briefing to Chief and Health Mins
2. Arrangement for meeting with DIRD/Defence?

I don't want to talk at cross-purposes here, so who should respond to the email below from DIRD?
I will reiterate that at the meeting which I attended in Jervis Bay now almost 2 months ago (19 May), all present including me assured the Wreck Bay Community council that we would keep them informed about the investigation and any potential environmental contamination as well as potential health concerns.

Whilst we (as ACT Government) need to be very clear that we are there to assist and advise, I do now strongly feel a duty of care as a health professional in addition to our long-held position as public servants to replicate as closely as possible what happens in the ACT when dealing with issues at Jervis Bay.

I am getting increasingly uncomfortable about reputational risk to ACT government and to me personally.

Paul

Dr Paul Kelly

ACT Chief Health Officer & Deputy Director-General |

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ACT
Government
Health



From: Heckenberg, Mark

Sent: Friday, 5 August 2016 7:31 AM

To: Kelly, Paul (Health)

Subject: RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Good morning Paul,

So as to perhaps inform your response from the EPA's perspective, given the nature and complexity of contaminated sites human health risk assessments, which I feel this falls into, the EPA would require that it be undertaken by a suitably qualified environmental consultant independent of stakeholders. This assessment would then need to be independently audited by an EPA approved contaminated land auditor with the auditor presenting their findings as to the adequacy of the assessment, the level of risk the identified contamination poses and the suitability of the site for the continued identified uses.

I appreciate that this may not be the response DIRD is after due to the potential costs, however, it would provide assurity to all stakeholders that the assessment is independent. As raised earlier, in accordance with the 'polluter pays principle', it should be Defence that commissions this assessment and audit.

Happy to discuss.

Regards Mark

Mark Heckenberg | Manager, Contaminated Sites | Environmental Quality

Phone: 02 6207 2151 | Email: mark.heckenberg@act.gov.au

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From: [REDACTED] <[REDACTED]@infrastructure.gov.au>

Sent: Thursday, 4 August 2016 5:07 PM

To: Kelly, Paul (Health) <Paul.Kelly@act.gov.au>; [REDACTED] <[REDACTED]@infrastructure.gov.au>;

Heckenberg, Mark <Mark.Heckenberg@act.gov.au>

Cc: [REDACTED] <[REDACTED]@infrastructure.gov.au>; Pengilley, Andrew (Health)

<Andrew.Pengilley@act.gov.au>; Rutledge, Geoffrey <Geoffrey.Rutledge@act.gov.au>; [REDACTED]

[REDACTED] <[REDACTED]@infrastructure.gov.au>; [REDACTED] <[REDACTED]@infrastructure.gov.au>

Subject: RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Dr Kelly

I'm writing in relation to conducting a Human Health Risk Assessment in relation to Mary Creek in the JBT.

As we had committed to do when we met, we have gone through the sources we have available on the use of Mary Creek, talking (discretely) to our people in the JBT, and looking at Defence's previous work. What we have found is below:

1. Local knowledge:

Mary Creek headwaters;

- There is little or no measurable regular activity in this area. There is insufficient water flow, depth of ponds or stream width for any type of recreational activities such as swimming etc. However, children are known to explore the bush surrounds including creek beds.

Between headwaters and ocean outfall;

- Again, depending on who you ask, there is little or no measurable activity along the creek line. Children are known to explore the area.

Mary Creek ocean outfall;

- At this point the creek widens, has a degree of depth and at times opens to the sea. The creek is used for food gathering, although not regularly, and recreational activities such as swimming and/or wading.

Note: Local knowledge can vary and be conflicting and the need for discretion makes it difficult to validate.

2. Defence

Defence has undertaken to investigate whether their previous environmental reports (e.g. Coffey Report) is supported by raw or analytical data related to human use of/exposure to the waters of Mary Creek. This research is ongoing. However, the Department's investigation into such reports that it has access to has not resulted in any information that would advance the understanding of human use of Mary Creek.

Arrangements are in place for a further, follow up round of testing of environmental waters in the JBT this month, which will give us a second set of results to look at.

We would also like to move ahead on commission a more formal risk assessment of the human health risks. This is not something we have the skills or expertise to undertake, so we will be needing to buy it in. If we were able to procure it from the ACT Government as an extension of our existing arrangements we would welcome the chance to do that – otherwise we will need to look externally. We would welcome a discussion on the best way to take this forward, including whether ACT Health may be in a position to assist.

I've copied in Geoffrey Rutledge from CMD, whose team coordinates our engagement with the ACT Government on JBT matters, just to make sure he and his team are in the loop on our discussions.

I will be finishing up in this role this week. Arrangements for my successor have not yet been confirmed, but in the meantime you may contact Sheryl Klaffer to progress the discussions.

Regards

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██████████ ██████████
██████████ ██████████ ██████████

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From: Kelly, Paul (Health) [<mailto:Paul.Kelly@act.gov.au>]

Sent: Thursday, 23 June 2016 11:34 AM

To: ██████████ ██████████ ██████████@infrastructure.gov.au>; Heckenberg, Mark <Mark.Heckenberg@act.gov.au>

Cc: ██████████ ██████████ ██████████ ██████████@infrastructure.gov.au>; ██████████ ██████████

██████████ ██████████@infrastructure.gov.au>; Pengilley, Andrew (Health) <Andrew.Pengilley@act.gov.au>

Subject: RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Colleagues,

I did manage to speak to NSW Health acting head of environmental health after our meeting yesterday, and to gather a bit more information about the scale and scope of their approach to the situation in and around Williamstown. It was a very helpful discussion.

As we briefly discussed yesterday, the key issue from a human health perspective is the exposure pathway. That is, given that we now know that there is likely to be contamination in Mary Creek in particular, regardless of level (to be determined) and given that there may be human health effects from that contamination (uncertain but possible

and definitely of concern to the community), then the missing piece is this exposure pathway. That is, how can the toxin get into a person. As we discussed yesterday, that requires some thought beyond measuring water content, though that is an important first step.

A water-borne toxin can potentially enter the body in three ways (in order of risk):

1. Drinking water
2. Eating stuff that lives in the water
3. Swimming in the water.

The first (drinking) is the most likely to lead to higher absorption, given this is a direct route and people may (should) drink several litres a day. We have established that the potable water supply is not affected, so that is a good thing. How much water is actually drunk ON A LARGE AND REGULAR BASIS from Mary Creek? I believe that is unlikely to be a big factor, but that needs to be determined with more engagement from the community than we currently have had up to now. So, a risk assessment exercise, informed by the further testing as we agreed yesterday is warranted. The second (eating aquatic animals) remains the "sleeper" for me. In Williamstown, according to my NSW Health colleague, they now have a body of knowledge about the extent of risk, including various risk profiles on different species. In general, species which live substantially in or around the sediment (recognising that this particular toxin binds with organic material) so that would (I guess, I'm not an expert on non-humans) likely include yabbies and other crustaceans, and those which are filter feeders (eg oysters and other molluscs) are the species with the highest concentrations of PFCs and therefore of highest risk to humans if consumed. NSW Health and/or EPA have tested a range of species and confirmed quite high levels in some species, and also that commercially grown oysters can quickly "purge" the toxin if removed to live in a different body of water (like they do with Hepatitis A virus for example). I don't know what species are present in Mary Creek, what levels of toxin are present or how much is ingested by which members of the community. This is the crucial missing link and where the assessment exercise will need to concentrate to be able to provide advice to the community. Essentially, **we need to talk with the community, and catch and test some aquatic species for PFOS, PFOA and PFHxS.**

The third (swimming) is really a theoretical risk as absorption of this particular toxin is probably not easy and may in fact not occur through the skin. The main risk here would be oral ingestion (mainly by kids) whilst using the water for recreation purposes.

So, there is more work to do to get to a point where we can talk about specific facts with the community and then there will be further work to do with them in relation to the testing of aquatic species and the nature/scale of use of Mary Creek. We must all realise however, that this will be a difficult task as we discussed yesterday because in these type of exercises, the facts of the hazard is usually only a very minor component, it is the outrage of the community which is the most difficult part and for this particular community there are concerns which go beyond any potential for physical health effects.

Regards,

Paul

Dr Paul Kelly

ACT Chief Health Officer & Deputy Director-General |

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 Paul Kelly - ACT CHO (@PKelly_ACTCHO) on Twitter

<http://www.health.act.gov.au/healthy-living/population-health>



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From: [REDACTED] [REDACTED] [REDACTED]@infrastructure.gov.au]

Sent: Thursday, 23 June 2016 9:27 AM

To: Heckenberg, Mark

Cc: Kelly, Paul (Health); [REDACTED]; [REDACTED]; [REDACTED]; [REDACTED]

Subject: RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Good morning Mark

Thanks for the prompt action.

