

PFAS FACT SHEET TARRO INVESTIGATION

PFAS Environmental Investigation

Recently, Fire and Rescue NSW (FRNSW) became aware of historical aqueous film-forming foam (AFFF) training activities conducted near its Tarro Fire Station, in the NSW Hunter region. Anecdotal reports indicate that legacy AFFF was applied to the ground in an open area at the rear (north and west) of the fire station which was later acquired by the Diocese of Maitland-Newcastle.

In September 2019, FRNSW engaged Nation Partners to conduct an environmental investigation into the presence of per- and poly-fluoroalkyl substances (PFAS) at Our Lady of Lourdes Primary School, Tarro.

The objective of the environmental investigation is to identify the nature and extent of PFAS in the environment from the use of legacy fire-fighting foam for training exercises at the site and any potential risks to people or the environment. The understanding of these potential risks will assist in developing mitigation strategies to minimise exposure (if necessary).

This investigation is part of an Environmental Investigation Program undertaken by FRNSW to investigate and manage the potential presence and impacts of PFAS on a number of our training sites and fire stations (current and past).

The FRNSW Environmental Investigation Program was developed in consultation with the NSW Environment Protection Authority (NSW EPA). The NSW EPA monitors the progress of FRNSW PFAS investigations and will coordinate any precautionary advice for the community, if required.

PFAS and Firefighting Foam

PFAS are a class of manufactured chemicals generally present in AFFF which is a firefighting foam that has been used extensively worldwide, and within Australia. Its use as a firefighting foam commenced around the 1970s by both civilian and military authorities due to its effectiveness in extinguishing liquid fuel fires. The term PFAS relates to a large number of chemical substances, with the primary PFAS compounds of interest to the investigations including perfluorooctane sulfonate (PFOS), perfluorohexane sulfonate (PFHxS), and perfluorooctanoic acid (PFOA).

From 2007, FRNSW commenced phasing out its use of legacy AFFF containing PFOS and PFOA as active ingredients. The firefighting foam now used by FRNSW is a more environmentally safe product and does not contain PFAS.

PFAS and the Environment

As well as firefighting foams, PFAS compounds have been used in the manufacture of common household and industrial goods. These include stain resistant applications for furniture and carpets, fast food or packaged food containers, make up, personal care products and cleaning products.

Due to its widespread use, most people living in developed nations will likely have some level of PFOS and PFOA in their body. Because these chemicals persist in humans and the environment, the Environmental Health Standing Committee (enHealth) recommends that human exposure to these chemicals is minimised as a precaution. The Commonwealth Department of Health advises that PFAS has not been shown to cause disease in humans.



Figure: Common uses of PFAS

Why is there testing at Our Lady of Lourdes Primary School, Tarro?

PFAS containing foams were used by FRNSW prior to 2007 for training exercises on former council parkland that was separated from the school by a fence. It now forms a part of the school grounds.

All environmental investigations are undertaken in accordance with the National Environmental Protection (Assessment of Site Contamination) Measure 1999 (NEPM). There are three main steps to an investigation: Preliminary site investigation (complete), detailed site investigation (current) and a human health and ecological risk assessment (if necessary).

A detailed site investigation includes sampling, analysis, and interpretation of soil, water and other environmental media that may be affected by PFAS. This is to identify the areas where PFAS may be present (source), how PFAS



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travels through the environment (pathways) and what may be affected by PFAS (receptors).

Are there preliminary findings?

The preliminary site investigation is complete and involved a desktop historical review, site inspection, and limited preliminary sampling.

A portion of the school has recently become a construction site for the installation of demountable buildings and this expedited the investigation process. Initial soil samples collected in late September for the characterisation of the stockpiled soil in the construction area and a small number of surface soil samples indicated the presence of PFAS. The access to the construction area is restricted to authorised personnel only.

Based on the findings from the preliminary site investigation, detailed sampling works were completed during the school holidays to better understand the extent of PFAS present at the site and included sampling of soils and available surface water. Groundwater monitoring wells were also installed and will be sampled soon.

PFAS were detected in some soil samples and the surface water samples.

What do the results mean?

The presence of PFAS in the environment does not necessarily mean that there is a risk to human health. It is important to assess if there are any pathways through which people may come into contact with PFAS.

There are a number of ways which people might come into contact with PFAS and these are called exposure pathways. EnHealth considers ingestion of food and drinking water contaminated with PFAS to be the major human exposure pathways, and inhalation of dust contaminated with PFAS and dermal (skin) contact with PFAS to be minor exposure pathways.

Based on the information obtained to date and the current recommendations from health authorities, the following advice is provided:

- the primary way people are exposed to PFAS is by drinking contaminated water or eating contaminated food. All children and staff at the school drink town water.
- contact with dust (inhalation) and soil (dermal) impacted with PFAS are considered to be very small ways in which people could be exposed to PFAS and can be managed by simple activities such as washing hands prior to eating food.

Next Steps

The assessment of all results will be conducted in accordance with the NEPM and the PFAS National Environmental Management Plan. An investigation report is being prepared, in consultation with the NSW EPA, which will summarise the findings to date. The report is expected to be released in late November.

The report will contain additional information relating to next steps, such as recommendations for any further investigation or management actions that may be required.

PFAS Further Information

Further information about the FRNSW PFAS Investigation is available at www.fire.nsw.gov.au/pfas

Information on the PFAS Investigation Program being undertaken by the NSW EPA is available at www.epa.nsw.gov.au/Mediainformation/pfasinvestigation.htm

Information on PFAS health effects and exposure pathways can be found on the Department of Health's website at

<https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-pfas.htm>



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