



Australian Government

Department of Defence
Defence Support and Reform Group

Army Aviation Centre Oakey Groundwater Investigation

Frequently asked questions

About the investigation

Q What is the investigation about?

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.

The initial investigation involves targeted sampling and testing of local water bores to the west and south-west of the base and desktop studies.

It is anticipated the investigation may take several years to complete. The purpose of the investigation is to understand how groundwater may have been impacted by fire-fighting foams, used as part of training activities on the AACO between 1970 and 2005.

These foams contained perfluorooctane sulphonate (PFOS) and perfluorooctanoic acid (PFOA).

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

Q How did Defence know there might be PFOS and PFOA in the groundwater outside the AACO?

In 2010, Defence found evidence of PFOS and PFOA in the groundwater beneath the AACO base. Defence completed further assessments of the groundwater system and the results indicated the impact may have travelled further afield, beyond the AACO.

Defence completed limited targeted water sampling in early 2013 with wider scale testing beyond the AACO perimeter occurring from early 2014, as part of the evolving process to determine the extent of the impact.

Q What are PFOS and PFOA used for?

PFOS and PFOA have been used for many years in a wide variety of common household and industrial products such as cleaning products, textiles and paper and packaging products and are therefore present at trace concentrations throughout the environment.



Australian Government

Department of Defence
Defence Support and Reform Group

Q Are there potential human health impacts of PFOS and PFOA?

PFOS and PFOA are labelled as 'emerging contaminants' because regulatory standards both here and abroad are in their infancy and/or are evolving due to new science and information being generated.

To date there has been limited research completed or published in Australia and/or overseas, which conclusively confirms a known link between exposure to these chemicals and the possible associated health impacts of these chemicals via the exposure pathways identified in Oakey.

Defence is aware that there are high profile, international legal proceedings, and associated research studies relating to these chemicals, for example, the West Virginia/Ohio - C8 Health Panel Epidemiological Study (http://www.c8sciencepanel.org/prob_link.html). However, the findings of this health study could have been impacted by many location- and population-specific factors (e.g. routes of exposure, background conditions and lifestyle factors), which cannot necessarily be translated to the Oakey community. In addition, many factors can influence a person's health and therefore it is challenging to link a person's health issue unequivocally to PFOS and PFOA exposure.

Research in Australia and overseas continues to be undertaken. Defence is actively engaged with industry professionals to review the information from these studies and its applicability to the site conditions.

As a precaution, Defence recommends residents within the investigation area do not drink any water sourced from underground water bores within the investigation area.

Further assessment of potential health impacts and risks associated with other uses of the groundwater will be undertaken as part of the investigation.

Q What is the 'detection area'?

The 'detection area' is a map showing our current understanding of the area where PFOS contaminated groundwater has been detected at Oakey. This is inferred from bore sample results and may change with time as more samples are tested.

Q What is the 'investigation area'?

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. The may change with time as more information becomes available.

Q What health guidelines are used as a basis for assessing reported PFOS and PFOA concentrations?

Australia currently has no guidelines for assessing reported PFOS and PFOA concentrations in drinking water. From August 2014, Defence is using Provisional Health Advisory (PHA) values developed in 2009 by the US Environmental Protection Agency (EPA). The PHA guidelines represent a concentration above which action should be taken to reduce exposure to PFOS and PFOA in drinking water. The PHA value for PFOS is 0.2 µg/L. The PHA value for PFOA is 0.4 µg/L.



Australian Government

Department of Defence
Defence Support and Reform Group

Q How will landholders and residents be kept informed about the project?

Defence is committed to regularly updating the community throughout the investigation.

The project website will be updated as the investigation progresses. Community information sessions, direct mail and information sheets will occur as required.

Enquiries or requests relating to individual properties will be assessed on a case-by-case basis.

Landholders and residents can contact the project team by emailing defence.oakey.anz@aecom.com or calling 1800 136 129 (8.30am – 5pm, weekdays).

Q Can I drink the groundwater from my water bore?

As a precaution, Defence recommends not drinking water from any underground sources (i.e. bore water) within the investigation area until further notice. This includes boiled groundwater.

