

David Larkings

From: David Larkings
Sent: Monday, 29 February 2016 10:22 AM
To: Tenille Fort; Suzanne Huxley; Janet Cumming; Sophie Dwyer; Greg Jackson
Subject: FW: Oakey PFC Contamination

Hi

Biosecurity Queensland has advised that the sampling around Oakey should commence in April – see below.

Regards,
David

David Larkings
Advanced Environmental Health Officer
Food Safety Standards and Regulation Unit
Health Protection Branch | Prevention Division
Department of Health | Queensland Government
PO Box 2368, Fortitude Valley BC QLD 4006
t. 07 332 89328
After hours oncall:
e. david.larkings@health.qld.gov.au | www.health.qld.gov.au/foodsafety



Queensland Health acknowledges the Traditional Owners of the land, and pays respect to Elders past, present and future.

From: WATTS Richard J [mailto:Richard.Watts@daf.qld.gov.au]
Sent: Monday, 29 February 2016 8:04 AM
To: David Larkings
Subject: FW: Oakey PFC Contamination

David

It looks like April is to be the proposed date of commencement of sample analysis. I also read the risks assessment to be completed by June. History suggests, DoD won't release the data as it becomes available but will wait for the study's conclusions to be able to put the data into context.

regards

Dick Watts
Principal Scientific Advisor and Qld AgVet Chemical Coordinator
Biosecurity Queensland
Department of Agriculture and Fisheries

T 07 3255 4379 M E richard.watts@daf.qld.gov.au W www.daf.qld.gov.au

From: SLIZANKIEWICZ Veronica
Sent: Monday, 29 February 2016 7:57 AM
To: WATTS Richard J
Subject: RE: Oakey PFC Contamination

Good morning Dick,

The environmental sampling is somewhat ongoing from what I can determine. The groundwater sampling (particularly in the investigation area) has been tested late last year to determine whether the PFCs are moving in the groundwater. Speaking to AECOM I understand that they are hoping to commence the biota sampling shortly and hoping to have the samples for the detection area all collected and analysis started by April. Truthfully I think that this is ambitious, but I may be wrong.

Hope this helps

Veronica

From: WATTS Richard J
Sent: Monday, 29 February 2016 7:35 AM
To: SLIZANKIEWICZ Veronica
Subject: FW: Oakey PFC Contamination

Veronica

Do you have any information for David's request.

I was surprised at the technical meeting that we had be asked to comment on the Sampling Analysis and Quality Plan: Stage 2C Environmental when it became apparent that the study appeared to be largely completed already. This raised eyebrows with Qhealth too. I am therefore not confident that biota sampling has not also been started.

regards

Dick Watts

Principal Scientific Advisor and Qld AgVet Chemical Coordinator
Biosecurity Queensland
Department of Agriculture and Fisheries

T 07 3255 4379 M E richard.watts@daf.qld.gov.au W www.daf.qld.gov.au

From: David Larkings [<mailto:David.Larkings@health.qld.gov.au>]
Sent: Friday, 26 February 2016 5:16 PM
To: WATTS Richard J
Subject: RE: Oakey PFC Contamination

Hi Richard

Thanks for copying us into the email.

To help with our planning, do you have any idea when the sampling will be done and when we may start seeing sample results?

Cheers,
David

David Larkings

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From: WATTS Richard J [<mailto:Richard.Watts@daf.qld.gov.au>]

Sent: Thursday, 25 February 2016 8:21 AM

To: SLIZANKIEWICZ Veronica

Cc: CUMMINS Melissa; SCHOLL Russel; BAUER Bartley; Andrew Wilson; David Larkings

Subject: FW: Oakey PFC Contamination

Veronica

I have sought advice from SFPQ and Qhealth on what the likely scenarios will be is food and feed if the biota sampling indicates contamination.

My first comment is that it is not easy to forecast the regulatory approaches because some key pieces of information are not yet known such as the detection limits for the studies and guidance values for PFOS and PFOA (to come from FSANZ).

There are really three scenarios i.e.

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SFPQ provided the following guidance on their regulatory approach

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Dick Watts

Principal Scientific Advisor and Qld AgVet Chemical Coordinator
Biosecurity Queensland
Department of Agriculture and Fisheries

T 07 3255 4379 M E richard.watts@daf.qld.gov.au W www.daf.qld.gov.au

From: CUMMINS Melissa
Sent: Thursday, 18 February 2016 6:09 PM
To: WATTS Richard J
Cc: SCHOLL Russel
Subject: RE: Oakey PFC Contamination

Hi Dick

Sorry for the additional work load. Can you or Bartley do this for PB&PI. I see that Bomber is also on the list – so perhaps we should liaise to make sure our points are consistent and not duplicative.
Mel

From: ROUTLEY Richard
Sent: Thursday, 18 February 2016 5:59 PM
To: CUMMINS Melissa; WATTS Richard J; LANCASTER Michael; DINESEN Zena; WAIDE Carly; HINCKFUSS Michelle; HARRIS Graham; KIND Peter K; KITSON Sacha
Cc: SLIZANKIEWICZ Veronica; MILLER Elton
Subject: Oakey PFC Contamination

Hi all

We are required to prepare a brief for the DG/Minister outlining **potential consequences for industry** and the **appropriated DAF response** should elevated levels of PFC's be detected in agricultural/food products as a result of the sampling about be undertaken in the Oakey region by the Dept of Defence. As you would be aware, they

plan to sample and test a wide range domestic and commercial animals and crop plants over the next few months.

A suggested process to develop this brief is as follows:

1. Could each of you please provide a written response addressing the above (dotpoints are OK) on behalf of your business group/area of expertise, to Veronica by **COB next Friday (26 Feb)**. Please highlight any legislative obligations that DAF has, other agencies with legislative obligations, likely impacts on domestic and export markets and movement of product, procedures or actions that DAF would put in place - and anything else you think is relevant.
2. We will draft a brief based on this information and circulate for comment.
3. There may be a need for a meeting by phone/Lync/face to face with some or all of us to clarify any areas of uncertainty/ambiguity.

Please contact either Veronica or myself if you have any questions or suggestions.

Thanks in advance for your help with this.

Regards



Richard Routley
Regional Director, South Region
 Department of Agriculture and Fisheries

T 07 4688 1121 M E richard.routley@daf.qld.gov.au W www.daf.qld.gov.au
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RTI Release

David Larkings

From: WATTS Richard J <Richard.Watts@daf.qld.gov.au>
Sent: Monday, 29 February 2016 7:28 AM
To: SLIZANKIEWICZ Veronica
Cc: CUMMINS Melissa; SCHOLL Russel; BAUER Bartley; Andrew Wilson; David Larkings
Subject: RE: Oakey PFC Contamination

Veronica

Apologies

This should have said Scenarios 1 and 2 are fairly obvious in what should be the appropriate response.

regards

Dick Watts
Principal Scientific Advisor and Qld AgVet Chemical Coordinator
Biosecurity Queensland
Department of Agriculture and Fisheries

T 07 3255 4379 M [redacted] E richard.watts@daf.qld.gov.au W www.daf.qld.gov.au

From: WATTS Richard J
Sent: Thursday, 25 February 2016 8:21 AM
To: SLIZANKIEWICZ Veronica
Cc: CUMMINS Melissa; SCHOLL Russel; BAUER Bartley; Andrew Wilson; 'David Larkings'
Subject: FW: Oakey PFC Contamination

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I have sought advice from SFPQ and Qhealth on what the likely scenarios will be is food and feed if the biota sampling indicates contamination.

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To: WATTS Richard J

Cc: SCHOLL Russel
Subject: RE: Oakey PFC Contamination

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Mel

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Sent: Thursday, 18 February 2016 5:59 PM
To: CUMMINS Melissa; WATTS Richard J; LANCASTER Michael; DINESEN Zena; WAIDE Carly; HINCKFUSS Michelle; HARRIS Graham; KIND Peter K; KITSON Sacha
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Please contact either Veronica or myself if you have any questions or suggestions.

Thanks in advance for your help with this.

Regards



**Queensland
Government**

Richard Routley
Regional Director, South Region
Department of Agriculture and Fisheries

T 07 4688 1121 M [redacted] E richard.routley@daf.qld.gov.au W www.daf.qld.gov.au
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RTI Release

David Larkings

From: David Larkings
Sent: Friday, 26 February 2016 9:53 AM
To: Sophie Dwyer; Suzanne Huxley; Janet Cumming; Uma Rajappa; Greg Jackson
Cc: Tenille Fort
Subject: FW: Oakey PFC Contamination

For your information.

From: SLIZANKIEWICZ Veronica [mailto:Veronica.Slizankiewicz@daf.qld.gov.au]
Sent: Thursday, 25 February 2016 8:54 AM
To: WATTS Richard J
Cc: CUMMINS Melissa; SCHOLL Russel; BAUER Bartley; Andrew Wilson; David Larkings
Subject: RE: Oakey PFC Contamination

Hi Dick,
 Thank you so much for putting all of this together. If I have any further questions I will be in touch.
 Kind regards
 Veronica

From: WATTS Richard J
Sent: Thursday, 25 February 2016 8:21 AM
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Cc: CUMMINS Melissa; SCHOLL Russel; BAUER Bartley; Andrew Wilson; David Larkings
Subject: FW: Oakey PFC Contamination

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David Larkings

From: David Larkings
Sent: Tuesday, 23 February 2016 11:01 AM
To: 'WATTS Richard J'
Cc: Tenille Fort; Cameron Bright; Janet Cumming; Sophie Dwyer
Subject: RE: PFOS and the Food Act

Hi Richard

Our position is that PFOS would be considered 'unsuitable' under the *Food Act 2006*. Our only mechanism to enforce this currently is prosecution.

Regards,
David

David Larkings
Advanced Environmental Health Officer
Food Safety Standards and Regulation Unit
Health Protection Branch | Prevention Division
Department of Health | Queensland Government
PO Box 2368, Fortitude Valley BC QLD 4006
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Queensland Health acknowledges the Traditional Owners of the land, and pays respect to Elders past, present and future.

From: WATTS Richard J [mailto:Richard.Watts@daf.qld.gov.au]
Sent: Monday, 22 February 2016 7:16 AM
To: David Larkings
Cc: Tenille Fort
Subject: RE: PFOS and the Food Act

David

Thank you for the reply.

Under AECOM biota sampling protocol, food will be tested for PFOS, PFOA and a range other more minor perfluorinated analogues. DAWR has written to FSANZ seeking guidance values for PFOS and PFOA. Based on animal transfer studies and expected guidance values, I am anticipating that the food commodities will be considered 'safe' but have some level of contamination.

If I am reading this correctly, the legislative consideration of whether the food can be legally sold hinges on whether the contaminant is foreign to the nature of food.

PFCs are reasonably ubiquitous at low levels in the environment and even arise from treated cooking surfaces and in food packaging.

(https://www.niehs.nih.gov/health/materials/perflourinated_chemicals_508.pdf). Accordingly PFCs occur in

food so in one sense they are not foreign in food. However, in another sense, PFCs are foreign to food as they do not arise from food itself but from contamination of food.

Do you have any examples for contaminants of 'foreign to the nature of food' has been previously been applied. Other compounds such as brominated flame retardants and dioxins spring to my mind as similar in the context in that they can contaminate food.

regards

Dick Watts

Principal Scientific Advisor and Qld AgVet Chemical Coordinator
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Department of Agriculture and Fisheries

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From: David Larkings [<mailto:David.Larkings@health.qld.gov.au>]
Sent: Friday, 19 February 2016 5:33 PM
To: WATTS Richard J
Cc: Tenille Fort
Subject: PFOS and the Food Act

Hi Richard

As you know PFOS is not listed in Standard 1.4.1 of the Australia New Zealand Food Standards Code as a contaminant. As such the Food Standards Code cannot be used to prevent or restrict the sale of food contaminated with it.

A revised version of the Food Standard Code commences on 1 March 2016. The revised Standard 1.4.1 includes the following note (#4) which may be useful for you:

Limits have been set under this Standard when it has been determined that there is a potential risk to public health and safety if the prescribed limits are exceeded, that should be managed by a standard. This Standard is to be read in the context of the requirements imposed in the application Acts that food must be safe and suitable for human consumption. For example, the concentration of contaminants and natural toxicants should be kept as low as reasonably achievable.

The revised Food Standards Code is available from <http://www.foodstandards.gov.au/code/Pages/Food-Standards-Code-from-1-March-2016.aspx>.

There are offences in the Food Act 2006 for the handling and sale of unsafe food and unsuitable food.