Kind regards, [REDACTED]

[REDACTED]

[REDACTED], Jervis Bay Territory Administration Section

Tel: (02) 6274 7918

Department of Infrastructure and Regional Development

Location: Level 3 East, 62 Northbourne Avenue, Canberra ACT 2600
 Postal: GPO Box 594, Canberra ACT 2601

From: Heckenberg, Mark [<mailto:Mark.Heckenberg@act.gov.au>]

Sent: Thursday, 23 June 2016 7:45 AM

To: [REDACTED]

Cc: Kelly, Paul (Health)

Subject: EPA PFC Samples [SEC=UNCLASSIFIED]

Good morning All,

I have checked with the lab and can confirm that they are NATA accredited for PFC analysis of soil and water samples.

The lab is checking to see whether our May 2016 samples have been retained and I have asked for a quote for analysis against the testing method that reports the other compound Lauren and Paul made reference to yesterday (perfluorohexane sulphonate (PFHxS)).

Once I have received the quote I will forward it on along with a request that we proceed with the reanalysis of the samples.

Regards

Mark Heckenberg | Manager, Contaminated Sites | Environmental Quality

Phone: 02 6207 2151 | Email: mark.heckenberg@act.gov.au

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Erin Brockovich: Oakey groundwater contamination a huge problem

By Isobel Roe

Posted Tue 2 Aug 2016, 7:13pm

The level of toxins in groundwater in the Queensland town of Oakey is concerning and there are potentially 30 more examples of chemical contamination "out there", American consumer advocate Erin Brockovich has said.

Residents in Oakey are meeting this evening to discuss taking part in a class action against the Federal Government, following the contamination of groundwater near the Oakey Aviation Base by a toxic firefighting foam containing the chemicals PFOS and PFOA.

It followed the release of a Defence Department report released last week which showed a contamination plume under Oakey will have spread another two kilometres in 100 years.

A Senate committee earlier this year was scathing of the Department, which had known the foam to be toxic as far back as 2003.

Ms Brockovich became renowned for her investigative and legal work after taking on US company Pacific Gas and Electric over water contamination in the small town of Hinkley, California.

She has since worked with law firms leading class actions in the US against companies that have contaminated water with PFOS and PFOA.

Ms Brockovich said the level of contamination in Oakey's groundwater, caused by PFOA and PFOS, was concerning.

"The greatest gifts we have are our land, our right to clean water and our health," she said.

PFOA is the same in the US as it is here. It's toxic there, it's toxic here.

"I can't tell you what to do, I can't tell you whether to be involved in a law suit.

"People are angry, they are fearful, they don't want to believe it. What is happening here is real."

Another report from Defence detailing the health risks in Oakey will be released later this month.

'I understand what they are going through'

Ms Brockovich, who is an ambassador for lawyers looking to represent Oakey residents, said she acted as a bridge between law firms and communities.

"I understand what they're going through, and I understand their fear, and I understand they won't always come forward," she said.

Ms Brockovich said the Australian Government must acknowledge the extent of the issue.

Contamination affects several other Australian Defence bases and has prompted the Government to promise blood-testing for affected residents, but the health impacts of the chemical remain unclear.

"There's potentially 30 more Oakeys throughout Australia," Ms Brockovich said.

"It's clearly important we have this conversation and we begin to take steps on how we're going to get there, what we're going to do and what prevention measures and monitoring we can do."

"The blaming has got to stop.

"It is what it is and how will we as a country, as a Government, make it safer?"

Class action potentially a 'very big issue' for government

For the past two years, Shine Lawyers has been representing affected residents and farmers in negotiating Federal Government compensation.


But partner Peter Shannon said it was now time to get a class action together.

"When the issue first broke we acted for about 50 landholders affected directly as a result of the bore contamination," he said.

"We were instructed not to institute. We saw it also as a community issue with [a] solution requiring a community solution.

"We were involved with extensive discussions with Defence and other parties and, ultimately, we come to the conclusion that if there is going to be any kind of discipline to those discussions is if there is a time pressure."

Topics: community-and-society, law-crime-and-justice, courts-and-trials, oakey-4401

Contact 



[REDACTED]
[REDACTED]
Jervis Bay Territory Administration
Department of Infrastructure & Regional Development
GPO Box 594
Canberra ACT 2601

RE: REVISED REPORT ON PER- AND POLY-FLUORO-ALKYL SUBSTANCES WATER SAMPLING AND ANALYSIS

Dear [REDACTED],

In accordance with instructions from [REDACTED] of the Department of Infrastructure & Regional Development (DIRD) dated 13 May 2016 the ACT Environment Protection Authority (EPA) undertook discrete water sampling within the effluent, surface and ground waters of the Jervis Bay Territory on 25 May 2016. The purpose of the sampling was to ascertain whether per- and poly-fluoroalkyl substances (PFAS), most likely sourced from aqueous film forming formings (AFFF), had made their way into the receiving environment of the Jervis Bay Territory.

This report is an update of the EPA report dated 15 June 2016 following a meeting of Commonwealth and ACT Government stakeholders on the 22 June 2016.

Sampling was undertaken at the following 10 locations (see map below for details):

HMAS Creswell – (effluent and surface water samples)

1. Sewage Treatment Plant – treated effluent
2. Effluent Retention Dam – stored treated effluent
3. Spring water – surface water from natural spring adjacent to Effluent Retention Dam
4. Flat Rock Creek – tidal receiving waters adjacent to the HMAS Creswell Golf Course walk bridge.

RAN School of Ship Survivability and Safety – (surface water samples)

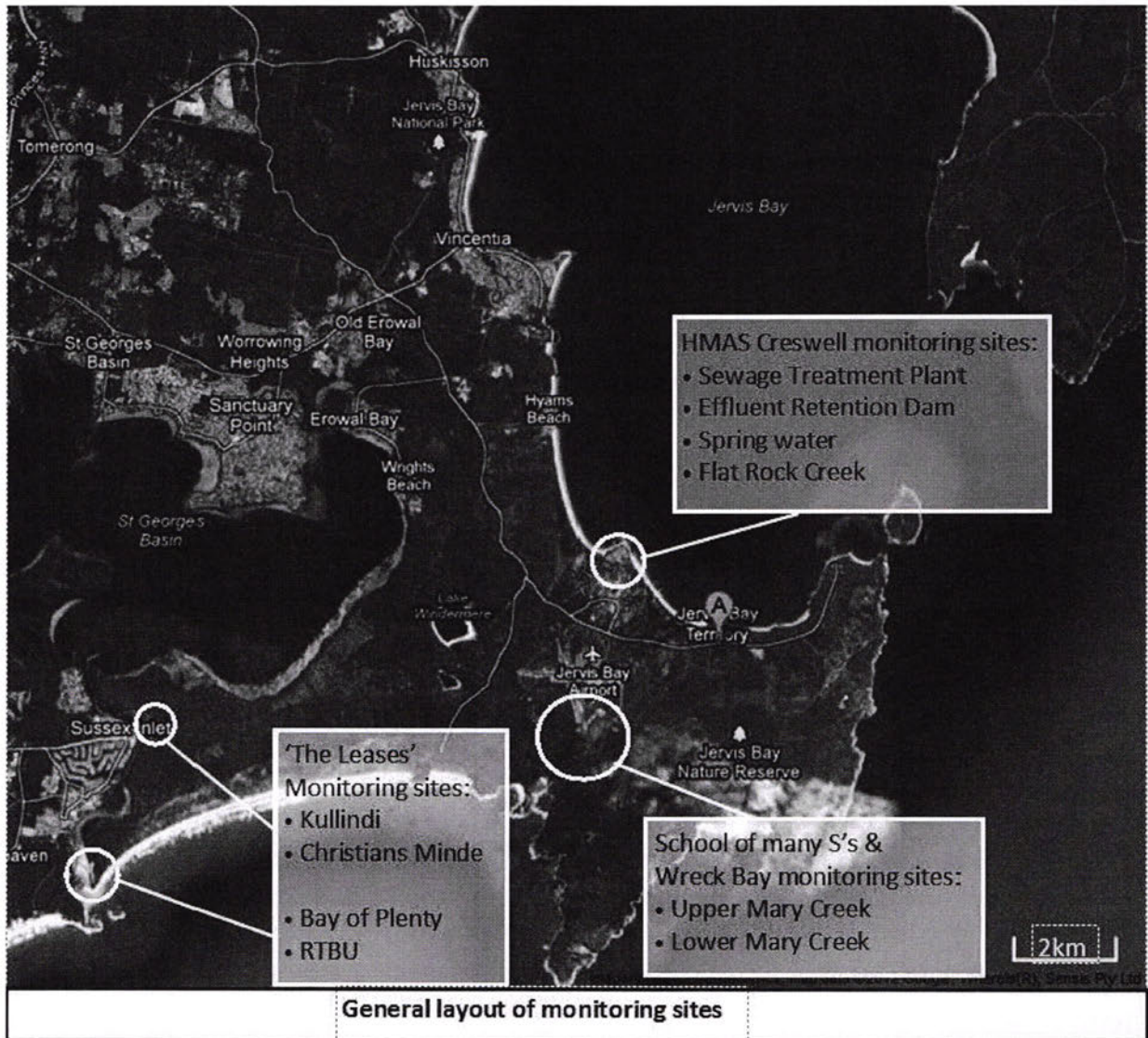
5. Upper Mary Creek – downstream of fire training facilities
6. Lower Mary Creek – off-site location adjacent to Boorarla Road crossing

Leases – (groundwater samples)

7. Christians Minde
8. Kullindi
9. RTBU
10. Bay of Plenty Cottages



Map of Sampling Locations:



General layout of monitoring sites



Methodology

Due to the potentially ubiquitous and persistent nature of PFAS pollutants sampling was undertaken at all EPA sampling locations within the Jervis Bay Territory (JBT).

