EPA investigates PFC use in South Australia

The Environment Protection Authority (EPA) is investigating the use of *perfluorinated compounds* (PFCs) in South Australia.

In light of recent activity around Defence bases, the EPA has been working with the Department of Defence to advise them of their obligations under the *Environment Protection Act 1993* to keep the community informed should they conduct any testing outside a Commonwealth defence site.

PFCs are from a family of commonly used chemicals that do not occur naturally and have been used in a range of industrial applications, with the highest proportion and potential for entry into the environment being through their use in firefighting foams for liquid fires.

PFCs are not banned but have been phased-out and replaced by chemicals that break down faster.

EPA Operations Director Science, Assessment and Planning, Peter Dolan said part of the EPA's role is to monitor emerging chemicals of concern based on a likelihood of them entering the environment.

"PFCs are known to persist in the environment for some time," Mr Dolan said.

"*Perfluorooctane sulfonate* (PFOS) and *perfluorooctanoic acid* (PFOA) are specific types of PFCs that can potentially be transported kilometres through water and air and can readily transfer between different substances such as soil, sediment, surface water and groundwater," he said.

"Research into PFCs shows that the chemical is very slow to break down once it enters the human body, and the fact that it accumulates in the body has meant that a number of scientific and regulatory bodies believe that more research into the potential impacts of PFCs is needed."

In 2012 the EPA tested fish in Adelaide coastal waters but found no detectable levels of PFOS in the edible portions of the fish.

There have been significant scientific advances in the past three years in chemical analytical methods for detecting PFCs, with testing in May discovering its presence in the Port River near stormwater outlets.

Recent testing of marine life from the Port River including fish, crustaceans and molluscs identified low levels of PFCs in these animals. The results were reviewed by SA Health, which advised that the levels in all edible tissue samples were below the maximum allowable concentrations and they were safe to eat.

SA Health Director, Public Health Services, Kevin Buckett, advises that in humans, there is no conclusive evidence that PFCs cause any specific illnesses, including cancer.

"Whether PFCs cause health problems in humans is currently unknown but on current evidence from studies in animals the potential for adverse health effects cannot be excluded. Because the elimination of PFCs from the human body is slow there is a risk that continued exposure could cause adverse health effects," Dr Buckett said.

There have been concerns interstate where PFCs have been found in groundwater and used for drinking, but it isn’t the case in South Australia where groundwater is not commonly used for drinking.

The EPA is also conducting a stocktake of likely sources of PFCs in South Australia to enhance its understanding of its historical and current use, and distribution of the chemical.

More information on PFCs is available on the Commonwealth *Department of Health website* or via this *link*.

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Environment Protection Authority