The definition of unsuitable food includes:

- (1) Food is **unsuitable** if it is food that-
 - (d) contains a biological or chemical agent, or other matter or substance, that is foreign to the nature of the food.
- (2) However, food is not unsuitable merely because-
 - (b) it contains a metal or non-metal contaminant (within the meaning of the Food Standards Code) in an amount that does not contravene the permitted level for the contaminant as stated in the food standards code); or
 - (c) it contains a matter or substance permitted by the food standards code.

As such it could possibly be argued that contaminated food is unsuitable but we may need to further consider if it is 'foreign to the nature of the food'.

A toxicological assessment may be needed to determine if a food contaminated with PFOS was unsafe. As you know this would need to consider many factors including the chemical, the amount present, the food, how much would be eaten, the frequency of consumption etc.

Another consideration could be section 216 and 217 of the Food Act which deal with emergency powers. Under s216 the chief executive can make an order if it is necessary to 'prevent or reduce the possibility of a serious danger to public health or mitigate the adverse consequences of a serious danger to public health. Under s217, the order can 'prohibit the cultivation, taking, harvesting or obtaining, from a stated area, of a particular food or type of food or other primary produce intended to be used for human consumption'. However, this once again comes back to assessing whether there is a risk to public health.

Regards,
David

David Larkings
Advanced Environmental Health Officer
Food Safety Standards and Regulation Unit
Health Protection Branch | Prevention Division
Department of Health | Queensland Government
PO Box 2368, Fortitude Valley BC QLD 4006
t. 07 332 89328
After hours oncall:
e. david.larkings@health.qld.gov.au | www.health.qld.gov.au/foodsafety



Queensland Health acknowledges the Traditional Owners of the land, and pays respect to Elders past, present and future.

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From: [Louise Mahoney](#)
To: paul.sanders@dnrm.qld.gov.au; [Jeannette Young](#); [CHO ESO](#); [Sophie Dwyer](#); [Penny Hutchinson](#); [CONNOR Andrew](#); Chris.Hill@ehp.qld.gov.au
Cc: [SLIZANKIEWICZ Veronica](#); [Brian Witherspoon](#); [Christine Castley](#)
Subject: FW: Seeking advice from Oakey IDC
Date: Monday, 9 November 2015 4:19:24 PM
Attachments: [image001.png](#)
[image002.png](#)
[image004.png](#)
[image005.jpg](#)
[CTS 26809-15 Incoming.pdf](#)
[Letter to Shine 09 11 15.docx](#)

Good Afternoon

For your information and advice if necessary: Shine Lawyers has written to the DG of DAF requesting advice on requirements for vendor declarations for livestock, and what levels of chemicals would be considered 'unacceptable'.

DAF has drafted a response, and it is provided for your information and comment if appropriate at the second attachment.

Please provide any feedback direct to Veronica by **12pm tomorrow** (Tuesday 10 November).

Sophie, I draw your attention in particular to the reference to the Food Standards Code in answer to question 3.

I anticipate that DAF's DG brief on this correspondence will indicate the agencies on this distribution have been consulted.

Regards
Louise

Louise Mahoney

A/Director

Social Policy

Department of the Premier and Cabinet

P 07 3003 9353

Executive Building, Level 14, 100 George Street, Brisbane QLD 4000

PO Box 15185, City East, QLD 4002

From: SLIZANKIEWICZ Veronica [mailto:Veronica.Slizankiewicz@daf.qld.gov.au]

Sent: Monday, 9 November 2015 4:07 PM

To: Louise Mahoney <Louise.Mahoney@premiers.qld.gov.au>

Cc: bwitherspoon@safefood.qld.gov.au

Subject: Seeking advice from Oakey IDC

Hi Louise,

I have attached a letter we have received from Shine Lawyers, requesting some advice

for landholders. I have also attached a draft response back. I would appreciate if you could forward this onto other IDC members for their input. Unfortunately I have a very tight turn around on this.

If I could have any feedback no later than **12pm tomorrow** I would appreciate it. Can you please send this through to the relevant people on my behalf.

Veronica Slizankiewicz
a/Manager, Resources and Planning
Regions & Industry Development
Department of Agriculture and Fisheries

203 Tor Street Toowoomba Queensland 4350
PO Box 102 Toowoomba Queensland 4350
t: +61 7 4688 1583 m:
f: +61 7 4688 1199
e: veronica.slizankiewicz@daf.qld.gov.au
w: www.daf.qld.gov.au Customer Service Centre: 13 25 23

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Office of the Director-General
Department of Agriculture and Fisheries

URGENT

To: R & ID; cc Alison Magarity

ACTION REQUIRED:

- For information
- Appropriate action within business group
- DG response
- DG briefing note
- Please liaise with: _____

GTS: 26/09/15

Forward to ESU by

3pm 10/11/15

Comments: D-G briefing note & reply requested

RTI Released

CONTACT:
CONTACT EMAIL:
OUR REF:

Oakey Groundwater Team
landholderlaw@shine.com.au
9335589

 **SHINE LAWYERS**
RIGHT WRONG.

5 November 2015

CTS: 26809/15
eDOCS: _____

Office of the
Director General
06 NOV 2015
RECEIVED

The Chief Executive
Department of Agriculture and Fisheries
GPO Box 46
BRISBANE QLD 4001

Dear Chief Executive,

Oakey Groundwater Contamination

We represent 46 individuals (all of whom are residents of Oakey) in connection with the matter of the spread of perfluorochemical (PFC) contaminants emanating from the Army Aviation Centre at Oakey in Queensland ("the Base").

You may be aware that in July 2014 the Department of Defence announced that the perfluorochemicals PFOS and PFOA (constituents of a type of firefighting foam said to have been discharged in bulk quantities over wide areas of the Base between 1977 to 2003) have been found in elevated concentrations in groundwater, both on and off the Base and apparently extending in a plume in the groundwater several kilometres from the Base.

Defence has subsequently advised that the contamination has been found in drainage channel sediments and water ways as well as in groundwater off of the base and affects an area in the order of 24 square kilometres at Oakey including much private irrigation and grazing land and capturing several hundred private water bores and several kilometres of Oakey Creek traversing private property.

There is significant scientific opinion to the effect that PFOS and PFOA are persistent, bioaccumulative and potentially hazardous.

Earlier this year a small number of Oakey residents were blood tested by private arrangement and the results found PFOS, PFOA and PFHXS in unusually elevated concentrations (some of the results were 30 to 60 times greater than the Australian average) in the serum of the participants (some of whom have indicated that they have not been in the practice of drinking the bore water but have consumed locally produced food).

Defence subsequently arranged a wider program of blood testing and the results here appear to largely confirm the earlier findings.

Shine Lawyers Pty Ltd
ABN 86134702757
PO Box 667, Dalby Qld 4405
33a Archibald Street, Dalby Qld 4405
Phone: 07 4662 5977
Fax: 07 4662 3196
www.shine.com.au

13 11 00 66134702757.AU

Among our clients are a number of livestock growers and cultivators producing fodder crops, all of whom rely on ground water or surface water sourced at Oakey to supply their operations.

You will appreciate that livestock growers are required to complete vendor declarations when selling their livestock. We note that none of the questions on current MLA vendor declarations relate specifically to PFCs and to date we have not identified any guidance from your agencies on the issue of PFC contamination in livestock or meat.

We note however the advice of MLA as follows:

"The repercussions of selling livestock with unacceptable levels of persistent chemicals may include failure to be paid for the livestock, and possible legal liability for the resulting costs faced by processors and the rest of the supply chain."

On behalf of our grazing and cultivation clients we request that you let us know as a matter of urgency:

1. when completing their vendor declarations, what if any disclosures do our clients need to make specifically in regard to the risk of PFC contamination of their livestock (in particular bovines, sheep and lambs) grown at Oakey in or near the PFC contamination plume identified by the Department of Defence;
2. what measures should our grazing and cultivation clients be taking in respect of the risk of PFC contamination of their livestock at Oakey (To date, the advice from the Department of Defence to Oakey residents is encapsulated as follows: "The only recommendation made by Defence is a precautionary recommendation to not drink bore water.");
3. what levels of PFC contamination in livestock (in particular bovines, sheep and lambs) are currently regarded as "unacceptable" (we understand that PFCs may concentrate in certain tissues – e.g. liver - while being at lower levels in others).

We would appreciate an urgent response given the importance of these issues to our clients.

Regards,



SHINE LAWYERS

CC:

1. The Chief Executive
Department of Agriculture and Water Resources
GPO Box 858
CANBERRA CITY ACT 2601
2. The Chief Executive
National Residue Survey
GPO Box 858
CANBERRA ACT 2601
3. The Chief Executive
Australian New Zealand Food Regulation Ministerial Council
PO Box 4
WODEN ACT 2606
4. The Chief Executive
Food Standards Australia New Zealand
PO Box 7186
CANBERRA BC ACT 2610
5. The Chief Executive
Australian Pesticides and Veterinary Medicines Authority
PO Box 6182
KINGSTON ACT 2604
6. The Chief Executive
SAFEMEAT
18 Marcus Clarke Street
CANBERRA ACT 2600
7. The Chief Executive
AUS-MEAT Limited
PO Box 3403
TINGALPA DC QLD 4173
8. The Chief Executive
Meat and Livestock Australia
PO Box 1961
NORTH SYDNEY NSW 2059

Name:	Action Officer AO Name	General Manager GM Name	Initials	BOM member BOM Member	Initials
Business Unit:	AO Business Unit	GM Business Unit		BOM Business Group	
Telephone:	AO Phone xxxx xxxx	GM Phone xxxx xxxx	! !	BOM Phone xxxx xxxx	! !
Date:	Insert Date eg 13 July 2006				
EA Name:	EA/Typist Name	EA Telephone EA phone xxxx xxxx		File No: eDOCS File	

Reference: CTS 26809/15

Mr Peter Shannon
Partner
Shine Lawyers Pty Ltd
PO Box 667
DALBY QLD 4405

Dear Mr Shannon

Thank you for your letter of 5 November 2015 concerning Oakey groundwater contamination in connection with the Army Aviation Centre.

We note the concerns of your clients and provide the following responses to your questions, in the order set out in your letter.

1. National Vendor Declarations are part of an industry program that assures domestic and international markets of food safety and product integrity. Your clients would need to declare on the form if, in the previous six months, any of the animals have been on a property listed on the Extended Residue Program database or placed under a State Government restriction for chemical residues or contaminants. There are no Queensland agricultural properties with a status on the Extended Residue Program database related to perfluorinated compounds, nor have any been quarantined for perfluorinated compounds.
2. It is our understanding that:
 - (a) the Department of Defence is currently undertaking a human health and ecological risk assessment, which will include the testing of animals and crops that are part of the human food chain; and
 - (b) the Department of Defence will inform landholders and residents if it obtains any information from its ongoing investigations which indicates that using groundwater for irrigation of crops and watering livestock should cease.

In this context, we suggest that you seek further information in relation to this query from the Department of Defence.

Floor 8
Primary Industries Building
80 Ann Street Brisbane
GPO Box 46 Brisbane
Queensland 4001 Australia
Business Centre 13 25 23
Website
www.daf.qld.gov.au
ABN 66 934 348 189

3. Under the *Stock Act 1915* and *Stock Regulation 1988*, 'residue disease' may occur when a chemical residue is present in the tissues of stock in excess of a concentration stipulated in the Australia New Zealand Food Standards Code, part 1.4, standard 1.4.1. You should undertake your own review of this code (which is publicly available) and make further inquiries as necessary, but it is our understanding that there are no maximum limits set for perfluorinated compounds in this code.

If you require any further information, please contact Veronica Slizankiewicz on telephone 07 46881583 or email veronica.slizankiewicz@daf.qld.gov.au.

