



# **BIG CHANGES IN FIRE FIGHTING FOAM ARE COMING**

**WHAT IS THE EPA 2010/15 PFOA  
STEWARDSHIP PROGRAMME  
AND HOW WILL IT AFFECT YOU?**



# BIG CHANGES...

To comply with the USA EPA 2010/15 PFOA Stewardship Programme, fluorosurfactant manufacturers worldwide have committed to withdraw from sale any fluorosurfactant with a carbon chain length greater than C6 by 2015. This change will have a significant impact on fire fighting foam manufacturers and users.

## But what does this change mean to you?

### THE EPA 2010/15 PFOA STEWARDSHIP PROGRAMME – WHAT & WHY?

#### PFOS, PFOA & FLUROSURFACTANT RESEARCH

Fluorosurfactants are synthetic fluorinated chemicals with varying carbon chain lengths, designed to be highly effective at lowering the surface tension of water. They are used in the manufacture of many different products in many industries, including Fire Fighting Foams.

Since the removal of PFOS from Fire Fighting Foams in 2005, a related chemical called Perfluorooctanoic acid (PFOA) has been discovered to be an unintentional byproduct of the telomer manufacturing process used in the production of fluorosurfactants.

PFOA is a man-made chemical with a carbon chain length of C7, first synthesised in 1947. It is toxic, bioaccumulative and very persistent and has been found at very low levels in the environment and in the blood of the general population since 1960. PFOA has also been shown to cause adverse effects in laboratory animals.

In October 2003, a fluorosurfactant working group was formed by the Environmental Protection Agency (EPA) in the USA and it concluded that:

- Fluorosurfactants with an R<sub>f</sub> carbon chain length greater than C6 could potentially degrade and form PFOA and would therefore be classed as being toxic to the environment.
- There is no pathway for fluorosurfactants with an R<sub>f</sub> chain length of C6 or less to degrade into PFOA (which has an R<sub>f</sub> chain length of C7).

In response to this research and with the aim to reduce the global potential for human exposure to PFOA, in 2005 the EPA convened what has come to be known as **the 2010/15 PFOA Stewardship Programme**.

#### WHAT IS THE 2010/15 PFOA STEWARDSHIP PROGRAMME?

The 2010/15 PFOA Stewardship Programme asks all manufacturers of long chain fluorotelomers and other long chain fluorinated compounds to voluntarily **stop the production and use of fluorinated compounds with a carbon chain greater than C6 by year end 2015**.

This includes the manufacture of long chain fluorosurfactants previously used in the manufacture of Fire Fighting Foam concentrates.

**European and worldwide manufacturers have now committed to this programme**, meaning fluorinated compounds with carbon chains greater than C6 will soon no longer be available.

# HOW WILL THIS PROGRAMME AFFECT FIRE FIGHTING FOAM?

## FIRE FIGHTING FOAM & THE MOVE TO C6

The EPA 2010/15 PFOA Stewardship Programme presents a challenge to foam manufacturers.

Fire Fighting Foam concentrates are traditionally manufactured using fluorosurfactants with a carbon chain length between C6 and C12. Manufacturers who have committed to the Programme will stop the production of fluorosurfactants with a carbon chain greater than C6 by year end 2015, meaning these commonly used fluorosurfactants will no longer be available.

Consequently, all fire fighting foam manufacturers will need to:

- **reformulate** their foam concentrates using C6 fluorosurfactants
- **retest** the new foam concentrates to meet International standards required by the Offshore Oil & Gas industry, such as UL 162, ICAO Level B and EN 1568:2008 Part 3

## OUR PROGRESS

Over a year ahead of the date set by the 2010/15 Programme, Oil Technics is proud to offer their customers a **new range of Aberdeen Foam C6 foams**.

This gives our customers an early opportunity to make the change to more environmentally friendly foams, potentially giving them an advantage over their competitors.

All of the C6 foams have succeeded in meeting the stringent performance requirements of **UL 162**, which is generally considered to be the most challenging performance standard to obtain.

## HOW WILL THIS CHANGE AFFECT THE END USER?

Ask yourself three things to find out how this change will affect you:

- 1 **Is my current foam stock 2010/15 compliant ?**
- 2 **Is my current foam stock UL 162 approved ?**
- 3 **Is my current foam stock compatible with new C6 Fire Fighting Foam ?**

You may also like to consider the following points:

- If you blend C6 foam with non-C6 foam, you will lose your C6 compliancy.
- If you continue to use your existing foam stock, after 2015 you will probably find it is no longer being manufactured and has been replaced by a new C6 foam.

For further information, please visit [www.firefightingfoam.com](http://www.firefightingfoam.com)



**ABERDEEN FOAM**

## OUR RANGE

Oil Technics has now developed, tested, and passed the following Aberdeen Foam C6-based AFFFs to International foam standards:

### Foam Concentrate

- 1% AFFF-LF-C6
- 3% AFFF-LF-C6
- 6% AFFF-LF-C6
- 1% AFFF-C6
- 3% AFFF-C6
- 3 x 3% AFFF-AR-C6

### Performance Standard

- UL 162
- UL 162
- ICAO Level B
- ICAO Level B
- ICAO Level B
- UL 162
- UL 162
- ICAO Level B
- UL 162



## OUR THANKS

We would like to thank Fire Manager Pete Dennett and his staff at the Petrofac Fire Training School in Montrose, Scotland, for generously making available to us the use of their fire testing facilities throughout the development of our C6 products.

## GLOSSARY

### AFFF

Aqueous Film Forming Foams  
*A foam concentrate that contains fluorosurfactants.*

*Fluorosurfactants provide AFFFs with the low surface tension and positive spreading coefficient that enables film forming on top of lighter fuels.*

### PFOA

Perfluorooctanoic acid

### PFOS

Perfluorooctanesulfonic acid

### R<sub>f</sub>

Fully fluorinated

## USEFUL REFERENCES

- EPA 2010/15 PFOA Stewardship Programme  
[www.epa.gov/oppt/pfoa](http://www.epa.gov/oppt/pfoa)
- UL Listings  
[www.ul.com](http://www.ul.com)
- Fire Fighting Foam Coalition  
[www.ffc.org](http://www.ffc.org)
- Fire Sector Federation  
[www.firesectorfederation.co.uk](http://www.firesectorfederation.co.uk)
- Industrial Organisation for Industrial Hazard Management  
[www.joiff.com](http://www.joiff.com)
- Fire Industry Association  
[www.fia.uk.com](http://www.fia.uk.com)



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