Following advice from the Department of Defence¹ on the types of AFFF used within the JBT the following suite of PFAS pollutants were analysed and reported:

6:2 Fluorotelomer sulfonate (6:2 FtS)
8:2 Fluorotelomer sulfonate (8:2 FtS)
Perfluorohexane sulphonate (PFHxS)
Perfluorooctanoic acid (PFOA)
Perfluorooctane sulfonic acid (PFOS)

All samples were taken in accordance with ALS (Analytical testing laboratory) sampling requirements by an EPA Environment Protection Officer.

ALS laboratory method EP231-PFC was utilised for all non-saline water samples and method EP231-PFC-LL use for all saline water samples.

There are currently no ACT EPA or nationally adopted criteria for PFAS impacts to soil and water.

In the absence of this criteria the ACT EPA, following discussions with the Department of Infrastructure & Regional Development and other Government Stakeholders at a meeting on 22 June 2016, chose to adopt criteria from the following interim guidance documents:

- *“Defence Contamination Directive #8 Interim Screening Criteria Consistency of Toxicology or Ecotoxicology based Environmental Screening Levels for PFOS, PFOA, 6:2 FTS”*, Department of Defence 19 May 2015; and
- *“enHealth Statement: Interim national guidance on human health reference values for per- and poly-fluoroalkyl substances for use in site investigations in Australia”²*, Health Standing Committee (enHealth) of the Australian Health Protection Principal Committee, June 2016

¹ Suite of analytes updated following Government stakeholder meeting on 22 June 2016

² Whilst this guidance has not been formally released by the Commonwealth Department of Health, due to the Commonwealth Government being in caretaker period, advice has been issued that State and Territory jurisdictions should use this guidance as they see fit. (Paul Kelly, ACT Health, pers comm, 30 June 2016)

Table of Results – enHealth Interim PFAS Criteria

			Client sample ID			Effluent Retention Dam (ERD)	Lower Mary Creek	Upper Mary Creek	Flat Rock Creek	HMAS Creswell STP	Spring Water	Christians Minde	Kullindi	RTBU	Bay of Plenty
			Date of sampling			JERV002	JERV003	JERV004	JERV005	JERV006	JERV009	JERV011	JERV012	JERV014	JERV015
Compound Lab Method	LOR	Unit	Interim Criteria ^b			Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
			TDI ¹	DWQG	RWQG										
6:2 FtS EP231-PFC	0.1	µg/L	NC	NC	NC	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1		
8:2 FtS EP231-PFC	0.1	µg/L	NC	NC	NC	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1		
PFOA EP231-PFC	0.02	µg/L	1.5	5	50	<0.02	<0.02	0.03		<0.02	<0.02	<0.02	<0.02		
PFOS EP231-PFC	0.02	µg/L	0.15	0.5	5	1.02	2.76	6.13		0.93	0.63	<0.04	<0.04		
PFHxS EP231-PFC	0.002	µg/L													
6:2 FtS EP231-PFC-LL	0.01	µg/L	NC	NC	NC				<0.01				<0.01	<0.01	
8:2 FtS EP231-PFC-LL	0.01	µg/L	NC	NC	NC				<0.01				<0.01	<0.01	
PFOA EP231-PFC-LL	0.002	µg/L	1.5	5	50				<0.002				<0.002	<0.002	
PFOS EP231-PFC-LL	0.002	µg/L	0.15	0.5	5			0.140					<0.004	<0.004	
PFHxS EP231-PFC	0.002	µg/L													

Legend

Effluent based water sample

Surface water sample

Groundwater sample

NC – no criteria established

TDI¹ – cannot be applied without additional studies**Bold** – exceeds laboratory's limit of reporting (LOR)**0.18** – exceeds interim Drinking Water Quality Guideline criteria**1.22** – exceeds interim Drinking Water Quality Guideline criteria and exceeds interim Recreational Water Quality Guideline criteria**TDI¹** – Interim Tolerable Daily Intake (µg/kg/d)**DWQG** – Interim Drinking Water Quality Guideline criteria**RWQG** – Interim Recreational Water Quality Guideline criteria**6:2 FtS** – 6:2 Fluorotelomer sulfonate**8:2 FtS** – 8:2 Fluorotelomer sulfonate**PFHxS** – Perfluorohexane sulphonate**PFOA** – Perfluorooctanoic acid**PFOS** – Perfluorooctane sulfonic acid

b – Interim criteria taken from *enHealth Statement: Interim national guidance on human health reference values for per- and poly-fluoroalkyl substances for use in site investigations in Australia*, Health Standing Committee (enHealth) of the Australian Health Protection Principal Committee, June 2016



Discussion of Results

At a meeting between Commonwealth and ACT Government stakeholders on the 22 June 2016 it was decided that a reanalysis of the EPA samples taken on 25 May 2016 be undertaken to include Perfluorohexane sulphonate. Following discussions with the laboratory, ALS, it was found that the broader suite of 20 PFAS pollutants had already been analysed just not reported. ALS reissued the Certificate of Analysis for this broader suite of analytes on 29 June 2016 following appropriate quality assurance procedures.

Below is a discussion of results against the interim Defence and enHealth guidance criteria listed above.

Notes:

In the absence of Surface Water - Human health (drinking water) criterion for each PFAS compound the Groundwater – Human health (drinking water) criterion have been applied to the relevant surface water samples.

Where effluent derived water samples have been analysed Human health (drinking water) criteria have not been applied due to the low likelihood of this water being used for drinking water purposes – a comparison of relevant surface water criteria only has been made.

The Tolerable Daily Intake criteria from the enHealth guidance could not be applied on the basis of the water sample results alone. Additional human and other studies would be required prior to the application of this criterion.

HMAS Creswell – (effluent and surface water samples)

Detections of PFOS and PFHxS above the the laboratory limit of reporting were identified in all water samples taken from the 4 HMAS Creswell sampling sites. Results were below the laboratory limit of reporting for all other pollutants.

All PFOS results exceeded the Surface water - Human health (consumption of fish) criterion of 0.00065g/L (0.65ng/L) but met all other Directive #8 surface water criteria.

Exceedences of the PFOS Groundwater – Human health (drinking water) criterion were recorded for the ERD and STP sites. Whilst exceedences of this criterion were noted the exposure pathway is very unlikely due to the low likelihood of this water being used for drinking water purposes.

PFOS/PFHxS was detected above the laboratory limit of reporting but below enHealth criteria in the Flat Rock Creek sample.

Exceedences of the enHealth PFOS/PFHxS Interim Drinking Water Quality Guideline criterion were recorded for the ERD, STP and Spring Water sites.

RAN School of Ship Survivability and Safety – (surface water samples)

The results for samples taken from Upper and Lower Mary Creek were below the laboratory limit of reporting for the 6:2 FtS and 8:2 FtS pollutants.

PFOA was detected above the laboratory limit of reporting but below criteria in the Upper Mary Creek sample.

PFHxS was detected above the laboratory limit of reporting in the Upper and Lower Mary Creek samples. No individual criteria have been established under the Directive #8 and enHealth interim guidelines for PFHxS.

An exceedence of the PFOS Surface water - Human health (consumption of fish) **and** Groundwater – Human health (drinking water) criteria was identified in the Lower Mary Creek sample.

An exceedence of Surface water - Human health (consumption of fish) **and** Groundwater – Human health (drinking water) **and** Surface Water - Recreational use criteria was identified in the Upper Mary Creek sample.

An exceedence of the enHealth PFOS/PFHxS Interim Drinking Water Quality Guideline criterion was recorded for the Lower Mary Creek sample.

An exceedence of the enHealth PFOS/PFHxS Interim Drinking Water Quality Guideline criterion **and** Interim Recreational Water Quality Guideline criterion was recorded for the Upper Mary Creek sample.

Leases – (groundwater samples)

All results from the 4 lease sites were below the laboratory limit of reporting and below the adopted Directive #8 groundwater criteria and enHealth criteria for all PFAS compounds analysed. Surface water criteria were not applied to these samples.