Yours sincerely

Jack Noye
Director-General
Department of Agriculture and Fisheries

At/Enc

RTI Release

AGENDA

Defence / Southern Queensland Working Group
Friday 28 August 2015

Level 13, Executive Building, 100 George Street, Brisbane

Time	No.	Item	Lead
		s.73	
1000	4	Existing Project / Activity Updates ² <ul style="list-style-type: none"> • Defence (DSRG, DNL) <ul style="list-style-type: none"> ○ Oakey water contamination s.73	Nominated Personnel

s.73

RTI RELEASE

Planned Attendees:

Defence:

Mr David Neumann	JLC, Director National Logistics (co-chair)
Mrs Lorraine Garlin	EIG, Acting Director Estate Planning QLD.
WGCDR Tony Blair	RAAF, Amberley Air Base Executive Officer
LT COL Alby Hughes	Army, SO1 Force Modernisation 7 Bde
CMDR Peter Tedman	Navy, Commanding Officer Naval HQ, Southern Queensland
CMDR Rob Donovan	JLC, Deputy Director National Logistics (Maritime) (Secretary)

Queensland Government:

Mr Craig Rutledge	Department of State Development, (DSD), Executive Regional Director (South) (co-chair)
Mr Mal Lane	Director, Defence Industries Queensland (DIQ) DSD
Mr Lindsay Pears	DSD QLD Defence Industry Envoy
Mr Julian Evans	Premier and Cabinet, Intergovernmental Relations
Mr Robert Tuttici	Transport and Main Roads (DTMR), Prog Planning & Corridor Management
Ms Joanne Trienen	DSD, QLD Defence Industries Queensland
Mr John Brun	Manager Land Planning and Development, EDQ/DSD
Ms Roslyn Hooper	Natural Resources and Mines (DNRM), Manager Land Services
Ms Sophie Dwyer	Executive Director, Health Protection Unit, Queensland Department of Health

**MINUTES OF A MEETING OF
THE SOUTHERN QUEENSLAND DEFENCE / GOVERNMENT WORKING GROUP,
HELD AT EXECUTIVE BUILDING, 100 GEORGE STREET, BRISBANE,
ON FRIDAY 12 SEPTEMBER 2014**

Attendees:

Defence Members

Mr David Neumann	Director, National Logistics (co-chair)
Ms Debbie Richards	Director Estate Planning (Qld)
Mr Neil Andrews	Regional Manager Defence Support
WGCDR S. Nickson	XO RAAF Amberley
LCDR Mark Tandy	XO NHQ-SQ
CMDR David Luck	Deputy Director National Logistics - Maritime (secretary)

Defence Observers

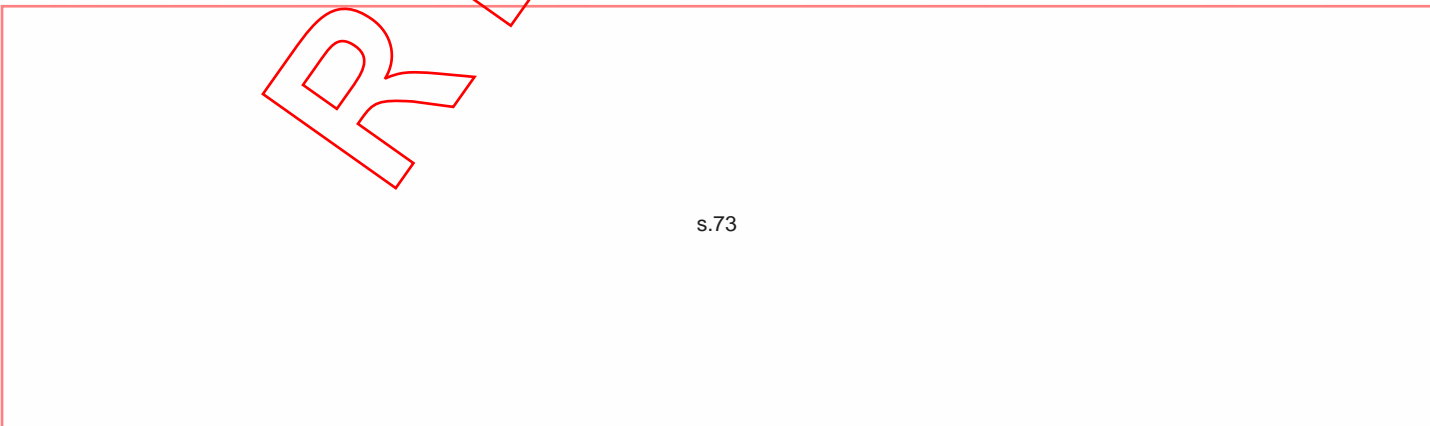
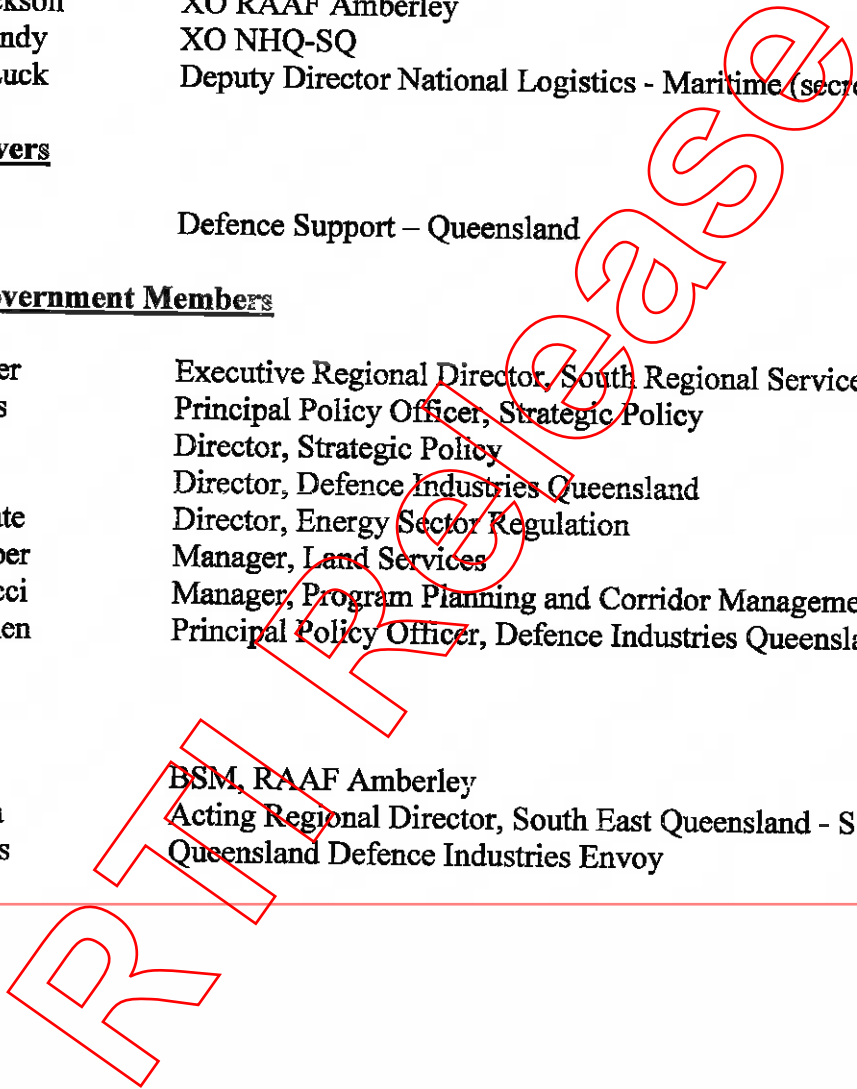
Mr Shane Dare	Defence Support – Queensland
---------------	------------------------------

Queensland Government Members

Ms Sarah Buckler	Executive Regional Director, South Regional Services (co-chair)
Mr. Julian Evans	Principal Policy Officer, Strategic Policy
Mr Wade Lewis	Director, Strategic Policy
Mr Mal Lane	Director, Defence Industries Queensland
Mr Shaun Leggate	Director, Energy Sector Regulation
Ms Roslyn Hooper	Manager, Land Services
Mr Robert Tutticci	Manager, Program Planning and Corridor Management
Ms Joanne Trienen	Principal Policy Officer, Defence Industries Queensland

Apologies

Mr M. Clarke	BSM, RAAF Amberley
Mr Gary Krishna	Acting Regional Director, South East Queensland - South
Mr Lindsay Pears	Queensland Defence Industries Envoy



RTI Release

s.73

s.73

Agenda Item 5. Army Aviation Centre Oakey

11. Ms Richards advised that there are no land acquisition issues around Oakey. The current issue relates to water contamination, which has been subject of recent media attention. Local residents have been advised not to drink bore water. There is contaminated water leaking from Oakey into underground water and investigations continue to resolve the matter.

s.73

RTI Release

s/73

s.73

S. BUCKLER
Executive Regional Director
South Regional Services
Queensland Government co-chair

December 2014

D. C. NEUMANN
Director, National Logistics
Joint Logistics Command
Defence co-chair

December 2014

Annex:

A. Action Matrix

s.73

RTI Release

**Annex A to
Minutes of the Southern Queensland Defence / Government Working Group
of 12 Sep 2014**

ACTION MATRIX

No.	Action	Lead
	s.73	
6/14	Provide update on Oakey water contamination issue.	DEF
	s.73	

RTI Release

**Defence / Southern Queensland Working Group
Friday 20 February 2015
Level 13, Executive Building, 100 George Street, Brisbane.**

Defence:

Mr David Neumann	JLC, Director National Logistics (co-chair)
Ms Debbie Richards	DSRG, Director Estate Planning QLD
WGCDR Tony Blair	RAAF, Amberley Air Base Executive Officer
LT COL Alby Hughes	Army, SO1 Force Modernisation 7 Bde
CMDR Peter Tedman	Navy, Commanding Officer Naval HQ, Southern Queensland
Mrs Meredith Apps	Navy, Deputy Director Navy Infrastructure and Plans
CMDR Rob Donovan	JLC, Deputy Director National Logistics (Maritime) (secretary)

Queensland Government:

Mr Craig Rutledge	State Development, Infrastructure and Planning (DSDIP), Executive Regional Director (South) (co-chair) – by phone
Mr Lindsay Pears	DSDIP, QLD Defence Industry Envoy
Mr Julian Evans	Premier and Cabinet, Intergovernmental Relations
Mr Robert Tuttici	Transport and Main Roads (DTMR), Prog Planning & Corridor Management Ms Joanne Trienen, DSDIP, QLD Defence Industries Queensland
Ms Natasha Neale	Premier and Cabinet, Intergovernmental Relations
Ms Roslyn Hooper	Natural Resources and Mines (DNRM), Manager Land Services
Mr Warwick Williams	DTMR, State Wide Heavy Vehicles – by phone

RTI REQUEST

s.73

- b. SQCF 6/14 – Provide an update on the Oakey water contamination issue. In-ground contamination at Oakey Base has been ongoing since 2010 and has now spread outside of the Defence estate. To date, 99 off-site bore holes have been tested, of which 36

have shown some chemical contamination. These locations have been provided with alternate water supplies and Defence has conducted a number of community information sessions to keep the local population informed. Defence is seeking to actively manage the situation and has initiated a programme to test individuals in advance of anticipated compensation claims. The contamination has so far been restricted to bore holes and has not been identified in dams, rivers or ground water, so it is understood that livestock has not been affected.

Supporting Action: SQCF 6/14 – Ms Richards to update the Consultative Forum.

RTI Release

s.73

s.73
RTI Release

s.73

RTI Release

11. Date of Next Meeting. Friday 28 August 2015.



C RUTLEDGE
Executive Regional Director (South)
Dept of State Development, Infrastructure and Planning
Queensland Government Co-Chair

April 2015

D C NEUMANN
Director National Logistics
Joint Logistics Command
Defence Co-Chair

April 2015

Annexes:

- A. Consultative Forum and Working Group Action Matrix
- B.

s.73

RTI Release

Defence and Southern Queensland Group Action Matrix

Consultative Forum Actions

= Action Arising at WG

No.	Action	Lead
SQCF1/14		
SQCF2/14		
SQCF3/14		
SQCF4/14		
SQCF5/14		
SQCF6/14	Provide update on Oakey water contamination issue.	Def
SQCF7/14		
SQCF8/14		
SQCF9/14		

SQ Working Group Actions

No.	Action	Lead

RTI RELEASES

Page 39 redacted for the following reason:

s.73 - irrelevant to application


RTI Release

Greg Jackson

From: Hughes, Rebecca (EPA) <Rebecca.Hughes@sa.gov.au>
Sent: Friday, 26 June 2015 2:47 PM
To: Greg Jackson
Subject: RE: Perfluorinated chemical contamination

Hi Greg,
Please find Joyti's contact details as discussed.
Regards,
Rebecca

Dr Joytishna N Jit
Research Associate, Best Practice Policy


CROCARE | *A safer, cleaner environmental future*
Cooperative Research Centre for Contamination Assessment and Remediation of the Environment
Building X | University of South Australia | Mawson Lakes SA 5095 | Australia
tel +61 8 8302 6264 | mobile

www.crccare.com | [business card](#) | [map](#) | joytishna.jit@crccare.com   

Rebecca Hughes
Principal Adviser, Site Contamination
Phone (08) 8204 2066 | Fax (08) 8124 4673 | Mobile 0401 719 952

Environment Protection Authority
GPO Box 2607, Adelaide, S.A. 5001, AUSTRALIA



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From: Greg Jackson [mailto:Greg.Jackson3@health.qld.gov.au]
Sent: Monday, 22 June, 2015 2:19 PM
To: Delaere, Ian (Health); Hughes, Rebecca (EPA)
Cc: Boyce, Wendy (EPA)
Subject: RE: Perfluorinated chemical contamination

Ian

Thanks for that. Happy to hear of any info on contamination from these perfluorinated chemicals, especially if contamination moved off-site. In our particular case, the groundwater plume with these chemicals moved off the air base and towards a town (where some people drank the groundwater untreated) and an abattoir.

