



# CFS FACT SHEET

## PFAS Frequently Asked Questions

### What is PFAS?

PFAS is a universal acronym given to more than 3,000 man-made fluorinated organic chemicals. PFAS primarily refers to per-fluoroalkyl and poly-fluoroalkyl substances, but can also include perfluorooctane (PFOS), perfluorooctane acid (PFOA) and perfluorinated chemicals (PFC).

### Where was PFAS used?

PFAS chemicals were commonly used since the 1950s in common household products and specialist products such as firefighting foams and industrial liquids.

PFAS was used in fast food packaging, the manufacturing process of non-stick products, waterproof clothing, stain resistant material sprays and waxes, some brands of dental floss, metal plating processes, hydraulic fluids in the aviation industry, surfactants in the photography industry, and through the use of some types of firefighting foams and extinguishers.

### Is PFAS harmful?

Current research concludes that there is no conclusive evidence that PFAS causes any specific illness in humans (this includes cancer).

The Australian Health Protection Principal Committee provided the following to the Australian Government Department of Health in June 2016:

- The general public are exposed to small amounts of PFAS in everyday life through exposure to dust, indoor

and outdoor air, food, water and products that contain these chemicals.

- There are no consistent results from conducted studies showing that PFAS exposure is linked to health problems in humans (US EPA studies provided results from studies conducted on laboratory animals – the levels were of higher measurements than those found in humans, and the applicability of effects in animals to humans was not well established.)

- There is no conclusive evidence that PFAS causes any specific illness in humans, this includes cancer.

- Although the International Agency for Cancer Research classified PFOA as 'possibly causing some cancers', other studies have concluded there is no association between human cancer and either PFOS or PFOA exposure.

- PFOS and PFOA are not known to cause adverse health effects to unborn or breastfeeding babies, but as a precaution mothers should limit their exposures to the chemicals.

- Blood tests are not recommended to determine whether any medical condition is attributable to PFAS exposure, as the tests have no current value in diagnosis, treatment or prognosis, and are primarily helpful to monitor exposure over time – this may help to monitor the success of exposure reduction measures.

- Ingestion of food and drinking water contaminated with PFAS are the major human exposure pathways. Inhalation of dust contaminated with PFAS and dermal (skin) contact with PFAS are considered to be minor exposure pathways.

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## What has the CFS done to reduce exposure to PFAS?

The vast majority of CFS volunteers will not have been exposed to PFAS during their previous firefighting and training at accumulated levels that would have been greater than their non-firefighting experiences.

Aqueous Film Forming Foam (AFFF) formulations were widely introduced to firefighting agencies in the 1960s to fight liquid fuel fires.

In the late 1990s researchers began to identify PFAS chemicals as non-biodegradable, extremely mobile and already present in the environment due to widespread usage.

In 2002 the National Industrial Chemical Notification and Assessment Scheme (NICNAS) recommended Australian industries actively sought alternatives to PFAS chemicals.

PFAS foams were ceased from usage at the CFS State Training Centre in 2002 on the flammable pad facility, with portable fire extinguishers continued to be used in basic training until the call of their removal in 2017.

In 2018 the SA Environmental Protection Authority announced a ban of firefighting foams containing PFAS with a mandatory removal by February 2020 – the CFS conducted two recalls of these products prior to the announcement of the ban, with recalls including all Class B foam containers and foam extinguishers from all firefighting vehicles.

Precautionary vehicle testing of the B Class foam storage on our pumper fleet (18 vehicles) commenced in August 2019. Not all vehicles in the fleet have used the foams.



## Why is there concern over PFAS?

PFAS has a half-life of 10 years in humans and the environment, meaning it takes a considerable amount of time to fully break down.

Due to this time scale and PFAS's ability to be carried in water sources, authorities have taken precautionary measures to remove the chemicals from usage and limit exposure to them.

PFOS and PFOA have been shown to be toxic to some animals.

## Is it possible to still be exposed to PFAS?

PFAS residuals may be found in areas where the CFS used foams or extinguishers to fight extensive fires or regularly conduct training – as a precaution, these areas should be avoided when growing edible items, grazing livestock or sourcing ground water.

## What research into the possible effects of PFAS to humans is being done in Australia?

The Victorian Metropolitan Fire Brigade (MFB) and United Firefighters Union (UFU) announced in February 2019 they would partner with the Macquarie University to conduct a clinical pilot study to investigate methods to reduce PFAS in the bloodstream.

For more information on PFAS please go to the EPA website [https://www.epa.sa.gov.au/environmental\\_info/perfluorinated-compounds](https://www.epa.sa.gov.au/environmental_info/perfluorinated-compounds) or SA Health website [www.sahealth.sa.gov.au](http://www.sahealth.sa.gov.au)