Recommendations

- Investigations into the use of the impacted water bodies should be undertaken. Where the potential for human contact is identified restrictions to water access should be implemented until further information on potential human health risks becomes available. Consideration should be given to informing the local community on the results of sampling and interim response pending further information.
- A further water sampling and analysis event for PFAS pollutants should take place within three to six months of this event to ascertain whether the results are representative of impacts to the receiving environment or are anomalous;
- On the basis of the above results discussions should be held with the Commonwealth Department of Defence on the need for wider PFAS assessment of water, soil and sediment within HMAS Creswell, the RAN School of Ship Survivability and Safety and adjacent areas.
- A human health risk assessment (HHRA) into the impacts from PFOS and PFOS/PFHxS should be considered in the identified areas of impact with an initial focus on the Lower Mary Creek sampling area. In accordance with the requirements of the ACT *Environment Protection Act 1997* the 'polluter' should be responsible for all future assessment and remedial works;
- The findings of these and all future assessment works (including the HHRA) and including any remedial works should be independently audited by an EPA approved contaminated land auditor;
- Discussions should be held with the Commonwealth Departments of Defence, Health and the Environment on the potential impact on human health and the environment from the identified PFOS and PFOS/PFHxS contamination;
- Following discussions and advice from with the Commonwealth Departments listed above DIRD should engage with local stakeholders.

Should you or your staff wish to discuss the above findings and recommendations please feel free to contact me on 02 6207 2151 or at mark.heckenberg@act.gov.au.

Yours sincerely

Mark Heckenberg
Manager, Contaminated Sites
Construction, Environment and Workplace Protection
Access Canberra

19 July 2016

Attachments – ALS Certificate of Analysis dated 29 June 2016



ACT
Government

Chief Minister, Treasury and
Economic Development

To: Chief Minister

Copy Head of Service

Subject: Update on perfluorinated compound contamination in Jervis Bay Territory

Critical date and reason

- 1. Routine

Recommendations

- 2. That you note the information in the brief.

NOTED/PLEASE DISCUSS

Andrew Barr MLA / /

Supporting Reasoning

3. The ACT Chief Health Officer (CHO) will soon provide advice to the Department of Infrastructure and Regional Development (DIRD) that waterways in Jervis Bay Territory (JBT) should be closed to the community as a result of perfluorinated compound (PFC) contamination, pending further testing.
4. You have previously been briefed on the results of water testing by ACT Health and the Environment Protection Authority (EPA) for PFC contamination in the JBT (CMTEDD2016/39).
5. On 25 May 2016, at the request of DIRD, the EPA undertook PFC testing at a number of water sites in the JBT. EPA and the CHO met with DIRD on 22 June to discuss the findings. A final report was subsequently provided to DIRD, revised to reflect the ongoing debate regarding Australian guidelines for testing and analysing PFOS levels. The results continue to indicate contamination at JBT above human health limits, particularly in Upper Mary Creek. The final EPA report is at Attachment A.
6. The EPA report recommends further discussions should be held with the Commonwealth Departments of Defence, Health and the Environment on the potential impact on human health and the environment from the identified PFC contamination. The report also recommended further testing in the JBT.
7. The CHO, as the lead official in the ACT's engagement with the Commonwealth and JBT on this issue, has raised a number of concerns internally regarding the results of the EPA testing.
8. The CHO recently attended the NSW CHO Environmental Health Expert Advisory Committee meeting where the Williamstown PFC contamination issue and response were discussed in great detail. This meeting underscored the significant level of resources and attention now being directed at PFC contamination in Williamstown. The CHO also noted that while there are a number of local differences between Williamstown and JBT, quantitatively the level of contamination is very similar, as is the population of the affected area.
9. Further, the CHO noted that the precautionary approach taken by Defence in Williamstown led to an early restriction of land and water usage after the initial testing results, pending more detailed analysis. This step has not been taken in JBT.
10. Advice from the CHO is that if Mary Creek flowed through the ACT, the ACT Government would already have closed this waterway to human contact, including swimming, drinking, foraging and fishing, enforced by signage and supported by communications directly with the community.
11. The ACT position is that Defence must take the lead, and that DIRD holds responsibility for decisions regarding waterway closure and communications with the community. CHO advice to DIRD will be that further testing of the environment is urgently needed and clear next steps, including possible waterway closures, must be agreed as a matter of priority.

12. Intergovernmental Relations in CMTEEDD continue to engage DIRD and Defence on this issue and DIRD have undertaken to meet with EPA and the CHO as soon as possible. Further updates will be provided following this meeting.

Consultation and Communication

13. This brief was prepared in consultation with the EPA and ACT Health. Further discussion with Defence and DIRD will follow.
14. A decision to close waterways in JBT Bay will require considerable community communication in JBT, led by the Commonwealth. The ACT CHO will provide expert advice where appropriate.

Financial

15. ACT activities in the JBT regarding this issue are purchased by the Commonwealth at cost.

Management of Other Risks

16. The potential closure of waterways in JBT will have significant cultural impacts for members of the Wreck Bay Aboriginal community, including mental distress due to strong traditional and spiritual relationship with the land.
17. There is currently limited research and evidence of long term health affects due to PFC contamination. The appropriateness and accuracy of human criteria guidelines for PFCs are competing and are under debate in environmental and health agencies. The Commonwealth Government made an election commitment to an independent review of the enHealth guidelines – which impact PFC analysis criteria – to commence within 30 days of re-election. No further announcements have been made regarding this.
18. The PFC contamination in Williamstown has received significant community interest and media attention. Due to the similarities in terms of population size, there is potential for significant media attention in Jervis Bay, including litigation from affected community members and businesses. Most recently, the famous consumer advocate Erin Brokovich has brought new media attention (Attachment B) to the issue at Oakey in Queensland. Ms Brokovich's involvement and calls for the Australian Government to acknowledge the extent of the PFC issue, are likely to generate ongoing and significant media attention.

Executive Clearance: Geoffrey Rutledge

Date: August 2016

Action Officer: David Clapham

Phone: 57261

White, Sarah-Jane (Health)

From: Kelly, Paul (Health)
Sent: Tuesday, 9 August 2016 9:53 AM
To: Rutledge, Geoffrey
Cc: Pengilley, Andrew (Health); Clapham, David; Johnston, Vanessa (Health)
Subject: RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Thanks Geoffrey,

So I won't reply to the email from DIRD for now, thanks for the assurance that you have been in communication and things are moving.

The brief looks good. One update to point 17 is that the Commonwealth Health Minister announced the appointment of a Queensland academic to review the enHealth guidelines, TOR is only for water, not food (which is being investigated by Food Standards Australia and New Zealand). See announcement:

<http://www.health.gov.au/internet/ministers/publishing.nsf/Content/health-mediarel-yr2016-ley045.htm>

Can I share the Brief with my DG and/or Minister(s)?

Paul

Dr Paul Kelly

ACT Chief Health Officer & Deputy Director-General |

Population Health | ACT Health Directorate

PH 02 6205 2108 | E paul.kelly@act.gov.au

 Paul Kelly - ACT CHO (@PKelly_ACTCHO) on Twitter

<http://www.health.act.gov.au/healthy-living/population-health>



From: Rutledge, Geoffrey
Sent: Monday, 8 August 2016 10:09 PM
To: Kelly, Paul (Health)
Cc: Pengilley, Andrew (Health); Clapham, David
Subject: RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Paul,

Apologies for the delay.

And I know you had a very busy week towards the end of last week.

I verbally updated the Chief Minister on Monday 1 August and this attached brief went to the CM's Office on Friday 5 August. I have spoken to DIRD and Sam Lucas from DIRD provided his update via email on 4 August.

I will be speaking with DIRD again on Friday, but given your meeting with NSW Friday – will try to get an earlier update.

Geoffrey

From: Kelly, Paul (Health)
Sent: Monday, 8 August 2016 5:06 PM
To: Rutledge, Geoffrey <Geoffrey.Rutledge@act.gov.au>
Cc: Pengilley, Andrew (Health) <Andrew.Pengilley@act.gov.au>
Subject: FW: EPA PFC Samples [SEC=UNCLASSIFIED]

Hi Geoff,

Are you around? I just tried to call to discuss.

I am awaiting the brief promised on 29 July, that would be very helpful to frame discussions going forward.

I would appreciate your urgent attention and advice please in relation to inter-governmental communication. I discussed my concerns about a lack of progress on this matter with my DG this afternoon, who has requested that I send the email below to her to forward to the Head of Service. I have not yet actioned this request.

No doubt you, as I, have many competing demands, but I do believe that this matter needs to be progressed with some urgency now. There are reputational risks to the ACT government as I have previously stated, along with my own professional obligations as a doctor. My advice about how to proceed remains the same as that provided to the Commonwealth on 23 June (in the email below) and verbally on 19 May in Jervis Bay Territory.

I will meet with NSW colleagues again on Friday morning on a range of matters, including PFOS, so having a sense of where DIRD is moving and our role in that would be helpful prior to that meeting.