Regards

Greg

Greg Jackson PhD

Director | Water Team

Health Protection Unit | Chief Health Officer Branch | Health Service and Clinical Innovation Division

Department of Health | Queensland Government

Level 1, 15 Butterfield Street, Herston, Brisbane, 4006 | PO Box 2368, Fortitude Valley, 4006

t. 07 3328 9345

m.

f. 07 3328 9354

e. greg.jackson3@health.qld.gov.au | www.health.qld.gov.au

From: Delaere, Ian (Health) [<mailto:Ian.Delaere@sa.gov.au>]

Sent: Monday, 22 June 2015 2:45 PM

To: Greg Jackson; Hughes, Rebecca (EPA)

Cc: Boyce, Wendy (EPA)

Subject: FW: Perfluorinated chemical contamination

Greg,

I have spoken with Rebecca and Wendy at our EPA.

If there is information available from the environment sector they may be able to be of assistance.

Kind regards,

Ian

From: Delaere, Ian (Health)

Sent: Monday, 22 June 2015 11:07 AM

To: Vickers, Andrew (Health)

Cc: 'Greg Jackson'

Subject: RE: Perfluorinated chemical contamination

Greg,

In the groundwater space there has been limited testing in South Australia altho s.73

s.73

SA Health, to the best of my knowledge has not been involved.

I can try and track down a helpful person from our EPA if this will be of assistance.

Kind regards

I

Dr Ian Delaere | Manager - Toxicology
Scientific Services |
Public Health Services | Public Health & Clinical Systems
SA Health | Government of South Australia
Level 1 | Citi Centre Building | 11 Hindmarsh Square | Adelaide | SA | 5000
DX 243 Mail: PO Box 6 | Rundle Mall | Adelaide | SA | 5001
T +61 8 8226 7665 | F +61 8 8226 7102 | M + [redacted] | E Ian.Delaere@sa.gov.au
www.health.sa.gov.au

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From: Vickers, Andrew (Health)
Sent: Monday, 22 June 2015 10:44 AM
To: Delaere, Ian (Health)
Cc: 'Greg Jackson'
Subject: FW: Perfluorinated chemical contamination

Hi Ian

This sounds like it may be up your alley. Can you help Greg with his enquiry or direct him to someone who may be able to?

Kind regards

Andrew Vickers | Environmental Health Officer
Public Health Services | Public Health & Clinical Systems
SA Health | Government of South Australia
Level 1 | Citi Centre | 11 Hindmarsh Square | Adelaide | SA | 5000
DX 243 Mail: PO Box 6 | Rundle Mall | Adelaide | SA | 5000
www.sahealth.sa.gov.au

tel +61 8 8226 7159
fax +61 8 8226 7102
andrew.vickers@sa.gov.au

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From: Greg Jackson [<mailto:Greg.Jackson3@health.qld.gov.au>]
Sent: Friday, 19 June 2015 3:55 PM
To: Xavier.schobben@nt.gov.au; Lease, Chris (Health); stuart.heggie@dhhs.tas.gov.au; Sophie Dwyer; WSMIT@doh.health.nsw.gov.au; lyndell.hudson@act.gov.au; Graeme.gillespie@health.vic.gov.au; jim.dodds@health.wa.gov.au
Cc: Sophie Dwyer; Janet Cumming; Rebecca Richardson; Vickers, Andrew (Health)
Subject: Perfluorinated chemical contamination

Dear Colleagues,

Sophie Dwyer has asked me to contact all of you to assist with a current issue we are dealing with. Queensland Health is assisting the Department of Defence in its investigation of groundwater contamination with perfluorinated

chemicals (PFCs) resulting from firefighting training at the Army Aviation Centre at Oakey in southern Queensland (<http://www.defence.gov.au/id/oakey/>).

We are aware that similar PFC contamination has been recorded at other sites around Australia, including Fiskville in Victoria (<http://www.abc.net.au/news/2015-06-15/water-deliberately-contaminated-at-fiskville-base-inquiry-hears/6547462>), but we would particularly like to know the extent of such issues in other jurisdictions, and whether there are any ongoing investigations, such as at Fiskville. The focus of our interest is primarily on **off-site** impacts rather than on-site or occupational health exposures, such as the cancers that have been associated with the fire station at Success (a suburb of Perth) or the Monash Firefighters Health Study.

There is some urgency associated with our enquiries on this issue so I would be very grateful if you could inform us, by phone or email, of any information you hold, which you are able to share with us.

Thank you very much (in advance) for your assistance in this matter.

Regards

Greg

Greg Jackson PhD

Director | Water Team

Health Protection Unit | Chief Health Officer Branch | Health Service and Clinical Innovation Division
Department of Health | Queensland Government

Level 1, 15 Butterfield Street, Herston, Brisbane, 4006 | PO Box 2368, Fortitude Valley, 4006

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EDHPU

Subject: Oakey Interagency meeting
Location: Meeting Room 3.3, Level 3, 15 Butterfield Street Herston
Start: Fri 26/06/2015 12:00 PM
End: Fri 26/06/2015 3:30 PM
Recurrence: (none)
Meeting Status: Meeting organizer
Organizer: EDHPU
Required Attendees: Sophie Dwyer; 'Lindsay.Delzoppo@ehp.qld.gov.au'; 'Elton.Miller@daf.qld.gov.au'; 'Allison.Crook@daf.qld.gov.au'; 'paul.goldsbrough@justice.qld.gov.au'; 'Chris.hill@ehp.qld.gov.au'; 'Richard.watts@daf.qld.gov.au'; 'Paul.sanders@dnrm.qld.gov.au'; 'Jason.chavasse@dnrm.qld.gov.au'; 'Barbara Wilson'; 'louise.mahoney@premiers.qld.gov.au'
Optional Attendees: Penny Hutchinson; Peter Boland; Greg Jackson; Janet Cumming; Rebecca Richardson; Suzanne Huxley; DDHHS; DDHHS-RHAC; Hwee Sin Chong; Matthew Boyd; COM Western; Phil Pond; Rick Jacobson; GLEESON Kelly

→ Peter & Penny coming + 1 area Manager

Good morning,

The Health Protection Unit is currently collaborating with the Department of Defence in the coordination of a response to the PFOS contaminated groundwater at Oakey. In order to formulate a long term health plan for the affected Oakey community it would be beneficial to hold an inter-agency round table discussion. The purpose is to clarify the current situation, roles, and future programs for each of the involved agencies.

You are invited to attend a meeting at the offices of the Health Protection Unit, at 15 Butterfield Street, Herston on Friday 26 June 12 noon. Lunch will be provided.

If you require a car parking space please let us know as early as possible.

Regards
Myra

Myra Thompson
 Executive Support Officer
 Health Protection Unit | Chief Health Officer Branch
 Health Service & Clinical Innovation Division
 Department of Health | Queensland Government
 Level 3, 15 Butterfield Street
 HERSTON QLD 4006
 t. 07 3328 9268
 e. myra.thompson@health.qld.gov.au | www.health.qld.gov.au



Rebecca Richardson

From: Rebecca Richardson
Sent: Wednesday, 24 June 2015 10:44 AM
To: Sonya Bennett; Jeannette Young; Peter Boland; Penny Hutchinson; Suzanne Huxley; Janet Cumming; Greg Jackson; Sophie Dwyer
Subject: Oakey groundwater contamination - Sitrep attached
Attachments: Sitrep1 120615 (2).doc

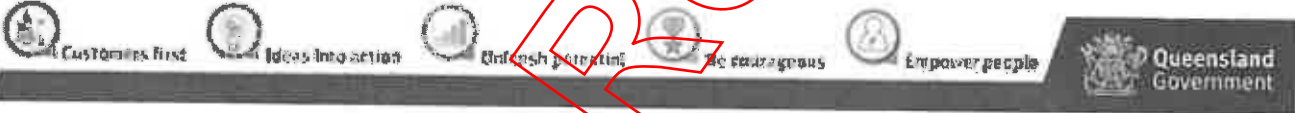
Hi all,

Please find attached the Sitrep relating to the groundwater contamination at Oakey.

Regards
Rebecca

Rebecca Richardson
 A/Senior Environmental Health Officer
 Water Team, Health Protection Unit
 Chief Health Officer Branch
 Department of Health
 Level 3, 15 Butterfield Street, Herston QLD 4006
 PO Box 2368
 Fortitude Valley BC QLD 4006

Telephone: 07 3328 9348
 Fax: 07 3328 9354
 email: Rebecca.richardson@health.qld.gov.au | www.health.qld.gov.au



RTI Release



IN CONFIDENCE
State Health Emergency Coordination Centre
Situation Report

Date: 23 June 2015 **Time:** 1700 **Report Number:** 1

Prepared by: Rebecca Richardson, HPU **Approved by:** Sophie Dwyer, ED, HPU

Description of Incident: Perfluorinated chemicals (PFCs) have contaminated groundwater with Aqueous Film Forming Foams (AFFFs) at the Army Aviation Centre Oakey (AACO), administered by the Department of Defence (DoD).

Plan Activated: None

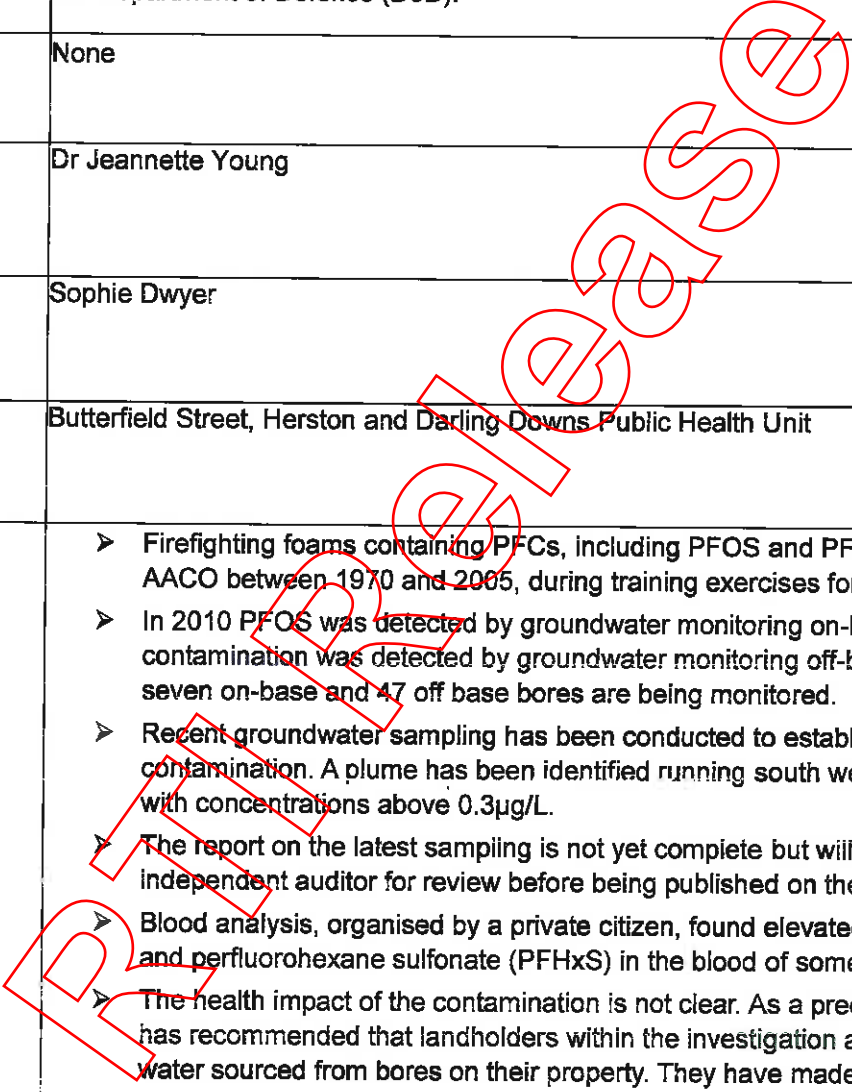
State Health Coordinator (If activated): Dr Jeannette Young

Health Incident Controller: Sophie Dwyer

HEOC Locations: Butterfield Street, Herston and Darling Downs Public Health Unit

Current Situation Update Summary (since last SitRep)

- Firefighting foams containing PFCs, including PFOS and PFOA, were used at AACO between 1970 and 2005, during training exercises for firefighters.
- In 2010 PFOS was detected by groundwater monitoring on-base, and in 2013 contamination was detected by groundwater monitoring off-base. Currently seven on-base and 47 off base bores are being monitored.
- Recent groundwater sampling has been conducted to establish the extent of contamination. A plume has been identified running south west from the base with concentrations above 0.3µg/L.
- The report on the latest sampling is not yet complete but will be given to an independent auditor for review before being published on the DoD website.
- Blood analysis, organised by a private citizen, found elevated levels of PFOS and perfluorohexane sulfonate (PFHxS) in the blood of some residents.
- The health impact of the contamination is not clear. As a precaution, the DoD has recommended that landholders within the investigation area do not drink any water sourced from bores on their property. They have made a commitment to undertake a further human health risk assessment to fully understand the community's exposure and risk.
- Further work will be also be undertaken to assess the contamination on the base, pathways to the aquifer and hydrogeology of the area.
- There is no current impact on the reticulated water supply for Oakey, as the water is currently sourced from Toowoomba. When the Oakey bores have been used in the past, the water has been treated by reverse osmosis.
- There are a number of farms and an abattoir in the contamination area. It is not clear if contaminated ground water is used at these sites.



