Army Aviation Centre Oakey Environmental Investigation

About the Investigation
The Department of Defence (Defence) is undertaking a long-term environmental investigation and assessment of the groundwater beneath the Army Aviation Centre Oakey (AACO) base and surrounds. It is anticipated the investigation and any subsequent management actions may take several years to implement.

The purpose of the investigation is to understand impacts to the environment from the historical use of fire-fighting foams, at the AACO as part of training activities. These foams contained perfluorooctane sulphonate (PFOS) and perfluorooctanoic acid (PFOA), which are two of the many types of per- and polyfluorinated chemicals (PFCs).

The information collected will assist Defence to understand the groundwater impacts and contribute to developing appropriate strategies for managing any potential human health and ecological risks.

Next Stages – Assessments and Field Work
From mid-2015 to mid-2016, the investigation will involve a hydrogeological assessment and a human health and ecological risk assessment.

Hydrogeological Assessment
Defence has commenced a hydrogeological investigation to further understand the nature and extent of the groundwater impacts. This involves:
- periodic sampling and testing of ground and surface water
- targeted soil sampling
- installing groundwater monitoring wells at key locations
- hydrogeological modelling.

To assist with ongoing monitoring of the groundwater impacts, Defence will install a number of new monitoring wells at the AACO base and surrounding area.

Outside the base, 10 wells will be installed at five locations within the Investigation Area. These wells will all be installed on Government-owned land, mainly along roadside easements.

Drilling rigs will be used to install the monitoring wells, which will remain in place for several years. These works are anticipated to occur in mid-to-late 2015.

Human Health and Ecological Risk Assessment
To inform the human health and ecological risk assessment, selected flora and fauna will be tested. This includes testing animals and crops that are part of the human food chain, as well as some that are not. This testing will be undertaken based on the technical requirements of the investigation. It will not be necessary to collect samples from all plant and animal species within the Investigation Area.

Plant and animal testing will not be undertaken by-request. Defence will make direct contact with landholders who may be able to assist the investigation with testing.

Using Bore Water for Drinking
As a precaution, it is recommended that residents not drink water sourced from underground water bores within the Investigation Area, until further notice. This includes boiled bore water.

Landholders and residents within the Investigation Area, who use bore water for drinking water or household use, should contact Defence to discuss possible management strategies.

Each household’s drinking water requirements will be assessed on a case-by-case basis to select the most appropriate alternative water sources available.
Current Investigation and Detection Areas
The ‘Detection Area’ shows the area where groundwater with concentrations of PFOS has been detected at Oakey. This is based on bore water sample results and may change as more samples are tested.

The ‘Investigation Area’ is the broader area beyond the Detection Area which is being studied as part of assessing the extent of the contaminated groundwater. It may change with time as more information becomes available. A map showing the PFOA Investigation and Detection Areas is available on the project website.

Drinking Water Screening Levels
Australia currently has no guidelines for assessing PFOS and PFOA concentrations in drinking water. Defence is using Provisional Health Advisory (PHA) values developed in 2009 by the Office of Water, a division of the US Environmental Protection Agency (EPA).

The PHA value for PFOS is 0.2 µg/L (micrograms per litre). The PHA value for PFOA is 0.4 µg/L. If concentrations exceed these screening levels, action should be taken to reduce exposure to PFOS and PFOA in drinking water.

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