Paul

Dr Paul Kelly

ACT Chief Health Officer & Deputy Director-General |

Population Health | ACT Health Directorate

PH 02 6205 2108 | E paul.kelly@act.gov.au

 Paul Kelly - ACT CHO (@PKelly_ACTCHO) on Twitter

<http://www.health.act.gov.au/healthy-living/population-health>



From: Kelly, Paul (Health)
Sent: Friday, 5 August 2016 3:44 PM
To: Heckenberg, Mark; Jones, Greg; Power, David
Cc: Rutledge, Geoffrey; Johnston, Vanessa (Health)
Subject: RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Thanks Mark,

Will do.

Paul

Dr Paul Kelly

ACT Chief Health Officer & Deputy Director-General |

Population Health | ACT Health Directorate

PH 02 6205 2108 | E paul.kelly@act.gov.au

Paul Kelly - ACT CHO (@PKelly_ACTCHO) on Twitter

<http://www.health.act.gov.au/healthy-living/population-health>
ACT
 Government
 Health
**From:** Heckenberg, Mark**Sent:** Friday, 5 August 2016 3:17 PM**To:** Kelly, Paul (Health); Jones, Greg; Power, David**Cc:** Rutledge, Geoffrey; Johnston, Vanessa (Health)**Subject:** RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Thanks Paul.

I totally concur with the single point of contact. I have corrected a slight typo in option 2.

I think it may be more appropriate that you, Geoffrey and Greg decide on the best way to proceed with respect to communication issues.

Regards Mark

Mark Heckenberg | Manager, Contaminated Sites | Environmental Quality

Phone: 02 6207 2151 | Email: mark.heckenberg@act.gov.au

Construction, Environment and Workplace Protection | Access Canberra | ACT Government

GPO Box 158 Canberra ACT 2601 | <http://www.act.gov.au/accesscbr>**From:** Kelly, Paul (Health)**Sent:** Friday, 5 August 2016 2:54 PM**To:** Heckenberg, Mark <Mark.Heckenberg@act.gov.au>; Jones, Greg <Greg.Jones@act.gov.au>; Power, David <DAVID.POWER@act.gov.au>**Cc:** Rutledge, Geoffrey <Geoffrey.Rutledge@act.gov.au>; Johnston, Vanessa (Health) <Vanessa.Johnston@act.gov.au>**Subject:** RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Hi Mark,

We need a single point of contact on this I believe. And suitable clearance needs to be provided before any external response is made. That is at least as important as timely response.

I am happy to get back to [REDACTED] in the first instance with either:

1. An interim statement along the lines of:

"Thanks for your message. Geoffrey Rutledge, as the ACT Government focal person will be in contact with you in due course with our response. I understand that he has already been in contact with the Department to arrange an urgent meeting to discuss the next steps"

OR

2. A more definitive statement along the lines of:

"The ACT Government requests a meeting to further discuss this matter as soon as practicable. This meeting will need to be followed quickly with further discussions with the Wreck Bay council and community as we undertook to do in May 2016. In light of the environmental testing results, and in line with recommendations from the Chief Health Officer and the Environmental Protection Agency-Environment Protection Authority, the ACT Government requests that the Department of Infrastructure and Regional Development immediately commence a detailed human health risk assessment in the Jervis Bay Territory in line with similar exercises that have been completed or are in progress in the vicinity of other Defence sites, notably Williamstown, NSW. The email advice which has been provided to us on 4 August 2016, whilst a helpful starting point, does not provide sufficient detail to guide advice to the community of Jervis Bay. The ACT Government does not have the capacity to undertake this work, and recommends that an independent assessment be commissioned by Department of Defence, again in line with the procedure adopted at other contaminated sites, as soon as possible. The ACT Government remains committed to providing expert interpretation of any findings of an independent assessment, and to assist with risk communication to the community of Jervis Bay under the existing cost-recovery model."

As I understand it, Geoff has already conveyed at least part of this message to DIRD and/or defence (about the need to meet). The second message needs to be communicated as soon as possible, either by email or at the meeting.

Geoff please advise how you wish to proceed.

Paul

Dr Paul Kelly

ACT Chief Health Officer & Deputy Director-General |

Population Health | ACT Health Directorate

PH 02 6205 2108 | E paul.kelly@act.gov.au

Paul Kelly - ACT CHO (@PKelly_ACTCHO) on Twitter

<http://www.health.act.gov.au/healthy-living/population-health>



ACT
Government
Health



From: Heckenberg, Mark
Sent: Friday, 5 August 2016 1:56 PM
To: Jones, Greg; Power, David
Cc: Kelly, Paul (Health)
Subject: FW: EPA PFC Samples [SEC=UNCLASSIFIED]

Hi Greg and David,

To keep you informed please find below and attached the latest correspondence in relation to the PFAS issues in JBT.

Whilst we (as the EPA) weren't asked to respond to [REDACTED] request below I think it prudent that we make our position clear to DIRD – that is reiterate my comments to Paul to DIRD.

In the interests of transparency I also concur with Paul's comment that the findings of our assessment be communicated to the Community by DIRD as soon as possible.

I would appreciate your comments/direction.

Regards

Mark Heckenberg | Manager, Contaminated Sites | Environmental Quality
 Phone: 02 6207 2151 | Email: mark.heckenberg@act.gov.au
 Construction, Environment and Workplace Protection | Access Canberra | ACT Government
 GPO Box 158 Canberra ACT 2601 | <http://www.act.gov.au/accesscbr>

From: Kelly, Paul (Health)
Sent: Friday, 5 August 2016 11:56 AM
To: Heckenberg, Mark <Mark.Heckenberg@act.gov.au>
Cc: Rutledge, Geoffrey <Geoffrey.Rutledge@act.gov.au>; Peffer, Dave <Dave.Peffer@act.gov.au>
Subject: RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Hi Mark,

I'm dealing with a range of more urgent matters at the moment and seriously understaffed due to illness and leave, so I haven't yet responded to this email.

I just tried to call you, but in short, I am totally in agreement with your stance. By way of contrast: NSW and Williamtown: 3,550 page report by an independent environmental consultant; Qld and Oakey: international environmental campaigner and class actions; Jervis bay: a ½ page email by a Commonwealth public servant on their last day on the job. Whilst this information is helpful, it is not the level of detail required for a human health risk assessment.

Defence needs to commission and pay for an independent investigation as you have suggested. DIRD needs to coordinate the messaging with the community. ACT EPA and ACT Health need sufficient input into the framing of the consultancy, and reasonable opportunity to review the findings and any recommendations.

I reiterate that we need urgent action on the part of DIRD/Defence

Geoff, following our phone-call a week ago, where are we up to with:

1. Briefing to Chief and Health Mins
2. Arrangement for meeting with DIRD/Defence?

don't want to talk at cross-purposes here, so who should respond to the email below from DIRD?

I will reiterate that at the meeting which I attended in Jervis Bay now almost 2 months ago (19 May), all present including me assured the Wreck Bay Community council that we would keep them informed about the investigation and any potential environmental contamination as well as potential health concerns.

Whilst we (as ACT Government) need to be very clear that we are there to assist and advise, I do now strongly feel a duty of care as a health professional in addition to our long-held position as public servants to replicate as closely as possible what happens in the ACT when dealing with issues at Jervis Bay.

I am getting increasingly uncomfortable about reputational risk to ACT government and to me personally.

Paul

Dr Paul Kelly

ACT Chief Health Officer & Deputy Director-General |

Population Health | ACT Health Directorate

PH 02 6205 2108 | E paul.kelly@act.gov.au

 Paul Kelly - ACT CHO (@PKelly_ACTCHO) on Twitter

<http://www.health.act.gov.au/healthy-living/population-health>



From: Heckenberg, Mark
Sent: Friday, 5 August 2016 7:31 AM
To: Kelly, Paul (Health)
Subject: RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Good morning Paul,

So as to perhaps inform your response from the EPA's perspective, given the nature and complexity of contaminated sites human health risk assessments, which I feel this falls into, the EPA would require that it be undertaken by a suitably qualified environmental consultant independent of stakeholders. This assessment would then need to be independently audited by an EPA approved contaminated land auditor with the auditor presenting their findings as to the adequacy of the assessment, the level of risk the identified contamination poses and the suitability of the site for the continued identified uses.

I appreciate that this may not be the response DIRD is after due to the potential costs, however, it would provide assurity to all stakeholders that the assessment is independent. As raised earlier, in accordance with the 'polluter pays principle', it should be Defence that commissions this assessment and audit.

Happy to discuss.

Regards Mark

Mark Heckenberg | Manager, Contaminated Sites | Environmental Quality
 Phone: 02 6207 2151 | Email: mark.heckenberg@act.gov.au
 Construction, Environment and Workplace Protection | Access Canberra | ACT Government
 GPO Box 158 Canberra ACT 2601 | <http://www.act.gov.au/accesscbr>

From: [REDACTED]@infrastructure.gov.au]
Sent: Thursday, 4 August 2016 5:07 PM
To: Kelly, Paul (Health) <Paul.Kelly@act.gov.au>; [REDACTED]@infrastructure.gov.au>;
 Heckenberg, Mark <Mark.Heckenberg@act.gov.au>
Cc: [REDACTED]@infrastructure.gov.au>; Pengilley, Andrew (Health)
 <Andrew.Pengilley@act.gov.au>; Rutledge, Geoffrey <Geoffrey.Rutledge@act.gov.au>; [REDACTED]
 <[REDACTED]@infrastructure.gov.au>; [REDACTED] <[REDACTED]@infrastructure.gov.au>
Subject: RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Dr Kelly

I'm writing in relation to conducting a Human Health Risk Assessment in relation to Mary Creek in the JBT.