	<ul style="list-style-type: none"> ➤ Validation of the blood tests collected by Sullivan Nicolaides has been confirmed with Jochen Muller of Entox whose lab at Entox will be analysing future blood samples. Entox are considered world leading experts on PFOS analysis in blood samples. Pooled samples of Australian origin are being used as reference points. Samples are cross validated with International laboratories including CDC. 10% of blood samples will be sent to the National Measurement Institute for validation. ➤ Entox believe that exposure to PFOS may be from sources other than drinking contaminated bore water due to elevated blood concentrations found outside the 'plume' area, and in members of the community who do not drink bore water. ➤ The extraction of epidemiological data on cancer has been deemed to be of minimal value due to the lack of scientific evidence relating to PFOS and site specific cancers, occupational studies have been on less than 10,000 and the affected population is small.
Media Management & Public Information	<ul style="list-style-type: none"> ➤ DoD have undertaken regular community briefings and appear to have been open and transparent throughout their investigation. ➤ As the long term impact of PFOS is unknown due to its half-life of up to eight years in humans and a lack of long term studies, regular low level frequent communications are proposed, updating residents on progress and up to date scientific information.
Ongoing Strategy & Planned Actions (This ongoing section is to be completed on a weekly basis)	<p>12 June 2015</p> <ul style="list-style-type: none"> ➤ An Inter-agency meeting is to take place with representatives from DEHP, DAF, SFPQ and DNRM within the next two weeks to discuss the issues at hand and devise a whole of Government approach. ➤ Due to anxiety in the affected community, as a result of a lack of knowledge on the long term health impacts, Penny Hutchinson will discuss with Ian Gardner (DoD) about issuing individual blood results with comprehensive explanatory information. ➤ Penny Hutchinson will arrange with Jochen Müller to discuss the issue with GPs prior to the release of the blood results. ➤ Develop a long term management plan for the affected Oakey community with the objective being to prevent future exposure to PFOS/PFOA. This will become clearer after the Inter-agency meeting. Research will be undertaken to identify if there are any existing occupational exposure management plans. Contact Air Services Australia and the authors of the Monash study on firefighters. The plan will be discussed with DoD. ➤ CHO has requested information on PFC contamination in other Australian jurisdictions. These have been contacted and information requested.



The Hon Dr Anthony Lynham MP
Minister for State Development and
Minister for Natural Resources and Mines

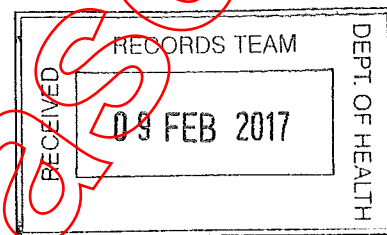
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Ref CTS 25569/16

- 6 DEC 2016

The Honourable Cameron Dick MP
Minister for Health and Minister for Ambulance Services
GPO Box 48
BRISBANE QLD 4001

Dear Minister



09 DEC 2016

I refer to the environmental investigations by the Department of Defence (DoD) into the effects of per- and poly-fluoroalkyl substances (PFAS) contamination at the Army Aviation Centre in Oakey and specifically the release of the "Human Health Risk Assessment Report" (HHRA) by AECOM in September 2016.

The HHRA concludes there is potentially an elevated risk to human health resulting from direct consumption of contaminated groundwater and consumption of eggs from chickens watered from groundwater within the Oakey groundwater contamination investigation area, and also indirect consumption of water (incidental to non-consumptive indoor and outdoor water use, e.g. bathing, swimming) within Zone 2 of the investigation area. The report recommends that, as a precautionary measure, surface and groundwater should not be used for human consumption within the investigation area, and also that water with detectable concentrations of the contaminant not be used for watering chickens within the investigation area or non-consumptive domestic or recreational use within Zone 2 of the investigation area.

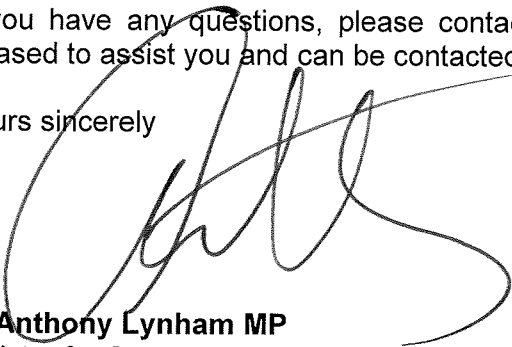
I understand since 2014, DoD has provided advice to people in the affected area not to drink groundwater in the investigation area and that affected residents are generally aware of the potential risks associated with consumption of the contaminated groundwater. DoD has also been active in informing the community about the matter and I understand is providing alternative water supplies to affected members of the community.

While this is primarily a public health matter and most appropriately dealt with under the *Public Health Act 2005*, the *Water Act 2000* also has provisions (section 22) which allow the Minister for Natural Resources and Mines to prohibit the taking or interfering with water, including groundwater, if satisfied 'urgent' action should be taken because 'there is a thing in harmful quantities in the water'.

I note to date no regulatory action has been considered necessary by Queensland Health or Toowoomba Regional Council, and seek your advice on any need for regulatory intervention from a water resource management perspective under the *Water Act 2000*.

If you have any questions, please contact Mr Paul Woodland, Chief of Staff who will be pleased to assist you and can be contacted on telephone 3719 7365.

Yours sincerely



Dr Anthony Lynham MP
Minister for State Development and
Minister for Natural Resources and Mines

RTI Release

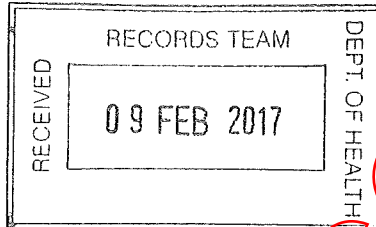


Minister for Health and
Minister for Ambulance Services
Member for Woodridge

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The Honourable Dr Anthony Lynham MP
Minister for State Development and
Minister for Natural Resources and Mines
Member for Stafford
PO Box 15216
CITY EAST QLD 4002



8 FEB 2017

Dear Minister *Anthony,*

Thank you for your letter dated 6 December 2016, in relation to the environmental investigation by the Department of Defence of per- and polyfluoroalkyl substances (PFAS) at Oakey.

The Department of Health recognises that the elevated serum PFAS concentrations in Oakey residents are the result of historical exposure over a long period of time to chemicals that have long estimated half-lives in humans. I note the measures by the Department of Defence to supply an alternative drinking water source for affected residents, and the advice provided to the community based on the human health risk assessment. There remains a continuing concern regarding the use of groundwater for the watering of livestock, which in turn may result in further human exposure through consumption of the animal. This is of particular relevance to those who already have elevated serum PFAS levels.

The evidence suggests that the risk to health for the community is low. However, these chemicals persist in humans and the environment, and it is recommended that human exposure to these chemicals is minimised as far as reasonably possible as a precaution.

I am advised that the provision of an alternative source of drinking water, and advice to the community, significantly mitigates the risk of exposure of the community to the chemicals. In regard to the risks associated with livestock, the Queensland Government Perfluorinated Firefighting Foam Interdepartmental Committee (IDC), at which your department is represented, is considering strategies to manage this risk, including engagement with local landholders and the Department of Defence. The Legislation Working Group, which reports to the IDC, has also considered this issue and in subsequent discussions by the IDC and the work undertaken by this group, it was felt that there was no need for regulatory intervention from a water resource management perspective at this time.

The Department of Health will continue to work with the community to ensure a suitable precautionary approach is adopted, and that all members of the community are aware of the risks and the measures that can be adopted to reduce the risk. This includes providing information to the community, supporting the local general practitioners, and providing suitable support through the Darling Downs Hospital and Health Service.

Yours sincerely

CAMERON DICK MP
Minister for Health
Minister for Ambulance Services



**QUEENSLAND GOVERNMENT PERFLOURINATED FIRE FIGHTING FOAM
INTERDEPARTMENTAL COMMITTEE MEETING**

Tuesday, 9 August 2016

9.30-11.00am

Level 14, Room 14.09, 100 George Street, Brisbane

MINUTES

Attendees

- Adrian Jeffreys, Executive Director, DPC (Chair)
- Sophie Dwyer, Executive Director, Health Protection Branch, QH
- Suzanne Huxley, Senior Medical Officer, Health Protection Branch, QH
- Andrew Connor, Executive Director, Industry, Development and South Queensland Compliance, EHP
- Chris Hill, Director, Industry, Development and South Queensland Compliance, EHP
- Paul Sanders, Regional Manager Water Services, NRM
- Don Bletchley, Chief Transport Network Security, TMR
- Richard Routley, Regional Director, South Queensland, DAF
- Elton Miller, Executive Director, Regions and industry Development, DAF
- Emma Hooper (for David Sinclair) Queensland Treasury

Item	Discussion	Action
<div style="text-align: center; color: red; font-size: 2em; opacity: 0.5;"> RELEASED s.73 </div>		
7. Attendance at forthcoming Oakley information session (August) re. HHRA	<ul style="list-style-type: none"> • Dates for the community information are tentative. • Qld representation to be decided. 	<ul style="list-style-type: none"> • DPC to follow up with Defence and confirm Qld representation • Qld messaging to be developed for information session
8. Update form Chairs – PFFF IDC working groups	<ul style="list-style-type: none"> • Communication working group to revise overarching key messages for general application • Technical group will assume responsibility for the coordination of all technical responses, with the IDC to resolve contentious issues 	<ul style="list-style-type: none"> • WG Chair to revise key messages • IDC to determine a list of expectations to provide to polluters



**QUEENSLAND GOVERNMENT PERFLUORINATED FIRE-FIGHTING FOAM
INTERDEPARTMENTAL COMMITTEE MEETING**

**Tuesday, 9 August 2016 (9.30am – 11.00am)
Level 14 (Room 14.09), 100 George Street, Brisbane**

AGENDA

Gold Coast

Attendees

- Adrian Jeffreys, Executive Director, DPC (Chair)
- Sophie Dwyer, Executive Director, Health Protection Branch, QH
- Suzanne Huxley, Senior Medical Officer, Health Protection Branch, QH
- Andrew Connor, Executive Director, Industry, Development and South Queensland Compliance, EHP
- Chris Hill, Director, Industry, Development and South Queensland Compliance, EHP
- Paul Sanders, Regional Manager Water Services, NRM
- Don Bletchley, Chief Transport Network Security, TMR
- Richard Routley, Regional Director, South Queensland, DAF
- ton Miller, Executive Director, Regions and Industry Development, DAF
- David Sinclair, Director, Queensland Treasury

Item	Action	Responsible	Paper
1.			
2.			
3.		s.73	
4.			
5.	Feedback to Defence – Oakey HHRA report (due 11 August)	Discussion	All
	Update – Oakey information session 27-28 July	Discussion	Paul Sanders Richard Routley Sophie Dwyer
	<i>deferred to state</i>		
7.	Attendance at forthcoming Oakey information sessions (August) – Human Health and Ecological reports	Discussion	Adrian <i>Discuss with DG/cto</i> <i>Old position</i>
8.			
9.		s.73	
10.			
11.			

