

Groundwater Contamination at Army Aviation Centre Oakey



Australian Government

Department of Defence
Defence Support and Reform Group

Neighbourhood Information Session
Thursday 13th December 2012, 5.30pm

Overview

- Recent groundwater monitoring identified levels of Aqueous Film Forming Foam (AFFF) contamination
- Water quality monitoring of the Base swimming pool also identified levels of contamination
- Preliminary Human Health Risk Assessment completed and identifies that the risk to human health is low.

What is AFFF?

- PFOS compounds can be found in some textiles, paper, leather; wax, polishes, paints, varnishes, and cleaning products for general use; in metal surfaces, and carpets.
- Also found in fire fighting foam.
- AFFF products have been used across the community, Defence and industry for decades in fire fighting activities.
- AFFF contains **Perfluorinated Chemicals (PFC's) - Perfluorooctane Sulphonate and Perfluorooctanoic Acid (PFOS/PFOA).**

What is PFOS/PFOA?

- PFOS and PFOA are man-made fluorinated chemicals.
- Lipid-repellent and water-repellent characteristics provide soil, oil and water resistance to a wide range of products including carpets and textiles, paper and packaging, coatings, industrial and household cleaning products.
- PFOS and PFOA are chemically and biologically stable. They are resistant to breakdown by sunlight and water.
- Persistent in the environment.
- The 3M Company was the primary manufacturer of PFOS up until in 2000 when production ceased.

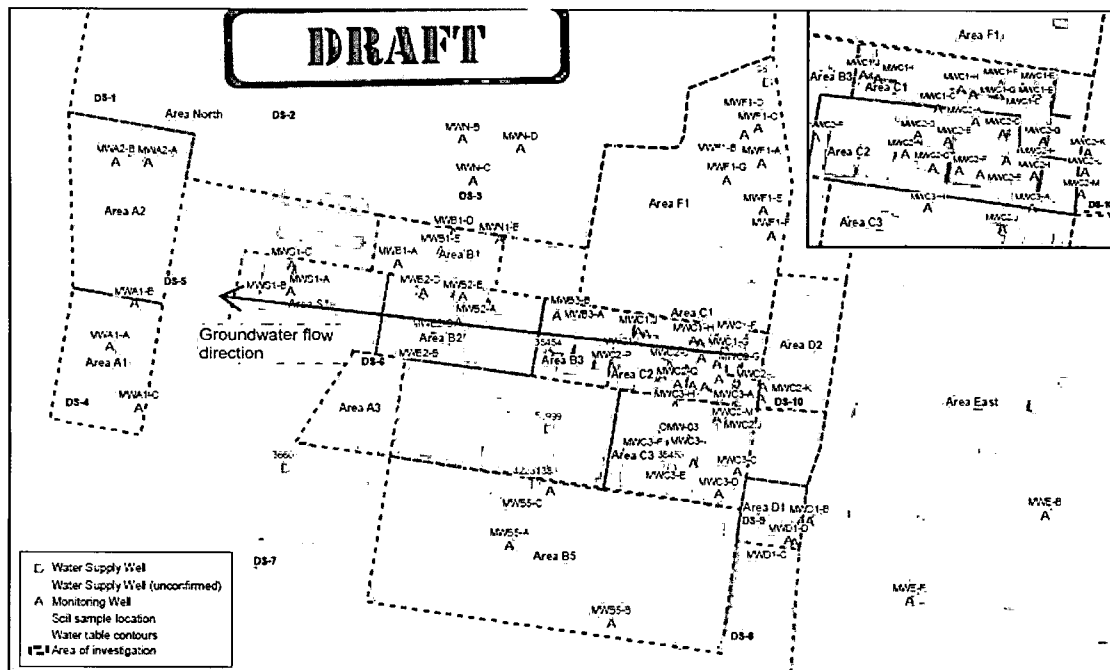


What is the situation at AACO?

- Base is connected to the town water supply
- Environmental investigations commenced in 2010 to identify potential contamination.
- PFOS/PFOA were initially identified in 2011 in groundwater.
- Defence historically used the groundwater for irrigation purposes and filling of the pool.
- PFOS pool samples = 8.5 µg/L

