



Marine Corps Outlying Landing Field Atlantic, North Carolina

Drinking Water Investigation

October 2017

The Navy is requesting permission to sample drinking water from wells within designated areas near Marine Corps Outlying Landing Field (MCOLF) Atlantic. The Navy has developed a protective policy to assess past releases of per- and polyfluoroalkyl substances, commonly known as PFAS. These substances may be present in the soil and/or groundwater at Navy sites as a result of historical firefighting activities using aqueous film forming foam (AFFF), including response to crashes, equipment testing, and training. Although no releases of AFFF have been reported at MCOLF Atlantic, the Navy is conducting this investigation in an abundance of caution due to the historical flight operations with emergency response equipment being present at MCOLF Atlantic that may have used AFFF. If PFAS are in the groundwater, there is the potential for these substances to also be present in private drinking water wells in the designated areas because of their proximity and location relative to the MCOLF Atlantic runway where AFFF may have been used in the past (Figure 1).

Out of concern for our neighbors and a desire to be proactive, the Navy is assessing potential exposure to certain PFAS compounds in drinking water before conducting the onsite environmental investigation for PFAS at MCOLF Atlantic. In the review of available records, the Navy has identified property parcels suspected to have drinking water wells within the designated sampling area (Figure 2). We are seeking the public's assistance to verify the presence of these drinking water wells. There is no legal requirement to conduct drinking water testing. It is a voluntary measure because water quality for our off-base neighbors is a priority for the Navy. The Navy is performing this drinking water sampling in coordination with partners such as U.S. Environmental Protection Agency (EPA) Region 4, Agency for Toxic Substances and Disease Registry Region 4, North Carolina Department of Health and Human Services, North Carolina Department of Environmental Quality, and Carteret County Health Department.

Figure 1



BACKGROUND

PFAS are manufactured chemicals that have been used since the 1950s in many household and industrial products because of their stain- and water-repellant properties. PFAS are now present virtually everywhere in the world because of the large amounts that have been manufactured and used. Once these compounds are released to the environment, they break down very slowly.

PFAS are "emerging" contaminants, which have no Safe Drinking Water Act regulatory standards or routine water quality testing requirements. The EPA is currently studying

If your preliminary results show that your drinking water contains PFOS and/or PFOA above the EPA health advisory, then the Navy will provide bottled water or an alternate water supply until a long-term solution is implemented.

Figure 2



PFAS to determine if regulation is needed. In May 2016, the EPA released lifetime health advisory levels for two PFAS, specifically perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). **Health advisory levels are not regulatory standards. They are health-based concentrations which should offer a margin of protection for all Americans throughout their lives from adverse health effects resulting from exposure to PFOS and PFOA in drinking water.** The EPA health advisory level for lifetime exposure is 70 parts per trillion (ppt) for PFOS and 70 ppt for PFOA. When both PFOS and PFOA are found in drinking water, the combined concentrations should not exceed 70 ppt.

NAVY POLICY

The Navy has developed a proactive policy to assess potentially impacted drinking water and eliminate exposure to PFOS and/or PFOA near installations where there were known or suspected releases of PFAS to the environment. Navy policy is to sample drinking water sources downgradient (in the direction of groundwater flow) from a suspected release of PFAS. Sampling in this area will allow the Navy to identify if our neighbors are exposed to PFOS and/or PFOA in drinking water above the EPA health advisory levels.

In September 2016, the drinking water at MCOLF Atlantic was sampled and analyzed for several PFAS. Even though no PFAS were detected in the on-base drinking water, we realize that this sample result does not mean that groundwater has not been impacted because of the groundwater aquifer characteristics and depth of the Navy supply well relative to the depth of private drinking water wells. As such, we are conducting this voluntary measure to ensure that past operations on the MCOLF have not impacted drinking water in private wells near MCOLF Atlantic.

Our first priority is to determine if PFOS and/or PFOA are present in groundwater when used as drinking water by nearby residents and take appropriate action. Once any current exposure from drinking water has been addressed, we will initiate the on-base investigation to determine contaminant source areas, assess the extent of contamination, evaluate the potential for risk, and develop appropriate response actions following federal environmental investigation guidance.

HEALTH INFORMATION

Exposure to PFOS and PFOA appears to be global. Studies have found both compounds in the blood samples of the general population. Studies on exposed populations indicate that PFOS and/or PFOA may cause elevated cholesterol levels and possibly low infant birth weight. In studies conducted using laboratory animals, effects on developmental, neurological, immune, thyroid, and liver function were observed. Evidence linking PFOS and/or PFOA with cancer is inconclusive.

Health effects from exposure to low levels of PFAS are not well known and studies are continuing. At this time, it is not possible to link exposures to PFOS and/or PFOA to a person's individual health issues. Blood tests are available to measure these chemicals, but they are not routinely done because the results can be inconclusive and test results do not predict health effects. Long-term exposure effects are still being investigated by the EPA.

Based on what is known and still unknown about PFOS and PFOA, it is recommended people not drink or cook with water that contains these compounds above the EPA's health-based levels.

ACTIONS BASED ON RESULTS

The preliminary results from the off-base drinking water sampling are expected within approximately 30 days after collecting the samples. The Navy will keep the results confidential to the extent permitted by law. We will notify the property owners of their personal drinking water results and follow-up actions if needed.

The Navy will provide an alternate water source, likely bottled water, for drinking and cooking for those individuals whose drinking water is found to contain PFOS and/or PFOA above health advisory levels. The Navy will continue to provide the alternate water source until a permanent solution can be implemented.

For more information, visit these websites:

**<https://go.usa.gov/xR6SX>
www.secnav.navy.mil/eie/pages/pfc-pfas.aspx**

*If you have specific questions, contact the MCOLF Atlantic Public Affairs office at
1-877-MCOLF17 (1-877-626-5317) or email NavyAtlanticWater@usmc.mil.*