For those dialing in, please telephone 1800 173 224. Guest PIN is s.73 #0
stan

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QUEENSLAND GOVERNMENT PERFLUORINATED FIRE-FIGHTING FOAM INTERDEPARTMENTAL COMMITTEE MEETING

**Tuesday, 23 August 2016 (10.00 – 11.30am)
Level 4 (Room 4.19), 100 George Street, Brisbane**

AGENDA

Attendees

Adrian Jeffreys, Executive Director, DPC (Chair)
 Sophie Dwyer, Executive Director, Health Protection Branch, QH
 Suzanne Huxley, Senior Medical Officer, Health Protection Branch, QH
 Andrew Connor, Executive Director, Industry, Development and South Queensland Compliance, EHP
 Chris Hill, Director, Industry, Development and South Queensland Compliance, EHP
 Paul Sanders, Regional Manager Water Services, NRM
 Don Bletchley, Chief Transport Network Security, TMR
 Richard Routley, Regional Director, South Queensland, DAF
 Andrew Ellem, Deputy Under Treasurer, Queensland Treasury

Apologies:

Elton Miller, Executive Director, Regions and Industry Development, DAF

Item	Action	Responsible	Paper
1. Welcome, introduction, apologies		Adrian Jeffreys	
2. Minutes	Decision	All	Minutes from 9 August 2016
3. Defence environmental investigation and identification – next steps	Discussion	All	
4. Update - meeting with Defence re. Oakey HHRA report (15 August)	Discussion	Sophie Dwyer Suzanne Huxley	Technical working
5. Technical working group – draft summary of HHRA	Discussion	Sophie Dwyer	Paper to be tabled
6. Qld representation at Oakey information sessions (late August) – Human Health and Ecological reports	Discussion	All	
7. Communication working group - web content and key messages for next Oakey information session	Discussion/decision	Andrew Connor	Fire-fighting foam screenshots
8. Update – Legislative working group	Discussion	Chris Hill Susan Porchun	
9. Other business			
10. Next meeting			

For those dialing in, please telephone **1800 173 224**. Guest PIN is s.73



QUEENSLAND GOVERNMENT PERFLUORINATED FIRE-FIGHTING FOAM INTERDEPARTMENTAL COMMITTEE MEETING

Tuesday, 23 August 2016 (10.00 – 11.30am)
Level 4 (Room 4.19), 100 George Street, Brisbane

MINUTES

Attendees

Adrian Jeffreys, Executive Director, DPC (Chair)
 Sophie Dwyer, Executive Director, Health Protection Branch, QH
 Suzanne Huxley, Senior Medical Officer, Health Protection Branch, QH
 Andrew Connor, Executive Director, Industry, Development and South Queensland Compliance, EHP
 Chris Hill, Director, Industry, Development and South Queensland Compliance, EHP
 Paul Sanders, Regional Manager Water Services, NRM
 Don Bletchley, Chief Transport Network Security, TMR
 Richard Routley, Regional Director, South Queensland, DAF
 Drew Ellem, Assistant Under Treasurer, QT

Apologies

Elton Miller, Executive Director, Regions and Industry Development, DAF

Observers

Veronica Slizankiewicz, Manager, Resources and Planning, DAF
 Susan Porchun, Principal Policy Officer, DAF

Item	Discussion	Action
2. Minutes from 9 August 2016		Approved
3. Defence environmental investigation and identification – next steps	<ul style="list-style-type: none"> • IDC response to Defence letter of 19 July 2016 – Defence to design a management plan consisting of four primary objectives: <ol style="list-style-type: none"> 1. minimise further exposure so that PFAS levels in the community return to background levels 2. manage community concerns regarding declining land values, reduced amenity and historical exposure 3. remediate existing contamination 4. prevent future contamination including use of contaminated ground water and newer fire-fighting foams. 	<ul style="list-style-type: none"> • IDC chair finalised and emailed response to Defence on 31 August 2016.
7. Communication working group - web content and key messages for next Oakey information session	<ul style="list-style-type: none"> • Andrew Connor to circulate draft website information to IDC for approval 	<ul style="list-style-type: none"> • PFFF information pages available via Qld government website
Other business	<ul style="list-style-type: none"> • <div style="border: 1px solid black; padding: 5px; display: inline-block;">s.73</div> 	

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Method

The HHRA uses the accepted framework for human health risk assessment consistent with enHealth and NEPM guidelines¹. The steps in this method are issue identification, exposure assessment, toxicity assessment and risk characterisation.

Objective:

To assess the potential for adverse human health risks to identified groups of people on-site and off-site as a result of exposure to Site-derived PFAS in soil, groundwater, surface water, sediment, terrestrial biota and aquatic biota.

Note: The study focuses on future risks, not impact of past exposures (See comment below).

Issue Identification:

Identified contamination zones: In the area in which the contaminants were detected (Detection Area), two zones were identified.

- the area to the south of the site, where contamination results from surface water contamination from stormwater drains on the site (Zone 2), and
- the area south and west of the site where contamination results from movement to the contaminant into groundwater (Zone 1).

Identified pathways of exposure:

- direct contact with environmental media – water, soil, etc and
- secondary exposures fish, produce etc (see table below)

Identified receptors –

Residents,

- recreational users,
- agricultural workers and
- on-site personnel.

Samples were collected from environmental media as follows:

Direct pathway contact	Soil, sediment, surface water, groundwater. Results from earlier reports were included in the assessment
Biota Tissue (for consumption)	Fish (Bony Bream, Golden Perch, Carp) wild rabbit, F&V celery, silverbeet, pumpkin, olive citrus (lime, orange, mandarin, grapefruit) Chicken eggs Milk (cow and sheep)
Indirect - Other	Pasture (grasses and Lucerne) Cotton (fibre & seed, leaves)

Data Gaps were acknowledged, including:

- limited soil samples, low numbers of samples analysed for extended suite of PFAS, limited range of home grown produce, low response to community survey, missing information on bore construction, depth etc, limited demographic data, aquatic biota limited to fish, no aquaculture samples, no chicken meat, no chicken eggs from Zone 1, no sheep or cattle from Zone 2. Concentration in red meat muscle tissue was estimated from the serum concentration

Exposure Assessment:

Exposure Point Concentrations (the value that represents a conservative estimate of the chemical concentration for each exposure pathway) for the risk characterisation were selected:

- For direct pathway contact, maximum concentration reported for the media
- For indirect pathway ingestion, average concentration reported.

Only 202 responses to the community survey, which was used to identify potentially complete exposure pathways, were received.

- 62% (125) had access to groundwater,
- 17% of those with access to groundwater don't use it
- Uses included drinking (10%), watering vegetable gardens or crops (71%) and watering livestock (36%)

Exposure for breastfed infants was assessed using a time weighted average daily dose over the first 6 years of life rather than for the period of breastfeeding. This would potentially underestimate exposure in early childhood.

Toxicity Assessment:

The toxicity assessment adopted the European Food Safety Authority's Tolerable Daily Intake (estimate of the amount of the chemical that can be consumed daily over a lifetime without appreciable health risk), which is the same as the interim value adopted by enHealth.

Risk Characterisation:

The method requires the calculation of a Hazard Index – ratio of the estimated exposure to the TDI, summed for all chemicals of concern and all relevant pathways.

The measured PFAS in human serum was assessed by Toxconsult:

- PFOA concentrations were consistent with background and were not considered
- PFOS and PFHxS greater than expected from background and were focus of the assessment

The Hazard Indices calculated are summarised in the attached table. The significant sources of exposure can be summarised as:

Drinking of groundwater as main source of potable water	This was assumed to have ceased and not included in the Hazard Index
Incidental ingestion of groundwater (swimming, showering/bathing)	Contributes between 22% and 60% of Hazard Index
Incidental ingestion due to playing under a sprinkler	Contributes between 3% and 15% of Hazard Index
Ingestion of chicken eggs	Contributes between 13% and 50% of Hazard Index

Conclusions of the HHRA:

Based on the hazard indices, the following recommendations were made:

- In zone 1 – continue to not use groundwater for drinking purposes.
- In Zone 2 – avoid using groundwater for showering/bathing, sprinklers or to fill swimming pools or paddling pools.

Limitations of the HHRA:

1. The HHRA only considers current exposures. As the Department of Defence has provided alternative drinking water supplies to those people who were previously using groundwater for household purposes, the pathway of direct consumption of contaminated water is not included in the HHRA. Blood testing results from the Oakey community indicate it is likely that some individuals have elevated blood PFOS and PFHxS levels due to this pathway. Hence, the assessment of risk presented in the HHRA is not relevant for these individuals.
2. The HHRA only considers the types of PFASs present in the environment due to the historic use of fire fighting foams. It does not consider the types of PFASs which are present in the foams still used in Oakey. These chemicals are present in the environment, as evidenced by the Environmental Site Assessment, so should have been examined in the HHRA.

¹ Environmental Health Risk Assessment, Guidelines for Assessing Human Health Risks from Environmental Hazards. Department of Health and Aging, 2012 Update (enHealth, 2012b).

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Table 1 Table of Hazard Indices calculated for various exposure scenarios. Values greater than 1 (in bold) indicate risks of some concern

Receptor	HI – Typical Exposure Parameters		HI – Upper Range Exposure Parameters	
	Adult	Child	Adult	Child
Groundwater 'Zone 1'				
Residential	0.03	0.1	0.3	1.0
Commercial Agriculture Worker *	0.01	0.03	0.07	0.1
Groundwater 'Zone 2'				
Residential	0.08	0.3	1.1	3.2
Commercial Agriculture Worker *	0.002	-	0.08	-
Entire Detection Area				
Recreational users of local waterways	0.005	0.01	0.05	0.1
On-Site Personnel	0.0002	-	0.0003	-
Groundwater 'Zone 1'				
Resident who is also employed as a commercial agriculture worker in the DA*	0.04	0.13	0.4	1.1
Resident who also uses local waterways for recreation	0.04	0.11	0.4	1.1
Resident who is also employed at the Site	0.03	-	0.3	-
Groundwater 'Zone 2'				
Resident who is also employed as a commercial agriculture worker in the DA*	0.08	-	1.2	-
Resident who also uses local waterways for recreation	0.09	0.3	1.2	3.3
Resident who is also employed at the Site	0.08	-	1.1	-

RTI REQUEST

Evaluation of Draft Stage 2C Environmental Investigation - Human Health Risk Assessment, Army Aviation Centre Oakey (dated 2 August 2016)

Conclusions

The report correctly identifies high risk activities that should be avoided such as drinking groundwater, household use, pool filling and consuming eggs from poultry watered with groundwater.

Limitations

The report is insufficient to reliably evaluate some risk pathways. These include consumption of yabbies (not sampled), poultry (not sampled), root vegetables (not sampled) and eggs (limited data). The fact animal tissue sampling (rabbit & fish) shows presence long chain PFAA, which some research shows as significantly more bio-accumulative and toxic than the C8 and C6 PFAS focused on, increases uncertainty in some estimates.

Assessment focuses on four commonly occurring PFAS and assumes risks from others are minor, whereas longer-chain PFAA are likely of greater risk.

The absence of long chain PFAA in cattle/sheep serum may relate to differences in exposure pathways for the animals or PFAS partitioning differences and is not explained.

Animal tissue sampling (rabbit & fish) shows presence long chain PFAA which some research shows as more bio-accumulative and toxic than C8 PFAS.

There is no separate sampling of surface and deeper aquifers, leading to a conclusion all should be avoided for high risk uses.

Discussion of serum results should include current approaches in Germany and their relevance to properly inform the community.

Significant Gaps

The report has gaps that would normally be addressed in a contaminated land investigation document under the *Environmental Protection Act 1994* (EP Act)

The HHRA is restricted to evaluating impacts on current use of water whereas the EP Act and the *National Environmental Protection (Assessment of Site Contamination) Measure 1999* require consideration of all realistic potential uses and prescribed environmental values of the water. Potential use of the water for aquaculture is not assessed, but potentially of elevated risk considering potential for bioaccumulation.

Assessment of health impacts to persons on site is also not evaluated on the basis that management actions and workplace health and safety measures will be enforced to avoid contact and ingestion.