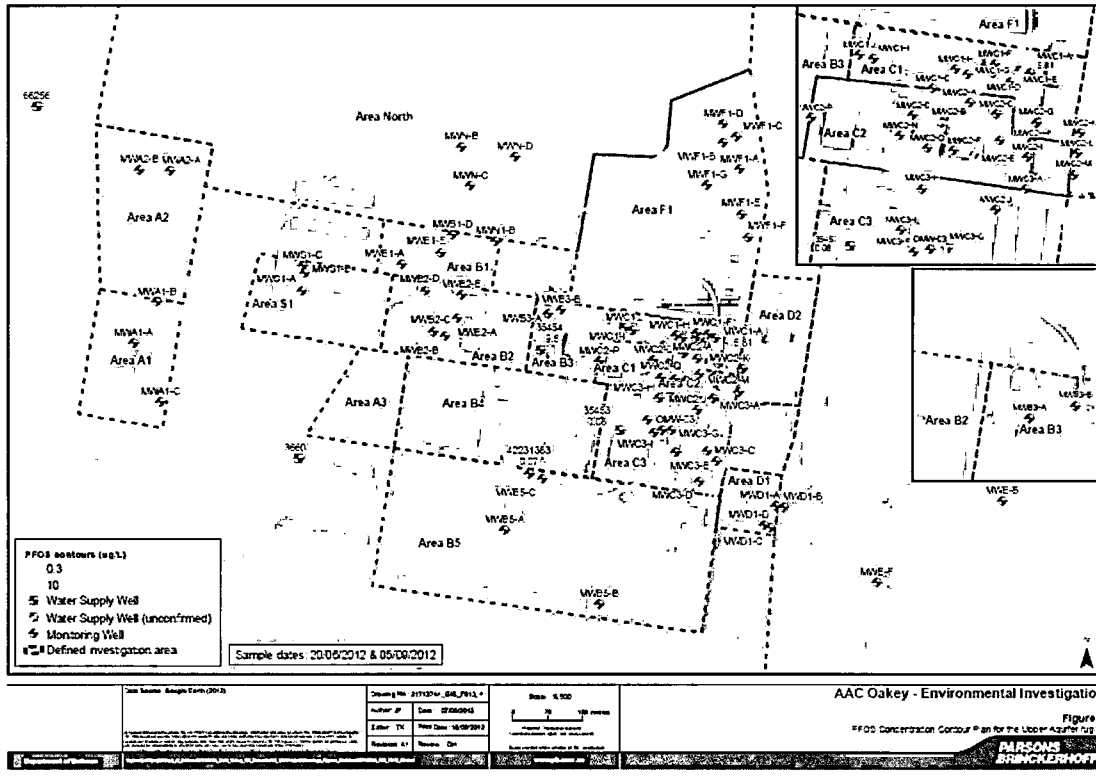


Inferred Groundwater Gradient Map - Groundwater Elevation Contours, AACO

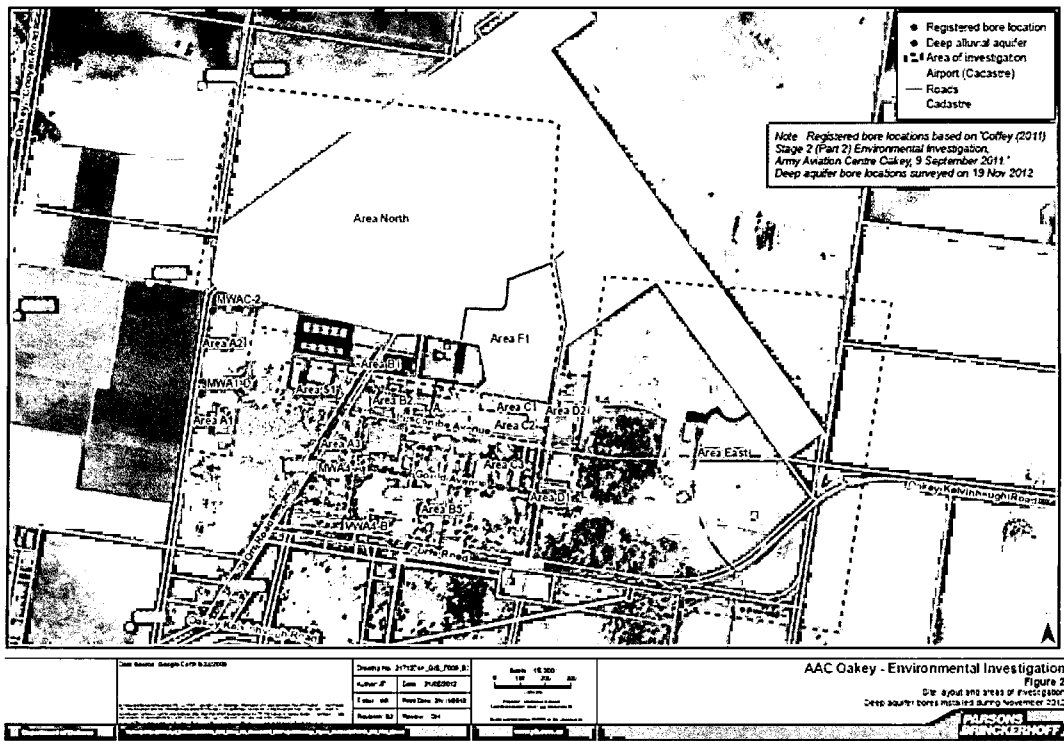




Inferred PFOS Concentration Contours Groundwater – Upper Aquifer, AACO



Proposed Groundwater Bore Sampling Locations – December GME 2012



What does this mean for you?

Human Health Information

- Potential pathways include ingestion of food and water and use of commercial products
- There is no acute level of health risk from skin exposure.

PHRA results

- The health risk from oral exposure is based on general exposure assumptions from enHealth 2012.
- Daily human reference dose = 0.00008 mg/kg per day
- 187mL per day, 3 days/ week over lifetime

Therefore:

- Health risk from drinking and swimming in the pool is low

What Next?

- Defence continuing investigations into human health risks
- More information will be available approx Feb/Mar.
- Defence will continue to inform you as investigations proceed



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Further Information

- *Environmental Guidelines for Management of Fire Fighting Aqueous Film Forming Foam (AFFF) Products* – Department of Defence, June 2007
- *Emerging Contaminants - Perfluorooctane Sulphonate (PFOS) and Perfluorooctanoic Acid (PFOA)*, USEPA, May 2012
- National Industrial Chemicals Notification and Assessment Scheme (NICNAS) <http://www.nicnas.gov.au/>
- *Hazard Assessment of Perfluorooctane Sulphonate (PFOS) and its salts*, ENV/JM/RD(2002)17/Final, OECD



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Further Information

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