As we had committed to do when we met, we have gone through the sources we have available on the use of Mary Creek, talking (discretely) to our people in the JBT, and looking at Defence's previous work. What we have found is below:

1. Local knowledge:

Mary Creek headwaters;

- There is little or no measurable regular activity in this area. There is insufficient water flow, depth of ponds or stream width for any type of recreational activities such as swimming etc. However, children are known to explore the bush surrounds including creek beds.

Between headwaters and ocean outfall;

- Again, depending on who you ask, there is little or no measurable activity along the creek line. Children are known to explore the area.

Mary Creek ocean outfall;

- At this point the creek widens, has a degree of depth and at times opens to the sea. The creek is used for food gathering, although not regularly, and recreational activities such as swimming and/or wading.

Note: Local knowledge can vary and be conflicting and the need for discretion makes it difficult to validate.

2. Defence

Defence has undertaken to investigate whether their previous environmental reports (e.g. Coffey Report) is supported by raw or analytical data related to human use of/exposure to the waters of Mary Creek. This research is ongoing. However, the Department's investigation into such reports that it has access to has not resulted in any information that would advance the understanding of human use of Mary Creek.

Arrangements are in place for a further, follow up round of testing of environmental waters in the JBT this month, which will give us a second set of results to look at.

We would also like to move ahead on commission a more formal risk assessment of the human health risks. This is not something we have the skills or expertise to undertake, so we will be needing to buy it in. If we were able to procure it from the ACT Government as an extension of our existing arrangements we would welcome the chance to do that – otherwise we will need to look externally. We would welcome a discussion on the best way to take this forward, including whether ACT Health may be in a position to assist.

I've copied in Geoffrey Rutledge from CMD, whose team coordinates our engagement with the ACT Government on JBT matters, just to make sure he and his team are in the loop on our discussions.

I will be finishing up in this role this week. Arrangements for my successor have not yet been confirmed, but in the meantime you may contact [REDACTED] to progress the discussions.

Regards

[REDACTED]

[REDACTED]
[REDACTED]
Local Government, Mainland Territories, and Regional Development Australia Branch | Local Government and Territories Division

Department of Infrastructure and Regional Development

GPO Box 594, Canberra ACT 2601

t 02 6274 7209 | m [REDACTED]

e [REDACTED]@infrastructure.gov.au | w www.infrastructure.gov.au

Phone: 02 6207 2151 | Email: mark.heckenberg@act.gov.au

Construction, Environment and Workplace Protection | Access Canberra | ACT Government

GPO Box 158 Canberra ACT 2601 | <http://www.act.gov.au/accesscbr>

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If you have received this e-mail in error, please notify the Department on (02) 6274-7111 and delete all copies of this transmission together with any attachments.

Moroney, Rebecca (Health)

From: Hudson, Lyndell (Health)
Sent: Wednesday, 17 August 2016 6:10 PM
To: Barr, Conrad (Health)
Cc: LeLievre, Maddie (Health)
Subject: FW: INFORMATION REQUEST: JBT HEALTH SURVEILLANCE TIME SERIES REPORTING JERVIS BAY TERRITORY [SEC=UNCLASSIFIED]
Attachments: Jervis Bay Potable Water Results Summary.xlsx; Jervis Bay Recreational Waters Results Summary.xlsx; Jervis Bay GPS Marks.docx
Importance: High

Hi Conrad

Jervis Bay requested information regarding sampling on Monday (wanting it by COB Wednesday). Rad has complied the information.

Please see email below and attachments. Not sure if you would like these printed and a hard copy for review and approval.

I let [REDACTED] (Jervis Bay) know that you were unavailable today and that we send the information to him one cleared by you.

Please let me know if you would like the information printed.

Thanks



Lyndell Hudson | Manager Environmental Health
 Health Protection Service | health.act.gov.au
 Phone (02) 6205 0956 | Mobile [REDACTED]

From: Krsteski, Radomir (Health)
Sent: Wednesday, 17 August 2016 1:06 PM
To: Hudson, Lyndell (Health)
Subject: FW: INFORMATION REQUEST: JBT HEALTH SURVEILLANCE TIME SERIES REPORTING JERVIS BAY TERRITORY [SEC=UNCLASSIFIED]

Hi Lyndell,

Below is a draft email for clearance through Conrad for [REDACTED] from the Department of Infrastructure and Regional Development.

Hi [REDACTED]

As discussed I have attached a summary of our microbiological testing results for the all of the potable waters site you requested from 2006 onwards, I have also included Kullindi Main, Kullindi BBQ and Bay Plenty in case you needed those sites as well (if you don't need them just delete the sheets on the excel workbook). As discussed, the sites that have been excluded are: Rail Tram and Bus Union (bore) camp; Rail Tram and Bus Union camp (rain water); Jervis Bay Village Territory Office; and Christian Minde. I have also attached a summary of the microbiological testing results for all of recreational water sites from 2006 onwards.

There is some discrepancy between sites over the years, namely when they were sampled. The Jervis Bay sampling program was reviewed in 2014 and as a result the sampling frequency was formalised along with all of the sites. Attached is the Jervis Bay Sample Tracking Sheet, this sheet lists all of the agreed sample sites along with the agreed

naming of each site. From September 2014 the sampling and testing of sites has been conducted according to that sample tracking sheet.

If you need any more information please contact me.

Kind regards,

Radomir Krsteski BAppSc DipAppSc DipGovPM MASM
 Manager Microbiology, Health Protection Service
 Population Health Protection and Prevention
 Ph: (02) 620 58709 Fax: (02) 620 58703 | E-mail: Radomir.Krsteski@act.gov.au

Care | Excellence | Collaboration | Integrity

From: [REDACTED]@infrastructure.gov.au]

Sent: Tuesday, 16 August 2016 8:35 AM

To: Krsteski, Radomir (Health)

Subject: RE: INFORMATION REQUEST: JBT HEALTH SURVEILLANCE TIME SERIES REPORTING JERVIS BAY TERRITORY [SEC=UNCLASSIFIED]

Good morning Radomir

Thanks very much for the quick response.

If your JBT records do not identify land by use/ownership– can you, please provide a list of all health surveillance sites routinely tested in the JBT by ACT Health and I will identify the sites we require separate test results for in the:

1. Wreck Bay village precinct (403 ha); and
2. Booderee National Park (6,379 hectares including 875 hectares' marine park)

FYI Booderee comprises the majority of the JBT, however ACT Health also undertake testing on JBT land administered by the Department of Defence and the Department of Infrastructure and Regional Development and Wreck Bay Aboriginal Community Council.

Wreck Bay and Mary Creek are not the same site.

I will be in training from 0900 to 1400hrs today – however please call my landline before 0900hs 6274 7795 or mobile later in the morning if you have any further questions

Thanks again for actioning this matter so quickly – greatly appreciated.

Best Regards

[REDACTED]
 [REDACTED] Jervis Bay Territory Administration
 Local Government, Mainland Territories & Regional Development Australia Branch | Local Government and Territories Division
 Department of Infrastructure and Regional Development
 GPO Box 594, Canberra ACT 2601
 t 02 6274 7795
 e [REDACTED]@infrastructure.gov.au | w www.infrastructure.gov.au

From: Krsteski, Radomir (Health) [mailto:Radomir.Krsteski@act.gov.au]
Sent: Monday, 15 August 2016 3:46 PM
To: [REDACTED]@infrastructure.gov.au>
Cc: Hudson, Lyndell (Health) <Lyndell.Hudson@act.gov.au>
Subject: FW: INFORMATION REQUEST: JBT HEALTH SURVEILLANCE TIME SERIES REPORTING JERVIS BAY TERRITORY [SEC=UNCLASSIFIED]

Hi [REDACTED],

I just left a message on your answering machine and thought best that I follow that up with this email. Just a couple of questions regarding the request you sent through below. I need some clarification, are Wreck bay and Mary Creek Beach the same site? And secondly does Booderee National Park include all of the sites in Jervis Bay or was there a specific site you were referring too?

