Joint Standing Committee on Foreign Affairs, Defence and Trade PFAS Sub-committee

Inquiry into the remediation of PFAS related impacts in and around Defence bases

Public hearing – Monday 9 November 2020 via teleconference

Cooperative Research Centre for Contamination Assessment and Remediation of the Environment – CRC CARE

Question on Notice

Senator Faruqi, *Proof Committee Hansard*, 9 November 2020, p. 2.

Senator FARUQI: Professor Naidu, in your submission it says that CRC CARE receives funding from Defence to deliver some of your work. I just want to know—and you could provide this on notice if you'd like—how much money you have received in funding for each of the projects that have been listed in your submission?

Prof. Naidu: The Australian Department of Defence was the very first organisation globally that recognised PFAS, particularly the active ingredients PFOS and PFOA, as being of potential concern, particularly that it could pose risks to the environment and human health. That goes back to 2005. We were the very first to commence the research. We had to develop methods for assessing the presence of these in the environment and to develop technology for the cleaning up of the environment, both in wastewater and soil.

The funding that we have received for technology varies from anywhere from \$250,000 to close to a million dollars. For example, the work that we're going to do at RAAF Base Richmond would be close to a million dollars. It's quite complex, with ground and soil remediation, and we had to develop the technology in the first instance. That money doesn't come to CRC CARE alone, because we do engage contractors. They go out into the field and they help us install the technology.

Senator FARUQI: Could you just take that on notice and please provide me with the breakdown of the funding that you have received from 2005, and for what projects?

Written question – clarification issued 16 November 2020

Please provide, in a table, the amount of funding provided by the Australian Government to CRC CARE for work relating to PFAS remediation per year since 2005, and within each year, the amount for each project.

Remediation of PFAS-related impacts ongoing scrutiny and review Submission 19 - Supplementary Submission

ANSWER, dated 30 November 2020

Emailed

Response to Senator Faruqi's Questions on Notice- tabulated Defence contributions 2009-2020

There is some difficulty accessing record for PFAS funding received in 2005 as that was part of CRC CARE I — I will need to see whether we could access our files archived. As discussed, CRC CARE did not receive any funds from Defence during 2013 to 2016 for PFAS research.

Spread sheet attached

Remediation of PFAS-related impacts ongoing scrutiny and review

Projects	Services Delivered	2009-10	2010-11	ıbmission 19 - 2011-12	Supplementa 2012-13	ary Submi 2013 -	ission 2014-	2015-	2016-	2017-	2018-	2019-	2020-
Approved						14	15	16	17	18	19	20	21
AFFF Soil	CRC CARE Developed and	\$610,297											
Works	demonstrated an												
Stage-1 and	innovative technology to												
Stage-2	remediate PFAS												
	contaminated soils by												
	irreversibly immobilising												
	PFAS contaminants in												
	soil. The long-term												
	studies conducted from												
	2010-2017 revealed the												
	long-term stability of												
	remediation technology												
	that PFAS was not												
	released following the												
	remediation.												
AFFF	matCARE™ is a CRC CARE		\$588,900		\$363,550								
Wastewater	patented technology that												
Remediation	has been used in												
at Three	containerised mobile												
RAAF Bases	wastewater treatment												
	plants to remediate												
	wastewater												
	contaminated with PFAS												
	as a result of firefighting												
	training at various Royal												
	Australian Air Force												
	(RAAF) sites throughout												
	Australia, including												
	Edinburgh (SA), Pearce (WA) and Townsville												
	(QLD). CRC CARE has												
	treated more than 1.5												
	million litres of PFAS												
	contaminated water.												
AFFF Sample	Defence sent	\$3,090											1
Analysis	environmental samples	73,030											1
, 5.15	to analyse PFAS at CRC												1
	CARE labs equipped with												1
	CARE labs equipped with												Ь

Remediation of PFAS-related impacts ongoing scrutiny and review

		Su	hmission 19 -	Supplementa	ar∨ Submi	esion		1		
St	state of art facilities for		Dimodion 10	Сарріотіот	l Cabiiii	501011				
P	PFAS analysis.									
	An advanced treatment		\$210,650				\$88,550		\$52,250	
			\$210,050				\$66,55U		\$52,25U	
	system is developed and									
	commissioned at RAAF									
	Γownsville. CRC CARE									
p	provided filtration									
m	naterial and supported									
ir	n operation and									
l m	maintenance of the									
tı	reatment system.									
	This project having	\$244,852	\$269,337	\$310,146						
	achieved the	7 - 1 1/22 -	7-00/00	, , , , , , ,						
	development of AFFF									
	field test kit, its field									
1	evaluation and training									
	_									
	the defence personnel									
	with its use, has initiated									
	ast year the									
1	development of a dip									
1	stick monitoring tool that									
a	avoids the use and									
St	storage of liquid test									
S	solutions including									
fl	lammable solvents.									
	Considering the issues of									
	nandling and storage at									
	RAAF bases of the AFFF									
	est kit solutions that									
	nclude flammable									
	solvents, development of									
	a monitoring tool based									
	-									
	on paper strip (dip stick)									
	would be highly useful									
	and more convenient.									
	Together with paper strip									
	cool, the project is aiming									
	o develop a sensor that									
	could be coupled with									
	the waste									
w	water remediation						 			

Remediation of PFAS-related impacts ongoing scrutiny and review

Submission 19 - Supplementary Submission

	Submission 19 - Supplementary Submission												
	technology which will help to know when breakthrough of the chemical occurs.		5	udmission 19 -	Sapplementa	ary Subiti i	osioii						
Evaluating Toxicology on identified firefighting foams	The Department of Defence has requested CRCCARE to test the toxicity of two fire fighting foam products namely Solberg and				\$120,000								
	Ansulite. CRC CARE has conducted the toxicological analysis on these two products and the results are presented below. Ansulite (6% concentrate) was obtained from RAAF Edinburgh base while Solberg RF6 (6% concentrate) was purchased from Solberg												
Bush firefighting foam	Asia Pacific Pty Ltd., NSW, Australia. Defence has funded CRC CARE to investigate the potential environmental				\$160,000								
Studies	impacts of Phos-Chek® WD881 and Fire-Brake™ 3150A (Class A firefighting products) and Phos-Chek® MVP-F and Phos-Chek® Insul-8 (fire												

Remediation of PEAS-related impacts ongoing scrutiny and review

Remediation of FFAS-related impacts ongoing scrutiny and review											
retardants/suppressants). This investigation	S t	bmission 19 - St	upplementar y	y Sūbmis	sion						
evaluated the											
environmental toxicity,											
persistence and											
bioaccumulation of Class											
A firefighting foam products and fire											
retardant/suppressants.											