Landholders and residents within the investigation area, who use groundwater for drinking water or household use, should contact Defence in order 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 assistance that Defence may be able to provide.

Defence will continue to work cooperatively with all relevant stakeholders including those from Commonwealth, State and local government agencies to implement appropriate management strategies.

Q What should I do if my only source of drinking water is from a rainwater tank?

Landholders or residents within the project's investigation area whose only source of drinking water is from a rainwater tank should contact Defence.

General advice about drinking water from rainwater tanks can be found on the Department of Health website:

- [Guidance on use of rainwater tanks](#)
- [Roof-harvested rainwater and protection of public health](#)

Q Can I continue to use the groundwater to water my crops or livestock?

Defence does not have any information which indicates that using groundwater for irrigation of crops and watering livestock should cease.

Should additional information, to be gathered through Defence's ongoing investigations, change this position, landholders and residents will immediately be informed.

Q Will the investigation include soil testing?

Defence is focussing its efforts on understanding any potential health impacts at this stage of the investigation. Following further delineation of the groundwater impacts and identification and



Australian Government

Department of Defence
Defence Support and Reform Group

implementation of appropriate management strategies, Defence may undertake soil investigations if they are determined necessary.

Q Will Defence pay for my drinking water?

Each household's drinking water requirements will be assessed on a case-by-case basis to select the most appropriate assistance that Defence may be able to provide.

Landholders and residents within the investigation area, who use groundwater for drinking water, should contact Defence in order to discuss possible management strategies.

Q If Defence is assisting me to access an alternate drinking water source to bore water, how long will this continue?

The length of time this assistance will be provided will depend on:

- The outcomes of the investigation, including the associated risk assessment and management strategies selected for potential health and ecological risks.
- Each household's situation, water use and available access options, which will be assessed on a case-by-case basis.

Each landholders'/ residents' existing water access arrangements will be reviewed as more information is collected over the life the project. Defence will contact you directly about any proposed changes to these arrangements.

This is a long-term environmental investigation, which may take several years to complete.

Q Will Defence provide compensation for loss of income to business-owners/ operators, where detections of PFOS and PFOA have been found (e.g. livestock and crop sales)?

Defence does not have any information at this time, which indicates that using groundwater for watering stock and irrigating crops, including commercial purposes, should cease.

At present, there is no basis for Defence to compensate business-owners/ operators for loss of income, or any other loss.

This is a long-term environmental investigation and assessment. The information collected by Defence will assist it to understand the groundwater impacts and develop appropriate management strategies in relation to any potential human health and ecological risks.

Q Will PFOS and PFOA detections have an impact on property values?

Defence does not have any information at this time, which indicates that values of the properties within the investigation area have been diminished.



Australian Government

Department of Defence
Defence Support and Reform Group

Groundwater assessment and test sites

Q How are the groundwater test sites selected?

The groundwater test sites are selected based on:

- the current understanding of groundwater flow direction
- results from previous sampling/ testing
- technical advice about the most likely movement of the impact.

In order to estimate the extent of the groundwater contamination, not every water bore within the investigation area will need to be tested. The location of future sample/ test sites will be informed by the data gathered to date and the technical information needed to progress the investigation and assessment at the time.

Defence will contact landholders and/or residents whose water bores are identified as a potential sample/ test site.

Q How long will the project team need to be on my property to undertake groundwater sampling?

Currently only existing water bores are being tested. The sampling process will take approximately 30 minutes to one hour, depending on bore accessibility. Please allow additional time, if multiple water bores are to be tested.

Q What does the testing involve?

Groundwater samples are collected in plastic containers provided by an independently accredited commercial laboratory. The samples are sent back to the laboratory in these containers for analysis. Testing by the laboratory is conducted using standard analytical methods (i.e. US EPA).

Q What will happen if I want my groundwater tested, but my property has not been selected for testing?

Landholders or residents within the investigation area should contact the project team directly regarding requests for groundwater testing.

Not all water bores within the investigation area need to be tested in order to determine the extent of the groundwater contamination. Requests will be assessed on a case-by-case basis which takes into account the specific circumstances of the landholder and the requirements of the project.

The location of future sample/ test sites will be informed by the data gathered to date and the technical information needed to progress the investigation and assessment at the time.