Kind regards
 Rad



Radomir Krsteski

Manager | Microbiology | ACT Governmental Analytical Laboratory
 Health Protection Service | Population Health Protection and Prevention | ACT Health
 25 Mulley Street Holder ACT | Locked Bag 5005 Weston Creek ACT 2611
T 02 62058709 | **M** Mobile (if applicable) | **E** radomir.krsteski@act.gov.au | **Website** |

From: Hudson, Lyndell (Health)
Sent: Monday, 15 August 2016 1:55 PM
To: Krsteski, Radomir (Health)
Subject: FW: INFORMATION REQUEST: JBT HEALTH SURVEILLANCE TIME SERIES REPORTING JERVIS BAY TERRITORY [SEC=UNCLASSIFIED]

Hi Rad

Would you be able to assist with this request??

Please note they want this back by Wednesday so would need to have to Conrad by COB tomorrow.

Lyndell



Lyndell Hudson | Manager Environmental Health
 Health Protection Service | health.act.gov.au
 Phone (02) 6205 0956 | Mobile [REDACTED]

From: [REDACTED]@infrastructure.gov.au]
Sent: Monday, 15 August 2016 11:50 AM
To: Hudson, Lyndell (Health)
Cc: [REDACTED]; Heckenberg, Mark; ACT IGR
Subject: INFORMATION REQUEST: JBT HEALTH SURVEILLANCE TIME SERIES REPORTING JERVIS BAY TERRITORY [SEC=UNCLASSIFIED]

Lyndell

1. The Department of Infrastructure and Regional Development (the Department) has received a request from the Wreck Bay Aboriginal Community Council (WBACC) and the Booderee National Park for details of all ACT environment water and health protection test results undertaken on Aboriginal Lands over several years.
2. Attached please find an extract of a time series test results for Environment and Planning Directorate environment water testing in the JBT from 2006 to the present for tests conducted on Aboriginal lands.
3. I seek your assistance to provide a similar table for health protection water testing undertaken by the Health Directorate for the Department over a similar interval (from 2006) for Aboriginal lands in the JBT:
 - a. Wreck Bay 403ha
 - b. and Booderee National Park.
4. Please note, this request excludes the most recent PFC test result already reported separately to the community.
5. I am hoping that ACT Health will have a cumulative report similar to Environment and Planning that can be easily exported into a table format, if not can we please discuss what is available and how it can be best presented.

I would be grateful if you could respond to this request by COB Wednesday 17 August 2016.

Please let me know if you have any problems with this request or timeframe– I will be at a planning session from noon today until 1400hrs tomorrow but can be contacted on [REDACTED].

Best Regards

[REDACTED]
 [REDACTED] Jervis Bay Territory Administration
 Local Government, Mainland Territories & Regional Development Australia Branch | Local Government and Territories Division
 Department of Infrastructure and Regional Development
 GPO Box 594, Canberra ACT 2601
 t 02 6274 7795
 e [REDACTED]@infrastructure.gov.au | w www.infrastructure.gov.au

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Stedman, Andrew (Health)

From: Kelly, Paul (Health)
Sent: Wednesday, 7 September 2016 4:38 PM
To: [REDACTED]; Heckenberg, Mark; [REDACTED]
Cc: [REDACTED]; Rutledge, Geoffrey; McNeill, Laura (Health); Pengilley, Andrew (Health)
Subject: RE: Request appointment phone call - Jervis Bay Territory - PFAS - FW: EPA PFC Samples [SEC=UNCLASSIFIED]

Hi [REDACTED],

It is very important that requests for ACT government assistance in relation to the PFOS/PFOA matter in the JBT is coordinated through our Chief Minister's Department. I have copied Geoffrey Rutledge in this email. Mark Heckenburg is part of that Directorate also.

By the way, an urgent Australian Health Protection Committee teleconference has just been called for 1730 hours today on PFOS/PFOA. I presume this will be about the results of the independent assessment of the enHealth guidelines on safe levels of exposure.

Paul

Dr Paul Kelly

ACT Chief Health Officer & Deputy Director-General |

Population Health | ACT Health Directorate

PH 02 6205 2108 | E paul.kelly@act.gov.au

Paul Kelly - ACT CHO (@PKelly_ACTCHO) on Twitter

<http://www.health.act.gov.au/healthy-living/population-health>



From: [REDACTED]; [REDACTED]; [REDACTED]; [REDACTED]@infrastructure.gov.au]
Sent: Wednesday, 7 September 2016 3:15 PM
To: Heckenberg, Mark; [REDACTED]
Cc: [REDACTED]; Kelly, Paul (Health)
Subject: RE: Request appointment phone call - Jervis Bay Territory - PFAS - FW: EPA PFC Samples [SEC=UNCLASSIFIED]

Hi Mark

Thanks for the update – appreciate your efforts to have the analysis and results to us by Friday.

Regards, [REDACTED]

[REDACTED]
 [REDACTED] Jervis Bay Territory Administration Tel: (02) 6274 7918

From: Heckenberg, Mark [<mailto:Mark.Heckenberg@act.gov.au>]

Sent: Wednesday, 7 September 2016 2:02 PM

To: [REDACTED]; [REDACTED]@infrastructure.gov.au>; [REDACTED]
 <[REDACTED]@infrastructure.gov.au>

Cc: [REDACTED]@infrastructure.gov.au>; Kelly, Paul (Health) <Paul.Kelly@act.gov.au>
Subject: RE: Request appointment phone call - Jervis Bay Territory - PFAS - FW: EPA PFC Samples
 [SEC=UNCLASSIFIED]

Hi [REDACTED],

The results of the EPA's PFAS sampling from environmental waters in the JBT have been received from the laboratory. I will endeavour to have a copy of the draft report to you by Friday.

Regards

Mark Heckenberg | Manager, Contaminated Sites | Environmental Quality
 Phone: 02 6207 2151 | Email: mark.heckenberg@act.gov.au
 Construction, Environment and Workplace Protection | Access Canberra | ACT Government
 GPO Box 158 Canberra ACT 2601 | <http://www.act.gov.au/accesscbr>

[REDACTED]@infrastructure.gov.au]

Sent: Wednesday, 7 September 2016 1:36 PM

To: Kelly, Paul (Health) <Paul.Kelly@act.gov.au>

Cc: [REDACTED]@infrastructure.gov.au>; Heckenberg, Mark <Mark.Heckenberg@act.gov.au>;
 [REDACTED]@infrastructure.gov.au>

Subject: Request appointment phone call - Jervis Bay Territory - PFAS - FW: EPA PFC Samples [SEC=UNCLASSIFIED]

Good afternoon Dr Kelly

I want to follow-up Sam's request in the email below, to see if you had any thoughts on our commissioning of the more formal Human Health Risk Assessment in relation to Mary Creek.
 The EPA has taken the (verification) environmental water samples and these are with the laboratory for testing. The outcome of these tests will help determine what further action, if any, is needed.

Is there a good time to call you today? I would also like to be able to introduce you to [REDACTED], who is our new General Manager, Local Government, Mainland Territories and Local Government.

Kind regards, Sheryl

[REDACTED]
 [REDACTED] | Jervis Bay Territory Administration Section
 Local Government, Mainland Territories & Regional Development Australia Branch | Local Government & Territories Division
 Department of Infrastructure and Regional Development
 GPO Box 594, Canberra ACT 2601
 t 02 6274 7918
 e [REDACTED]@infrastructure.gov.au | w www.infrastructure.gov.au

From: [REDACTED]

Sent: Thursday, 4 August 2016 5:07 PM

To: Kelly, Paul (Health) <Paul.Kelly@act.gov.au>; [REDACTED]@infrastructure.gov.au>;
 Heckenberg, Mark <Mark.Heckenberg@act.gov.au>

Cc: [REDACTED]@infrastructure.gov.au>; Pengilley, Andrew (Health)
 <Andrew.Pengilley@act.gov.au>; geoffrey.rutledge@act.gov.au; [REDACTED]

<[REDACTED]@infrastructure.gov.au>; [REDACTED] <[REDACTED]@infrastructure.gov.au>

Subject: RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Dr Kelly

I'm writing in relation to conducting a Human Health Risk Assessment in relation to Mary Creek in the JBT.

As we had committed to do when we met, we have gone through the sources we have available on the use of Mary Creek, talking (discretely) to our people in the JBT, and looking at Defence's previous work. What we have found is below:

1. Local knowledge:

Mary Creek headwaters;

- There is little or no measurable regular activity in this area. There is insufficient water flow, depth of ponds or stream width for any type of recreational activities such as swimming etc. However, children are known to explore the bush surrounds including creek beds.

Between headwaters and ocean outfall;

- Again, depending on who you ask, there is little or no measurable activity along the creek line. Children are known to explore the area.

Mary Creek ocean outfall;

- At this point the creek widens, has a degree of depth and at times opens to the sea. The creek is used for food gathering, although not regularly, and recreational activities such as swimming and/or wading.

Note: Local knowledge can vary and be conflicting and the need for discretion makes it difficult to validate.

2. Defence

Defence has undertaken to investigate whether their previous environmental reports (e.g. Coffey Report) is supported by raw or analytical data related to human use of/exposure to the waters of Mary Creek. This research is ongoing. However, the Department's investigation into such reports that it has access to has not resulted in any information that would advance the understanding of human use of Mary Creek.