There is limited evaluation of risks from use of current AFFF. Predominant PFAS in surface drains on base relate to more recent foam use rather than legacy foams. The investigation includes limited sampling for these and does not properly address how they got there, potential future risks or current management.



**QUEENSLAND GOVERNMENT PERFLOURINATED FIRE FIGHTING FOAM
INTERDEPARTMENTAL COMMITTEE MEETING**

**Tuesday, 12 July 2016
10.00 – 11.30am**

Cabinet Committee Room, Level 13, 100 George Street, Brisbane

MINUTES

Attendees

- Adrian Jeffreys, Executive Director, DPC (Chair)
- Sophie Dwyer, Executive Director, Health Protection Branch, QH
- Suzanne Huxley, Senior Medical Officer, Health Protection Branch, QH
- Andrew Connor, Executive Director, Industry, Development and South Queensland Compliance, EHP
- Chris Hill, Director, Industry, Development and South Queensland Compliance, EHP
- Paul Sanders, Regional Manager Water Services, NRM
- Don Bletchley, Chief Transport Network Security, TMR
- Malley Gleeson, Manager, Environment Services, EHP
- Richard Routley, Regional Director, South Queensland, DAF
- Elton Miller, Executive Director, Regions and Industry Development, DAF
Airservices Australia
- Paul Stoddart, Behzad Emami, Michelle Bennetts

RTI Release

Item	Discussion	Action
	<p>□</p> <p>s.73</p>	
6. Oakey information sessions - Qld Government representation	<ul style="list-style-type: none"> • Dates for the community information sessions changed. 	<ul style="list-style-type: none"> • DPC to follow up with Defence and confirm Qld representation
9. Other business	<ul style="list-style-type: none"> • Dates for release of s.73 □ Oakey contamination reports have changed 	<ul style="list-style-type: none"> • DPC to confirm new dates with Defence

Queensland Government Interdepartmental Committee for Fluorinated Firefighting Foam

Communications Working Group Terms of Reference

Background

During the 1970s to the mid-2000s, firefighting foam containing fluorinated chemicals perfluorooctane sulphonate (PFOS) and perfluorooctanoic acid (PFOA) was used on defence and civilian facilities in Australia. PFOS and PFOA are members of a group of compounds called per- and poly-fluoroalkyl substances (PFAS). Subsequent to the mid-2000s, other fluorinated foams were used which contained other PFAS, some of which break down to PFOA.

These chemicals are of concern around the world because they are not broken down in the environment and so can persist for a long time. Their widespread use, not just in firefighting foams means that they are ubiquitous global contaminants. The Queensland Government has recently adopted a policy requiring withdrawal from service as soon as possible of any firefighting foam containing PFOS or PFOA and the phasing-out as soon as practicable and within three years any foams based on long-chain (³C7) PFAS. Use of C6 fluorinated foams must only be where they are greater than 99.5% pure, there are no viable, practicable alternatives and firewater and wastes must be fully contained from release to the environment.

For communities near facilities where PFAS have been extensively used, higher levels may be found in the surrounding environment and exposure may occur, including through drinking groundwater. Research has not conclusively demonstrated that PFAS are related to specific illnesses in humans, even under conditions of occupational exposure. Recent studies have found possible associations to some health problems, although more research is required before definitive statements can be made on causality or risk.

In Queensland, the Army Aviation Centre Oakey has been identified as a significant source of PFAS contamination. The Department of Defence is now undertaking preliminary risk assessments at 13 additional defence facilities across Australia, including RAAF bases in Amberley and Townsville.

s.73

The Queensland Government has endorsed an active approach to potential risk identification, supply of information and community support, while remaining committed to encouraging a national approach to this issue.

The Queensland Government Interdepartmental Committee (IDC) will lead the response to the emergence of the Oakey contamination and act to manage risks associated with emerging contaminated

sites across the state. Three interagency Working Groups – Legislation, Technical and Communications – will support the IDC.

Purpose

The purpose of Communications Working Group is to support the IDC by preparing a package of communications strategies and tools for the Queensland Government to respond to PFAS contamination and management.

Governance

The Communications Working Group is chaired by the Department of Environment and Heritage Protection, and reports to the Chair of the IDC.

Governance arrangements and membership are outlined in Attachment 1.

The Department of the Premier and Cabinet provides common secretariat support across all three Working Groups. Further linkages between Working Groups is encouraged where operationally beneficial, and with the knowledge of Chairs.

Scope of Work

- Develop and provide state-wide information about risks and exposure, and making this information available on Queensland Government websites.
- Develop a PFAS Contamination Communication Strategy that includes:
 - An engagement strategy to clarify the role of Queensland Government agencies in community engagement activities about contaminated sites, with an emphasis on polluter responsibility to lead local engagements.
 - Key messaging for Queensland Government agencies.
 - Communication materials about possible future government intervention actions at contaminated sites.
 - Queensland Government contact points for Queensland communities.
 - Contact points for individual polluters – e.g. Department of Defence / Australia directed through IDC.

Confidentiality

Discussions of the Working Group are conducted on a without prejudice basis and members are asked to maintain confidentiality of discussions and materials provided under the broader IDC process. Should legal advice be required, members are requested to advise the Chair, and IDC, ahead of seeking advice.

Frequency of Meetings

Fortnightly, or as determined by the Chair.

Proxies

It is the responsibility of Members to arrange a proxy if they are unable to attend a meeting.

s.73

Draft commun. strategy

Queensland Government Interdepartmental Committee for Fluorinated Firefighting Foam

Technical Working Group Terms of Reference

Background

During the 1970s to the mid-2000s, firefighting foam containing fluorinated chemicals perfluorooctane sulphonate (PFOS) and perfluorooctanoic acid (PFOA) was used on defence and civilian facilities in Australia. PFOS and PFOA are members of a group of compounds called per- and poly-fluoroalkyl substances (PFAS). Subsequent to the mid-2000s, other fluorinated foams were used which contained other PFAS, some of which break down to PFOA.

These chemicals are of concern around the world because they are not broken down in the environment and so can persist for a long time. Their widespread use, not just in firefighting foams means that they are ubiquitous global contaminants. The Queensland Government has recently adopted a policy requiring withdrawal from service as soon as possible of any firefighting foam containing PFOS or PFOA and the phasing-out as soon as practicable and within three years any foams based on long-chain (³C7) PFASs. Use of C6 fluorinated foams must only be where they are greater than 99.5% pure, there are no viable, practicable alternatives and firewater and wastes must be fully contained from release to the environment.

For communities near facilities where PFAS have been extensively used, higher levels may be found in the surrounding environment and exposure may occur, including through drinking groundwater. Research has not conclusively demonstrated that PFAS are related to specific illnesses in humans, even under conditions of occupational exposure. Recent studies have found possible associations to some health problems, although more research is required before definitive statements can be made on causality or risk.

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s.73

The Queensland Government has endorsed an active approach to potential risk identification, supply of information and community support, while remaining committed to encouraging a national approach to this issue.

The Queensland Government Interdepartmental Committee (IDC) will lead the response to the emergence of the Oakey contamination and act to manage risks associated with emerging contaminated

sites across the state. Three interagency Working Groups – Legislation, Technical and Communications – will support the IDC.

Purpose

The purpose of Technical Working Group is to support the IDC and other Working Groups by establishing a comprehensive technical understanding of PFAS from industrial, agricultural, environmental, community and health perspectives, and outlining trigger points for and related levels of response available to the Queensland Government. PFOA, PFOS and perfluorohexane sulfonate (PFHxS) will form a key focus for this group.

Governance

The Technical Working Group is chaired by the Department of Health, and reports to the Chair of the IDC.

Governance arrangements and membership are outlined in Attachment 1.

The Department of the Premier and Cabinet provides common secretariat support across all three Working Groups. Further linkages between Working Groups is encouraged where operationally beneficial, and with the knowledge of Chairs.

Scope of Work

Task	Focus Area	Responsible Agency	Urgency
Knowing the environment <ul style="list-style-type: none"> o Assess technical reports: <ul style="list-style-type: none"> o Fisheries o Water o Department of Defence o Air Services Australia o Wetlands 	a) Oakey b) Other known sites c) Own work	DAF, DNRM, DEHP, Health	High
Assessing the risk <ul style="list-style-type: none"> o Understanding decision making: <ul style="list-style-type: none"> o CRC Care o EFSA/FSANZ o Safe Meat input o Relevant standards o Commonwealth Department of Environment o Escalation factors, risk management and trigger points: <ul style="list-style-type: none"> o Fisheries o Water use for home gardens and poultry o Exports o Meat o Animal feeds 		DAF, Health, DEHP DAF, Health, DNRM, DEHP	High High

s.73

<ul style="list-style-type: none"> o Cereal grains/pulses o Recreational water use o Water reuse (eg. Irrigation, stock water, fill pools, industry, drinking, aquaculture) o Grazing land o Environment – aquatic and terrestrial o Serum concentration 			
Testing <ul style="list-style-type: none"> • PFAS – relative toxicology of different chemical forms • Laboratory methods 		Health, DAF	Medium
Dealing with Waste, Waste Water and Contaminated Soil		DEHP	Medium
Treatment Methods		DEHP	Low
Phasing Out		DEHP	Low

Confidentiality

Discussions of the Working Group are conducted on a without prejudice basis and members are asked to maintain confidentiality of discussions and materials provided under the broader IDC process. Should legal advice be required, members are requested to advise the Chair, and IDC, ahead of seeking advice.

Frequency of Meetings

Fortnightly, or as determined by the Chair.

Proxies

It is the responsibility of Members to arrange a proxy if they are unable to attend a meeting.

RTI REQUESTS

Queensland Government Interdepartmental Committee for Fluorinated Firefighting Foam

Legislation Working Group Terms of Reference

Background

During the 1970s to the mid-2000s, firefighting foam containing fluorinated chemicals perfluorooctane sulphonate (PFOS) and perfluorooctanoic acid (PFOA) was used on defence and civilian facilities in Australia. PFOS and PFOA are members of a group of compounds called per- and poly-fluoroalkyl substances (PFAS). Subsequent to the mid-2000s, other fluorinated foams were used which contained other PFAS, some of which break down to PFOA.

These chemicals are of concern around the world because they are not broken down in the environment and so can persist for a long time. Their widespread use, not just in firefighting foams means that they are ubiquitous global contaminants. The Queensland Government has recently adopted a policy requiring withdrawal from service as soon as possible of any firefighting foam containing PFOS or PFOA and the phasing-out as soon as practicable and within three years any foams based on long-chain (³C7) PFASs. Use of C6 fluorinated foams must only be where they are greater than 99.5% pure, there are no viable, practicable alternatives and firewater and wastes must be fully contained from release to the environment.

For communities near facilities where PFAS have been extensively used, higher levels may be found in the surrounding environment and exposure may occur, including through drinking groundwater. Research has not conclusively demonstrated that PFAS are related to specific illnesses in humans, even under conditions of occupational exposure. Recent studies have found possible associations to some health problems, although more research is required before definitive statements can be made on causality or risk.

In Queensland, the Army Aviation Centre Oakey has been identified as a significant source of PFAS contamination. The Department of Defence is now undertaking preliminary risk assessments at 13 additional defence facilities across Australia, including RAAF bases in Amberley and Townsville.

s.73

The Queensland Government has endorsed an active approach to potential risk identification, supply of information and community support, while remaining committed to encouraging a national approach to this issue.

The Queensland Government Interdepartmental Committee (IDC) will lead the response to the emergence of the Oakey contamination and act to manage risks associated with emerging contaminated

sites across the state. Three interagency Working Groups – Legislation, Technical and Communications – will support the IDC.

Purpose

The purpose of Legislation Working Group is to support the IDC by establishing a coordinated understanding of available regulatory levers, outlining options for their application, and identifying any gaps in the regulatory capacity of Queensland to respond to PFAS contamination and management.

Governance

The Legislation Working Group is chaired by the Department of Agriculture and Fisheries, and reports to the Chair of the IDC.

Governance arrangements and membership are outlined in Attachment 1.

The Department of the Premier and Cabinet provides common secretariat support across all three Working Groups. Further linkages between Working Groups is encouraged where operationally beneficial, and with the knowledge of Chairs.

Scope of Work

- Catalogue the possible actions that may need to be taken in relation to the presence of perfluorooctane sulphonate (PFOS) and perfluorooctanoic acid (PFOA) contamination at defence and civilian facilities in Queensland.
- Consider if legislative tools are required to complete the actions and if so then map the legislative tools available under Queensland legislation that could be used to enable the action.
- Determine the preferred legislative tool (with regard to effectiveness and efficiency) and the triggers that may activate their use.

