

Air Force Response to PFOS/PFOA

Fact Sheet

As of July 2020

Background: What are PFOS and PFOA?

Perfluorooctane sulfonate, PFOS, and perfluorooctanoic acid, PFOA, are synthetic fluorinated organic compounds used in many industrial and consumer products such as nonstick cookware, stain-resistant fabric and carpet and some food packaging.

Commonly grouped with other synthetic fluorinated chemicals using the umbrella term per- and polyfluoroalkyl substances (PFAS), PFOS and PFOA are the only two compounds with established lifetime health advisories for drinking water.

- In 1970, the Air Force began using Aqueous Film Forming Foam (AFFF), which contains PFOS/PFOA. AFFF is mission critical because it meets MILSPEC and is the most efficient extinguishing method for petroleum fires and is widely used across the firefighting industry, to include all commercial airports, to protect people and property. AFFF is being phased out.
- The Air Force Civil Engineer Center (AFCEC) began a comprehensive assessment process in 2010 to identify locations where PFOS/PFOA may have been released across the Air Force at active, Reserve, Air National Guard and closed installations.
- On May 19, 2016, the Environmental Protection Agency established a lifetime Health Advisory (HA) level of 70 parts per trillion for a combined concentration of PFOA and PFOS in drinking water. For context, one (1) ppt is equivalent to one (1) drop of water in 20 Olympic-sized swimming pools. These two compounds are classified as emerging contaminants for which the risk to human health is not yet known and regulatory standards are evolving.

Air Force Response

AFCEC is taking a three-step approach – identify, respond, prevent – to assess and respond to potential PFOS/PFOA drinking water contamination.

- In 2017, the Air Force completed enterprise-wide sampling of drinking water at all installations — stateside and overseas — to ensure drinking water supplies meet EPA guidelines. The Air Force is currently resampling all drinking water on Air Force installations in 2020.
- In the United States, AFCEC is conducting additional sampling to identify potential AFFF releases, determine the extent of the PFOS/PFOA contamination and map possible pathways to drinking sources.

CERCLA

The Air Force's investigation work and response actions are guided by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), applicable state laws and the EPA's lifetime HA for drinking water.

The Air Force is moving forward aggressively in accordance with the CERCLA process to fully investigate releases, prioritize responses, and determine appropriate cleanup actions based on risk. Following the CERCLA process makes certain thorough investigative work is done; the process also promotes accountability, community involvement and long-term protectiveness.

Identify — Respond — Prevent

The following chart outlines the Air Force's three-step approach to identifying releases, investigating and responding to drinking water contamination and preventing future contamination.

IDENTIFY releases, investigate PFOS/PFOA

Preliminary Assessment

In the United States, the Air Force is conducting base-wide records reviews to identify fire training areas, crash sites and areas at installations where AFFF was used.

** As of May 2020, 100 percent of PAs are complete.*

Site Inspection

Once the PA identifies potential AFFF release areas, AFCEC conducts groundwater, surface water, soil and sediment sampling to verify releases and map possible pathways to drinking water sources.

If SI sampling indicates potential pathways to off-base drinking water supplies, AFCEC may test public water systems and private wells.

Once the SI is complete, AFCEC determines if more investigation work is needed.

RESPOND to drinking water contamination

Response Action

When AFCEC determines PFOS/PFOA levels exceed the lifetime HA in drinking water due to the Air Force mission, the Air Force will reduce risk and, if needed, provide an alternate drinking water source, like bottled water, until a permanent solution is in place. Permanent solutions may include installation of a filtration system or connecting private well owners with PFOS/PFOA over the EPA lifetime HA level to a public drinking water supply.

If sample results are detectable but below the lifetime HA in drinking water, the Air Force may conduct additional sampling as needed to track concentration changes and determine if further action is necessary.

PREVENT future contamination

AFFF Replacement

The Air Force has replaced legacy AFFF in fire vehicles, stockpiles and hangar systems with a more environmentally responsible formulation.

Retrofit fire vehicles

The Air Force has retrofitted fire vehicles with a system that prevents foam discharge during equipment testing and training. Approximately 850 fire trucks were retrofitted in 2019.

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