Perfluorinated Compounds (PFC) Environmental Management Program

Community Information Session
HMAS Albatross
Environmental Investigation

18th May 2016
Session #1
Agenda

• Welcome
• About the Defence PFC Environmental Management Program
  – Background
  – About PFCs
  – Health information
• About this Environmental Investigation Project
• Question and Answer Forum
• Informal Q&A and Information Session
About the Defence PFC Environmental Program
Program Background

• HMAS Albatross Environmental Investigation Project has been established

• Other key departments and agencies involved
Site Background

- HMAS Albatross has been a permanent operational flying and training base since 1948
- The base has a history of using Aqueous Film Forming Foam (AFFF) in emergencies and fire fighter training.
What are PFCs?

• Legacy AFFF foams contained perfluorinated compounds (PFCs) including perfluorooctane sulphonate (PFOS) and perfluorooctanoic acid (PFOA).

• PFOS and PFOA have been used to make coatings and products that resist:
  – heat
  – oil
  – stains
  – grease
  – water
About PFOS and PFOA

• Used for many years in a wide variety of common household and industrial products nationally and internationally.

• Present at trace concentrations throughout the environment and in most homes.

• Because of widespread use most people living in developed countries like Australia will have some PFOS and PFOA in their body.
About PFOS and PFOA

- Legacy AFFF containing PFOS and PFOA were:
  - used due to their effectiveness in extinguishing liquid fuel fires
  - widely used at large industrial sites where liquid fuel fires might occur, aviation facilities and fire fighting facilities
  - used extensively worldwide and within Australia by civilian and military organisations for fighting liquid fuel fires from the 1970s
About PFOS and PFOA

• PFCs, specifically PFOS and PFOA are emerging as compounds of interest around the world because they are persistent in the environment.

• Many countries have phased out, or are in the process of phasing out the use of PFOS and PFOA.
Background in Defence

• **In 2003** Defence became aware that PFOS/PFOA was an emerging persistent organic pollutant – Defence released a specification for the supply and testing of AFFF concentrates.

• **In 2004** Defence stopped using AFFF that contained PFOS and PFOA for training purposes.

• **From 2004** Defence commenced phasing out use of the old foams. The product currently used by Defence is a more environmentally safe product and does not contain PFOS and PFOA as active ingredients.
enHealth advises that research has not conclusively demonstrated that PFCs are related to specific human illnesses, even under conditions of occupational exposure.

PFCs can potentially enter the body in a number of ways:
- primarily through drinking water
- inhalation mainly in industrial settings
- eating food that has taken up the chemicals
- skin absorption (very low absorption risk)

PFCs can be naturally eliminated from the body:
- takes some time to be removed
- accumulation can occur if intake continues
Health information

- Australia does not currently have health or ecological trigger value guidelines for PFOS and PFOA.

- The development of Australian criteria for acceptable levels of exposure is required to understand any level of risk.

- There is currently no consistent evidence that exposure to PFOS and PFOA causes adverse human health effects.

- Dept. of Environment is developing and will implement nationally consistent guidance and standards for PFOS and PFOA with State and Territory Governments as soon as possible.
Defence engagement

- Defence is working closely with Commonwealth and State Governments, international bodies and industry to ensure we take a best practice approach.
- Defence is proactive in initiating a program of investigation.
- Defence is being open and transparent.
About this Investigation
About this investigation

- HMAS Albatross has been identified for detailed investigation.

- Environmental investigation is undertaken in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM).

- Specialist Environmental Consultants have been engaged.

- Defence has worked with industry to develop a detailed investigation methodology to enable completion within 12 months from commencement.
HMAS Albatross
Overview of Comprehensive Assessment Works

- **Staged assessment program** consistent with the NEPM and NSW EPA requirements
  - Initial sampling of existing locations (groundwater and surface water) on and off-site to assess if PFCs are present
  - Review of site history of AFFF use and sources of PFC contamination
  - Undertake detailed sampling on and off-site
  - Review risk to determine that water is safe for use
Preliminary Site Investigation

- Site history assessment
  - site interviews, stakeholder information, inspecting site
- Start development of Conceptual Site Model to identify contamination:
  - Sources (where and when AFFF was used)
  - Pathways (how PFCs move in the environment)
  - Receptors that may exposed to the contamination
- Preliminary sampling and screening of risk level
  - off-site private and public groundwater bores
  - key surface water drainage lines

AIM = Understand Source-Pathway-Receptor linkages and priority of works for Detailed Site Investigation.
Detailed Investigation Works

- Work with stakeholders to confirm further works, likely to comprise:
  - Soil Investigation
    - On-site soil samples
  - Drainage Line Investigation
    - On-site - Sample surface water and sediment/soil within drainage channels
    - Off-site – Sample downstream at drainage channel and dams. Background further ‘up-stream’ of Base.
  - Groundwater Investigation
    - Install additional shallow and multi level monitoring bores
    - Gauge all bores, sample and assess all new locations
  - Reporting on the works
    - Interpretative Report, consistent with the NEPM
Human Health and Ecological Risk Assessment (HHERA)

• Throughout the investigation, results will be compared to International screening criteria to assess the need for the HHERA
  – Consultation and input from agencies, experts and community
• Prepare HHERA methodology using NEPM and enHealth guidance
• Complete the HHERA, to evaluate risks to the human health and ecology, and inform future action to mitigate risks.
What will the works look like?
Assessment Works Timing

Preliminary Investigation Works
- Field Works - Commenced May 2016 - June 2016
- Reporting of Results – June - July 2016

Detailed Investigation Works
- Field Works – September - October 2016
- Reporting of Results – November 2016 - January 2017

Human Health and Ecological Risk Assessment
- Ongoing assessment of risk and requirement to commence HHERA throughout program
Stakeholder and Community Engagement

- Regular Stakeholder interactions to provide timely and accurate advice to guide decision-making
  - Public enquiry lines operate throughout project
  - Fact sheets, relevant information and results of sampling will be published on project website
  - Individual correspondence on private property results
  - Community Engagement Sessions at key milestones
  - Will be done with appropriate privacy considerations

- **Water use survey** to be conducted, to understand groundwater and rainwater tank use in the area
Need more information?

- Defence wants to keep you informed.
  - Phone: 1800 856 491
  - Email: HMAS.Albatross@aurecongroup.com
  - Local Site Website: www.defence.gov.au/id/albatross
  - Post: HMAS Albatross, Aurecon
    PO Box 538, Neutral Bay 2089

- Additional information sessions will be held during the course of the project.
- General information about the national Defence program can be found at: www.defence.gov.au/ID/PFOSPFOA/
In Summary

• Detailed site investigation has commenced and is in accordance with the NEPM.

• enHealth advises that research has not conclusively demonstrated that PFCs are related to specific human illnesses, even under conditions of occupational exposure.

• Defence will keep you informed and will continue to consult with all relevant Federal and State and local government agencies.
Questions?
HMAS Albatross
Thank you for your attendance