



Understanding Your Well Test Results

(Former Wurtsmith Air Force Base and PFCs)

The U.S. Air Force tested your well water for a group of chemicals called perfluorinated chemicals (PFCs). PFCs were in fire-fighting foams used at Wurtsmith Air Force Base when the base was in operation. PFCs are very persistent, meaning they stay in the environment for a very long time. They have been found in groundwater, surface water, fish and birds near the former Air Force Base. Health and regulatory agencies want to know if PFCs are in drinking water wells in the area. That is why the Air Force tested your well. The Michigan Department of Health and Human Services (MDHHS) has prepared this fact sheet to help you understand your drinking water test results from the well survey.

To help you understand your test results, an example of a water test results table is shown below. We added notes to the table below to further explain the information you received.

The PFCs are measured in units called micrograms per liter, or $\mu\text{g/L}$. This is the same as parts per billion, ppb.

Sample Date – 12/3/2015	
PFC	Sample Result
N-Ethyl perfluorooctanesulfonamidoacetic acid (EtFOSAA)	ND
N-Methyl perfluorooctanesulfonamidoacetic acid (MeFOSAA)	ND
Perfluorobutane sulfonic acid (PFBS)	ND
Perfluorodecanoic acid (PFDA)	ND
Perfluorododecanoic acid (PFDoA)	ND
Perfluoroheptanoic acid (PFHpA)	ND
Perfluorohexane sulfonic acid (PFHxS)	0.032
Perfluorohexanoic acid (PFHxA)	ND
Perfluorooctanoic acid (PFOA)	ND
Perfluorononanoic acid (PFNA)	ND
Perfluorooctane sulfonic acid (PFOS)	0.0096 J
Perfluorotetradecanoic acid (PFTeDA)	ND
Perfluorotridecanoic acid (PFTrDA)	ND
Perfluoroundecanoic acid (PFUnDA)	ND

If the result is listed as “ND,” the lab did not detect, or find, that PFC in your water sample. This means the PFC was not in the sample, or the amount was so low the lab could not measure it.

If the result is listed as a number, it means the PFC was found in your water sample. The number is the amount of PFC that was found in the sample.

Sometimes the lab equipment detects the PFC but it’s difficult to accurately measure the amount in the sample. In that case, the lab puts the letter “J” next to the number, meaning that the amount is estimated.

What do my results mean?

If a PFC was detected in your sample, there is a number in the table next to the specific PFC found. That means your well water has that PFC in it.

PFC drinking water standards have not been determined by the U.S. Environmental Protection Agency (EPA) or by the State of Michigan. The EPA does have Provisional Health Advisories for two of the PFCs: PFOA and PFOS. Provisional Health Advisories are developed for chemicals that do not have existing water quality standards. Provisional Health Advisory levels are the amount of a chemical in drinking water above which the EPA feels action should be taken to reduce exposure. The Provisional Health Advisory level for PFOA is 0.4 µg/L and for PFOS it is 0.2 µg/L.

Can PFCs harm human health?

MDHHS cannot predict who may be affected by PFC exposure. Along with other factors, how much PFC a person has been exposed to and for how long, helps determine if health could be harmed. Studies in humans have shown that certain PFCs can stay in the body a long time. They may affect fertility, the body's hormones, the immune system, and increase cholesterol levels and the risk of getting cancer. They may also affect the developing fetus and children, including possible changes in growth, learning, and behavior. More research is needed to confirm or rule out links between these health problems and PFC exposure.

The main ways to be exposed to PFCs is by eating food, or cooking with or drinking water with PFCs. It's important to note that touching the water is not harmful. Bathing, swimming, or doing dishes or laundry in water with PFCs will not harm you.

What are the next steps for MDHHS?

MDHHS is evaluating the water data to learn what it means for public health. A public meeting will take place in the spring of 2016 in order to update the community on all public health and cleanup activities for the former Wurtsmith Air Force Base. An update on the data evaluation will be provided at the meeting.

Where can I find more information?

Visit the MDHHS website showing all documents related to the former Wurtsmith Air Force Base site at www.michigan.gov/envirohealth. Go to "Health Assessments and Related Documents," and scroll down to (Former) Wurtsmith Air Force Base.

Michigan's Eat Safe Fish guidelines are available at www.michigan.gov/eatsafefish.

The federal Agency for Toxic Substances and Disease Registry, part of the U.S. Department of Health and Human Services, has more information about PFCs and your health at www.atsdr.cdc.gov.

Visit the Air Force website showing the Administrative Record for Base Realignment and Closure activities at the former Wurtsmith Air Force Base at <http://afcec.publicadmin-record.us.af.mil/Search.aspx>. Go to the "BRAC" button, scroll down to Wurtsmith AFB.

Call Christina Bush, the MDHHS toxicologist assigned to this site, at 1-800-648-6942 or e-mail her at bushc6@michigan.gov.