Arrangements are in place for a further, follow up round of testing of environmental waters in the JBT this month, which will give us a second set of results to look at.

We would also like to move ahead on commission a more formal risk assessment of the human health risks. This is not something we have the skills or expertise to undertake, so we will be needing to buy it in. If we were able to procure it from the ACT Government as an extension of our existing arrangements we would welcome the chance to do that – otherwise we will need to look externally. We would welcome a discussion on the best way to take this forward, including whether ACT Health may be in a position to assist.

I've copied in Geoffrey Rutledge from CMD, whose team coordinates our engagement with the ACT Government on JBT matters, just to make sure he and his team are in the loop on our discussions.

I will be finishing up in this role this week. Arrangements for my successor have not yet been confirmed, but in the meantime you may contact [REDACTED] to progress the discussions.

Regards

[REDACTED]

Local Government, Mainland Territories, and Regional Development Australia Branch | Local Government and Territories Division

Department of Infrastructure and Regional Development

GPO Box 594, Canberra ACT 2601

t 02 6274 7209 | m [REDACTED]

e [REDACTED]@infrastructure.gov.au | w www.infrastructure.gov.au

From: Kelly, Paul (Health) [mailto:Paul.Kelly@act.gov.au]

Sent: Thursday, 23 June 2016 11:34 AM

To: [REDACTED]@infrastructure.gov.au; Heckenberg, Mark <Mark.Heckenberg@act.gov.au>

Cc: [REDACTED]@infrastructure.gov.au; [REDACTED]

[REDACTED]@infrastructure.gov.au; Pengilley, Andrew (Health) <Andrew.Pengilley@act.gov.au>

Subject: RE: EPA PFC Samples [SEC=UNCLASSIFIED]

Colleagues,

I did manage to speak to NSW Health acting head of environmental health after our meeting yesterday, and to gather a bit more information about the scale and scope of their approach to the situation in and around Williamstown. It was a very helpful discussion.

As we briefly discussed yesterday, the key issue from a human health perspective is the exposure pathway. That is, given that we now know that there is likely to be contamination in Mary Creek in particular, regardless of level (to be determined) and given that there may be human health effects from that contamination (uncertain but possible and definitely of concern to the community), then the missing piece is this exposure pathway. That is, how can the toxin get into a person. As we discussed yesterday, that requires some thought beyond measuring water content, though that is an important first step.

A water-borne toxin can potentially enter the body in three ways (in order of risk):

1. Drinking water
2. Eating stuff that lives in the water
3. Swimming in the water.

The first (drinking) is the most likely to lead to higher absorption, given this is a direct route and people may (should) drink several litres a day. We have established that the potable water supply is not affected, so that is a good thing. How much water is actually drunk ON A LARGE AND REGULAR BASIS from Mary Creek? I believe that is unlikely to be a big factor, but that needs to be determined with more engagement from the community than we currently have had up to now. So, a risk assessment exercise, informed by the further testing as we agreed yesterday is warranted.

The second (eating aquatic animals) remains the "sleeper" for me. In Williamstown, according to my NSW Health colleague, they now have a body of knowledge about the extent of risk, including various risk profiles on different species. In general, species which live substantially in or around the sediment (recognising that this particular toxin binds with organic material) so that would (I guess, I'm not an expert on non-humans) likely include yabbies and other crustaceans, and those which are filter feeders (eg oysters and other molluscs) are the species with the highest concentrations of PFCs and therefore of highest risk to humans if consumed. NSW Health and/or EPA have tested a range of species and confirmed quite high levels in some species, and also that commercially grown oysters can quickly "purge" the toxin if removed to live in a different body of water (like they do with Hepatitis A virus for example). I don't know what species are present in Mary Creek, what levels of toxin are present or how much is ingested by which members of the community. This is the crucial missing link and where the assessment exercise

I have checked with the lab and can confirm that they are NATA accredited for PFC analysis of soil and water samples.

The lab is checking to see whether our May 2016 samples have been retained and I have asked for a quote for analysis against the testing method that reports the other compound Lauren and Paul made reference to yesterday (perfluorohexane sulphonate (PFHxS)).

Once I have received the quote I will forward it on along with a request that we proceed with the reanalysis of the samples.

Regards

Mark Heckenberg | Manager, Contaminated Sites | Environmental Quality

Phone: 02 6207 2151 | Email: mark.heckenberg@act.gov.au

Construction, Environment and Workplace Protection | Access Canberra | ACT Government

GPO Box 158 Canberra ACT 2601 | <http://www.act.gov.au/accesscbr>

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White, Sarah-Jane (Health)

From: Dale, Emm (Health)
Sent: Thursday, 8 September 2016 12:33 PM
To: Pengilley, Andrew (Health)
Subject: PFOS stuff [SEC=UNCLASSIFIED]
Attachments: Invitation for Dr Kelly to attend a meeting [SEC=UNCLASSIFIED]; RE: Paul Kelly's e-mail address [SEC=UNCLASSIFIED]; FW: JBT Community engagement: Updated Run sheet [SEC=UNCLASSIFIED]; RE: Invitation for Dr Kelly to attend a meeting [SEC=UNCLASSIFIED]; Min Brief - Public Consultation Meeting Jervis Bay May 2016.doc; Health Protection Service - 2016-17 ACT Government Jervis Bay Territoryxlsx; Emailing - 8 Brief signed by CM - GOVERNMENT RELATIONS - Advice - Brief to CM - updat.pdf [DLM=Sensitive]

Paul conducted the community engagement session in Jervis Bay on 19 May.

Paul met in person with The Dept of Infrastructure [REDACTED] [REDACTED] etc) on 22 June here in Canberra.

Paul met with NSW Environmental Health team on Friday 12 August – in Sydney.

This is all I've got in emails and from TRIM

 Emm Dale

Executive Assistant - Chief Health Officer
Population Health Protection and Prevention
ACT Health
P: 02 62050883

care excellence collaboration integrity



White, Sarah-Jane (Health)

From: [REDACTED]@infrastructure.gov.au>
Sent: Thursday, 16 June 2016 11:54 AM
To: Dale, Emm (Health)
Subject: Invitation for Dr Kelly to attend a meeting [SEC=UNCLASSIFIED]
Attachments: PFC_Results_Report_June2016.pdf; ALS_Cert_of_Analysis_May2016.pdf

Hi Emm

Could you advise whether Dr Kelly is available, and willing, to attend a meeting with the Department to discuss the results of environmental PFC testing in the Jervis Bay Territory conducted by ACT EPA?

Mark Heckenberg, ACT EPA, will be taking us through the results of testing. The results (attached) have been provided by the EPA to Lyndell Hudson (Health), and you may already have them.

The date and time is Wednesday, 22 June at 11:30 – 12:30 pm (unfortunately we have no flexibility with this time). The meeting will be held at our offices at 111 Alinga St Canberra City. Parking can be arranged.

Dr Kelly cannot attend in person we can make teleconference arrangements.

We have also extended an invitation to Dept of Defence. These will probably be people Dr Kelly met when he visited the JBT recently.

Happy to discuss.

[REDACTED]
[REDACTED]
Jervis Bay Territory Administration
Local Government, Mainland Territories & RDA Branch
Local Government and Territories Division
Department of Infrastructure & Regional Development
02 6274 7874
62 Northbourne Avenue | GPO Box 594 | Canberra ACT 2601
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ACT
Government

Chief Minister, Treasury and
Economic Development

File Ref: 10/2761

[REDACTED]
[REDACTED]
Jervis Bay Territory Administration
Department of Infrastructure & Regional Development
GPO Box 594
Canberra ACT 2601

RE: REPORT ON PERFLUORINATED CHEMICAL WATER SAMPLING AND ANALYSIS

Dear [REDACTED],

In accordance with instructions from Mr [REDACTED] of the Department of Infrastructure & Regional Development (DIRD) dated 13 May 2016 the ACT Environment Protection Authority (EPA) undertook discrete water sampling within the effluent, surface and ground waters of the Jervis Bay Territory on 25 May 2016. The purpose of the sampling was to ascertain whether perfluorinated compounds (PFC), most likely sourced from aqueous film forming formings (AFFF), had made their way into the receiving environment of the Jervis Bay Territory.

Sampling was undertaken at the following 10 locations (see map below for details):

HMAS Creswell – (effluent and surface water samples)

1. Sewage Treatment Plant – treated effluent
2. Effluent Retention Dam – stored treated effluent
3. Spring water – surface water from natural spring adjacent to Effluent Retention Dam
4. Flat Rock Creek – tidal receiving waters adjacent to the HMAS Creswell Golf Course walk bridge.

RAN School of Ship Survivability and Safety – (surface water samples)

5. Upper Mary Creek – downstream of fire training facilities
6. Lower Mary Creek – off-site location adjacent to Boorarla Road crossing

Leases – (groundwater samples)

7. Christians-Minde
8. Kullindi
9. RTBU
10. Bay of Plenty Cottages