



TALKING POINTS Perfluorinated Compounds March 28, 2014

Perfluorinated compounds, or PFCs, are a group of manmade chemicals that have been used for a wide variety of residential, commercial and industrial uses. PFCs are classified as emerging environmental contaminants because they do not have established regulatory standards, but evolving science has identified potential risk to human health and regulatory standards are under consideration. The Air Force Civil Engineer Center is aware of PFC releases on active duty and closed installations and is working in coordination with state and federal regulators to identify affected sites and, when necessary, take responsive action.

KEY MESSAGES

- EPA has issued a provisional health advisory for two PFCs, Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA).
 - Air Force guidance is to identify PFC releases, assess potential human exposure, and, when necessary, take action to protect human health.
 - Although there are currently no federal mandates regarding PFCs, AFCEC will work with EPA, state and local regulators to address PFC contamination at current and former Air Force installation sites.
 - Researchers have not definitively established the level at which PFCs cause effects.
 - AFCEC will work with regulators and discuss their approach to investigating potential PFC releases and mitigating identified exposures.
1. AFCEC's approach is a three-step evaluation process that focuses on Air Force Fire Training Areas, crash sites and areas that contained fire suppression systems. Locations with a suspected PFC release undergo groundwater, surface water, soil and sediment sampling to determine whether a release has occurred.
 2. If a PFC release is confirmed, the site moves to delineation, which includes an analysis to determine if any migration occurred and an evaluation of potential human exposures.
 3. The final phase of the process is to use all data gathered to determine whether remediation is required. If so, the next step is to identify the best remediation technique to mitigate exposures until cleanup standards are available.

QUICK FACTS

PFCs are a class of synthetic fluorinated organic chemicals used in many industrial and consumer products such as nonstick cookware, waterproof fabric, some food packaging and firefighting foam.

Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS) are both PFCs, a type of fluorinated organic compound.

In 1970, the Air Force began using Aqueous Film Forming Foam (AFFF), a firefighting agent that contains PFCs, to extinguish petroleum fires.

PFCs exist in the environment and are not known to degrade by any natural processes due to the strength of the carbon-fluorine bond.

The Air Force considers action to control PFC exposures based on a risk analysis where results indicate the concentration is above the EPA provisional advisory concentrations:

- **PFOS: groundwater concentration is greater than 0.2 micrograms per liter (ug/l)**
- **PFOA: groundwater concentration is greater than 0.4 ug/l, and where there is an exposure pathway.**

