



In 2016, the NSW Environment Protection Authority (EPA) commenced an investigation program to assess the impact of historic use of per- and poly- fluoroalkyl substances (PFAS) across NSW. The investigation is primarily targeting sites where, in the past, PFAS-containing products were used in significant quantities – for example, airports, fire-fighting training facilities and some industrial sites.

As a provider of fire-fighting training, NSW Mines Rescue (Mines Rescue) has voluntarily entered the investigation process and targeted environmental site assessments (ESA) have commenced.

Initial testing at the Newcastle and Hunter Valley Mines Rescue stations found the presence of PFAS in the soil at levels in excess of the EPA decision tree triggers. The results are relatively low and not unexpected given the historic use of PFAS-containing foams. Further assessments will take place to determine the nature and extent of any PFAS contamination in the area. Preliminary testing has now commenced at Lithgow. The Woonona site was not operational until 2008 and requires no action.

What are PFAS?

Per- and poly-fluoroalkyl substances, also known as PFAS, are a group of man-made chemicals that have been used in a range of common household products and specialty applications, including in the manufacture of non-stick cookware, fabric, furniture and carpet stain protection applications, food packaging, some industrial processes and in some types of fire-fighting foam.

PFAS are generally present in aqueous film forming foam (AFFF). AFFF is a fire-fighting foam that has been used extensively worldwide, and within Australia, from about the 1970s due to its effectiveness in extinguishing liquid fuel fires.

These foams were historically used at several sites across NSW including defence bases, airports, Fire & Rescue NSW, the Rural Fire Service and Mines Rescue.

The import and manufacture of many PFAS-containing products (including fire-fighting foams and industrial additives) was phased out in Australia by December 2003.

PFAS are very stable chemicals that do not break down and can persist for a long time in the environment.

When did Mines Rescue stop using PFAS?

AFFF was in general use for fire-fighting training at Mines Rescue stations from the 1970s until 2002 when Mines Rescue decided to stop using them following concerns raised by the US Environmental Protection Agency that it was highly persistent in the environment.

Where are PFAS found?

Like many chemicals, PFAS are likely to be found at trace levels in groundwater, surface water and soils in many urban areas due to their wide-spread use in everyday household items and their persistence in the environment.

Where larger amounts of PFAS have been released into the environment, it is possible that elevated concentrations of these chemicals might be found in soil, surface water and ground water.

How are people exposed to PFAS?

Most people come into contact with PFAS through eating food and drinking water containing small amounts of PFAS and by using everyday products like cosmetics, shaving cream, water-repellent sprays and non-stick cookware.

Although trace levels of these substances are common, the general population in NSW and around Australia are largely not impacted by historical PFAS use and environmental contamination.

For specific areas where elevated PFAS contamination has been identified, the ways people are most likely to be exposed is through drinking contaminated bore water or surface water, eating home grown produce where this water has been used (such as eggs, milk, meat, fruit or vegetables), or eating seafood caught in affected areas.

How were the Mines Rescue site investigations conducted?

In conjunction with the EPA, appropriate preliminary sampling investigations were undertaken in April 2017. The tests were performed by Senversa, an accredited site auditor.

Surface soil samples and sediment samples were taken onsite and in the areas immediately adjacent to our facilities to assess the potential risk of PFAS contamination from historical AFFF use.

The levels of PFAS found at the Newcastle and Hunter Valley Mines Rescue sites are quite low compared with other notable sites under review but still warrant further investigation.

Preliminary testing at Lithgow has now commenced.

The Woonona site did not start operating until 2008 and requires no investigation.

What is Mines Rescue doing now?

Mines Rescue is working with the EPA to investigate if there is a contamination issue and GHD has been appointed as an environmental consultant to conduct the next phase of investigations.

More detailed investigations surrounding the Newcastle and Hunter Valley stations, and preliminary testing in Lithgow, began in August. Findings are expected to be available by the end of September.

These investigations will identify if there has been a contamination due to the historic usage of PFAS-containing foams and will look at the surrounding land uses (residents, adjacent commercial/industrial properties, farms etc.), however, as PFAS in soil alone is not considered a risk, the emphasis will be on identifying potential contamination in surrounding ground water.

The EPA and Mines Rescue will work closely with stakeholders to keep the local community informed of the investigation process and any key developments.

Should I be worried about my health?

The Department of Health states there is no consistent evidence that exposure to PFAS causes adverse human health effects.

Much of the research on humans has been done with people who were exposed to relatively high levels of PFAS through their work.

Workers involved in the manufacture or use of PFAS usually have higher blood PFAS levels than the general public, however, studies have not consistently shown that PFAS exposure is linked to health problems.

Is there a test to determine any health effects?

There is no test to determine if you are likely to have any adverse health effects from exposure to PFAS.

Blood testing has no current value in informing clinical management, including diagnosis, treatment or prognosis in terms of increased risk of particular conditions over time. As such blood tests are not recommended to determine whether any medical condition is attributable to exposure to PFAS.

The value of blood testing is limited to assessing exposure at a population level, such as monitoring over time, which may help determine the success of exposure reduction measures. However, given the long biological half-life of PFAS, frequent blood monitoring is of no value.

Sources and useful links for more information.

www.epa.nsw.gov.au/MediaInformation/pfasinvestigation.htm

www.epa.nsw.gov.au/resources/clm/decision-tree-pfas-contaminated-sites.pdf

www.health.nsw.gov.au/environment/factsheets/Pages/pfos.aspx



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