Confidentiality

Discussions of the Working Group are conducted on a without prejudice basis and members are asked to maintain confidentiality of discussions and materials provided under the broader IDC process. Should legal advice be required, members are requested to advise the Chair, and IDC, ahead of seeking advice.

Frequency of Meetings

Fortnightly, or as determined by the Chair.

Proxies

It is the responsibility of Members to arrange a proxy if they are unable to attend a meeting.



Queensland Government Interdepartmental Committee for Fluorinated Fire Fighting Foam Terms of Reference

Background

During the 1970s to the mid-2000s, fire-fighting foam containing perfluorinated chemicals perfluorooctane sulphonate (PFOS) and perfluorooctanoic acid (PFOA) was used on defence and civilian facilities in Australia.

These chemicals are of concern around the world because they are not broken down in the environment and so can persist for a long time. Their widespread use, not just in fire-fighting foams means that they are ubiquitous global contaminants.

For communities near facilities where PFOS and PFOA have been extensively used, higher levels may be found in the surrounding environment and exposure may occur, including through drinking groundwater. Research has not conclusively demonstrated that PFCs are related to specific illnesses in humans, even under conditions of occupational exposure. Recent studies have found possible associations to some health problems, although more research is required before definitive statements can be made on causality or risk.

In Queensland, the Army Aviation Centre Oakey has been identified as a significant source of PFOS/PFOA contamination. The Department of Defence is now undertaking preliminary risk assessments at 13 additional defence facilities across Australia, including RAAF bases in Amberley and Townsville.

s.73

Purpose

The purpose of the interdepartmental committee (IDC) is to facilitate a coordinated response by relevant Queensland Government agencies to detections of Perfluorinated fire-fighting foam contamination outside the boundaries of sites where these foams have been used.

Guiding Principles

In undertaking this task the IDC will abide by the following principles:

- operators and/or owners of source sites have primary responsibility for the management of contamination events and associated costs;
- responsibility for decision-making rests with member agencies.

Membership

Agency	Representatives
Department of the Premier and Cabinet (Chair)	Adrian Jeffreys, Executive Director, Environment Policy
QH Queensland Health	Sophie Dwyer, Executive Director, Health Protection Branch, Queensland Health Suzanne Huxley, Senior Medical Officer, Health Protection Brach, Queensland Health
Department of Agriculture and Fisheries	Elton Miller, Executive Director
Department of Environment and Heritage Protection	Andrew Connor, Executive Director, Industry, Development and South Queensland Compliance Chris Hill, Director, Industry, Development and South Queensland Compliance
Department of Natural Resources and Mines	Paul Sanders, Regional Manager, Water Services South Region
Department of Transport and Main Roads	Don Bletchley, Chief Transport Network Security
Department of Local Government and Planning	
Secretariat	Virginia Berry, Environment Policy, Department of the Premier and Cabinet

Governance

The committee is chaired by the Department of the Premier and Cabinet and reports to the Director-General, Department of the Premier and Cabinet. The committee also provides direction to and has oversight of the working groups established to prepare information, communications strategies and tools for the Queensland Government to respond to contamination issues.

Terms of Reference

1. Provide a senior Queensland Government point of contact for the Department of Defence (DoD) on issues relating to contamination at Queensland military bases, s.73
2. Provide a forum for interagency communication in relation to management of contamination.
3. Facilitate access to technical and scientific advice on relevant assessment, monitoring and mitigation activities.
4. Enable monitoring and critical review of DoD, or other risk assessment and management strategies.
5. Coordinate public messaging and communication.

Confidentiality

Discussions of the IDC are conducted on a without prejudice basis and members are asked to maintain confidentiality of discussions. Should legal advice be required, members are requested to advise the group ahead of seeking advice.

Frequency of Meetings

Monthly, or as determined by the Chair.

Protocols for Communication with DoD, and other relevant parties

It is recognised that members may have reason to have unilateral contact with DoD, and other parties on operational matters relating to their own department's responsibilities.

Members should advise the IDC before expressing a policy position, publishing advice or materials, committing resources, or communicating on sensitive matters.

Proxies

Members are encouraged to nominate a proxy if they are unable to attend a meeting.

RTI Release

Queensland Government Interdepartmental Committee for Fluorinated Firefighting Foam

Technical Working Group Preliminary Summary of Comments Department of Defence Oakey Human Health Risk Assessment

1. Report Conclusions

No Issues

- Risk characterisation and conclusions are supported based on assessments carried out to date.
- That the use of groundwater for drinking water supply is the pathway with greatest potential to result in intakes that exceed the TDI for PFOS and PFHxS.
- PFOS and PFHxS are the species of most concern.
- The report answers the question would harm to human health be predicted for the residents of Oakey (answer is no).
- The majority of the exposure of PFAs at Oakey was historically through drinking water. Local fish populations are unlikely to be able to sustain high levels of fish consumption assumed in the risk assessment.

Not Supported

- That the risk characterisation and conclusions are absolute and are still to be potentially determined by other processes not studied to date. i.e. wind mobilisation

2. Points of Contention

DNRM

- There has been no assessment of contamination in the Main Range Volcanics and Great Artesian Basin Aquifers. Drinking groundwater is identified as one of the predominant pathways for potential health effects. Residents have been advised not to drink groundwater, however, it is not clear whether this only applies to the Oakey Creek Alluvial aquifer
- No assessment of the potential pathway associated with wind and the potential for movement via dust onto roofs and potential consequent concentration in rainwater tanks. Likewise, the assessment of the exposure pathway associated with the drinking of surfacewater has not been identified or assessed.

Health

- The report states (Conclusion 5.1, page 103) "The calculated MOE based on PFOS + PFHxS serum concentrations reported for the Oakey cohort by Heffernan (2015) indicated that adverse health effects are unlikely to be associated with the concentrations of PFOS and PFHxS that have been measured in the Oakey biomonitoring cohort." However, the current blood levels of Oakey residents are not necessarily representative of past serum concentrations and exposures, and thus cannot be used to indicate that adverse health effects are unlikely.
- The data gaps outlined in Table 18 (limited soil samples, low frequency of extended suite, low numbers and low diversity in home-grown produce samples, no yabbies, etc) were largely foreseeable and preventable, and further effort should have been made to collect a more

appropriate set of samples. The absence of meaningful data will have to be addressed in further work.

- The conclusion regarding eggs is based on a very small number of samples from only one property, and the report acknowledges that this may overestimate the risk. As eggs can be an important source of nutrition, this recommendation is of concern. The additional data that the report indicates is still required should have been part of this report.

Alternative supply

DAF

- The risk assessment methodology used in the Toxconsult report is not the accepted practice for chemical contaminants and does not answer the question, would the exposures be expected to exceed 100% of the TDI.
- It is difficult to draw conclusions about the potential need for risk management.
- The AECOM approach is a site assessment and does not align well with normal food regulatory approaches.
- The samples collected to assess the human dietary risks from consumption of PFAs contaminated produce is limited.
- The number of data points has been further unacceptably reduced in the risk assessment because of incorrect agricultural assumptions
- The main AECOM report does not consider the risks from consumption of edible offal (mammalian) or from Crustacea *(e.g. mussels)*
- The assumptions used in the AECOM report are inconsistent in their relative conservatism, therefore there is considerable uncertainty in the comparative exposures from different pathways.
- The hazard identified doesn't align with the EFSA hazard assessment which FSANZ has provisionally adopted.

Exposure

eg?

EHP

- Although contending all PFAS were evaluated, several PFAS detected on and off site in groundwater are not included in risk calculations e.g. PFHpA, PFBS.
- The HHRA does not assess of environmental values protected under the Water EPP, only current off-site uses. This approach of excluding uses future potential use e.g. freshwater aquaculture is inconsistent with the contaminated land NEPM and the EP Act.
- HHRA fails to adequately address impact EP Act environmental values e.g. groundwater on site by failing to evaluate relevant risks on the basis that management controls will be implemented so there is no need. This approach is inconsistent with the contaminated land NEPM and the EP Act.

Exposure

3. Limitations of Report Content

DNRM

- Limited understanding of the movement of the contaminant into the aquifer. Concentrations in the upper aquifer are higher than the lower aquifer over a large area suggesting movement via surface/overland flow into and through the soil, however, current conclusions are that soil concentrations don't correspond with concentrations in groundwater at the same site.
- Uncertainty around the influence of wind as a transport mechanism. This creates confusion as the predominant wind direction is to the West/Southwest, similar to surface water flow directions
- Uncertainty around use of contaminated water for irrigation. Limited work to date suggests that irrigation of contaminated water can influence detections in irrigated soil. The report identifies that insufficient information was available to understand the relationships associated with irrigation practice and detectable levels of the contaminant in soil.

- Assessment of the exposure pathway associated with the irrigation of surface water for plant produce. While the pathway has been identified in Table 22, no assessment of the extent or potential for contamination has been undertaken.

Health

- The analysis based on the serum concentrations is interesting, but does not advance the risk assessment process. The importance of the serum data is as a baseline for assessing future protection and mitigation strategies. Emphasis in this risk assessment should be placed on assessing those aspects of exposure that will inform risk management strategies, and enable validation of such strategies into the future.
- The conclusion section of the document.

EHP

- There has been limited sampling of some environmental media with reduce representativeness and reliability of risk estimates e.g. eggs, root vegetables, yabbies.
- Potential future risks for current use of PFAS containing Ansulite fire-fighting foam not adequately addressed.
- PFAS detected on and off site in groundwater are not included in risk calculations, which occurs in overseas jurisdictions e.g. Danish EPA.
- The sensitivity assessment does not address impacts on the assessment of adopting the lower PFOA TDI/TRV adopted by the US EPA in 2016.
- The discussion and evaluation of serum PFAS concentrations include the risk guidance values (HBM-1) recently published in May 2016 in Germany by the HBM commission of the German environmental agency. The levels adopted at which the German agency considers PFAS exposures should be minimised are low compared to HHRA guidance concentrations. This may be due to the fact that epidemiological studies are not heavily weighted in the assessment.
- Doesn't address future potential uses of water

?
✓

RTI REQUEST



Queensland Government ~~Perfluorinated~~ ~~Fire-fighting~~ Foam
Interdepartmental Committee

Technical Working Group
Terms of Reference

Background

During the 1970s to the mid-2000s, fire-fighting foam containing perfluorinated chemicals perfluorooctane sulphonate (PFOS) and perfluorooctanoic acid (PFOA) was used on defence and civilian facilities in Australia. ~~PFOS and PFOA are members of a group of compounds called per- and poly-fluoroalkyl substances (PFAS). Subsequent to the mid-2000s, other fluorinated foams were used which by Defence contained other PFAS, some of which break down to PFOA.~~ ~~[B1]~~

These chemicals are of concern around the world because they are not broken down in the environment and so can persist for a long time. Their widespread use, not just in fire-fighting foams means that they are ubiquitous global contaminants. ~~The Queensland Government has recently adopted a policy requiring withdrawal from service as soon as possible of any fire-fighting foam containing PFOS or PFOA and the phasing-out as soon as practicable and within three years any foams based on long-chain (C7) PFASs. Use of C6 fluorinated foams must only be where they are greater than 99.5% pure, there are no viable, practicable alternatives and firewater and wastes must be fully contained from release to the environment.~~ ~~[B1]~~

For communities near facilities where PFASOS and PFOA have been extensively used, higher levels may be found in the surrounding environment and exposure may occur, including through drinking groundwater. Research has not conclusively demonstrated that PFASCs are related to specific illnesses in humans, even under conditions of occupational exposure. Recent studies have found possible associations to some health problems, although more research is required before definitive statements can be made on causality or risk.

In Queensland, the Army Aviation Centre Oakey has been identified as a significant source of PFASOS/PFOA contamination. The Department of Defence is now undertaking preliminary risk assessments at 13 additional defence facilities across Australia, including RAAF bases in Amberley and Townsville.

s.73

The Queensland Government has endorsed an active approach to potential risk identification, supply of information and community support, while remaining committed to encouraging a national approach to this issue.

<ul style="list-style-type: none"> o abattoir), drinking o aquaculture o Grazing land o Environment, including aquatic and terrestrial o Serum concentration 			
Testing <ul style="list-style-type: none"> • PFOS – structures and toxicology • Labs supporting effective testing 		Health, DAF	Medium
Dealing with Waste, waste water and contaminated Soil		DEHP	Medium
Treatment		DEHP	Low
Phasing Out		DEHP	Low

Confidentiality

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Frequency of Meetings

Fortnightly, or as determined by the Chair.

RTI Release