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.***

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

Projects Approved	Services Delivered	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
AFFF Soil Works Stage-1 and Stage-2	CRC CARE Developed and demonstrated an innovative technology to 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.	$610,297											
AFFF Wastewater Remediation at Three RAAF Bases	matCARE™ is a CRC CARE patented technology that has been used in containerised mobile 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.		$588,900		$363,550								
AFFF Sample Analysis	Defence sent environmental samples to analyse PFAS at CRC CARE labs equipped with	$3,090											

	state of art facilities for PFAS analysis.												
RAAF Townsville	An advanced treatment system is developed and commissioned at RAAF Townsville. CRC CARE provided filtration material and supported in operation and maintenance of the treatment system.			$210,650					$88,550		$52,250		
AFFF Monitoring Tool	This project having achieved the development of AFFF field test kit, its field evaluation and training the defence personnel with its use, has initiated last year the development of a dip stick monitoring tool that avoids the use and storage of liquid test solutions including flammable solvents. Considering the issues of handling and storage at RAAF bases of the AFFF test kit solutions that include flammable solvents, development of a monitoring tool based on paper strip (dip stick) would be highly useful and more convenient. Together with paper strip tool, the project is aiming to develop a sensor that could be coupled with the waste water remediation		$244,852	$269,337	$310,146								

	technology which will help to know when breakthrough of the chemical occurs.												
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 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 Asia Pacific Pty Ltd., NSW, Australia.				$120,000								
Bush firefighting foam Studies	Defence has funded CRC CARE to investigate the potential environmental impacts of Phos-Chek® WD881 and Fire-Brake™ 3150A (Class A firefighting products) and Phos-Chek® MVP-F and Phos-Chek® Insul-8 (fire				$160,000								

	retardants/suppressants). This investigation evaluated the environmental toxicity, persistence and bioaccumulation of Class A firefighting foam products and fire retardant/suppressants.												