

## INFORMATION SHEET

June 2, 2016

### PFOA Biomonitoring Group-Level Results

The Department of Health (DOH) offered blood testing for PFOA to people from the Hoosick Falls area beginning in February 2016. This information sheet shows group results available to date so people can see how their levels compare with those of other participants, while keeping individual results confidential.

As studies have shown, when PFOA is present in drinking water, PFOA levels in blood are expected to be higher than levels in the general U.S. population. The blood testing result provides important information about exposure to PFOA and allows for comparisons to people living elsewhere. Because scientists and public health experts are still learning about PFOA and human health, the blood testing result does not indicate if a person's current illness is due to PFOA, or if a person will experience illness in the future due to PFOA. The result only provides exposure information.

This information sheet shows combined results for 2,081 Hoosick Falls area participants. This group combines people using Village water, people using private wells, people who work in the area, and former residents. PFOA levels in this group ranged from non-detectable to greater than 200 micrograms per liter ( $\mu\text{g/L}$ ). Table 1 shows two types of "middle" levels by gender and age groups. It shows the geometric mean and the 50<sup>th</sup> percentile. Geometric means are a way of calculating the middle level. They are used in science to prevent the highest and lowest values from distorting the average when the rest of the data are close together. The 50<sup>th</sup> percentile is the middle result among all the individual results: half of the people had levels higher and half had levels lower than the 50<sup>th</sup> percentile. The table shows that the geometric mean blood PFOA level is 23.5  $\mu\text{g/L}$  and the 50<sup>th</sup> percentile blood PFOA level is 28.3  $\mu\text{g/L}$  for the total of 2,081 participants. As in other populations, middle levels are higher in males than females, and higher in people who are older.

Information about PFOA levels in other groups with PFOA in drinking water, people who work with PFOA, and the general U.S. population is provided on page 2. Additional group level results are available on the DOH website, <http://www.health.ny.gov/hoosick/>.

<b>TABLE 1</b> <b>PFOA blood test results by gender and age group:</b> <b>Hoosick Falls area participants</b> <b>Participants tested February – April, 2016</b>			
	Number of participants	PFOA level in $\mu\text{g/L}$	
		Geometric mean	50 <sup>th</sup> percentile
Total	2081	23.5	28.3
By gender			
Females	1146	21.3	26.7
Males	935	26.6	30.7
By age group			
0-17	353	16.3	19.8
18-39	458	18.7	22.6
40-59	700	25.7	32.8
60 and older	570	31.7	43.4

## PFOA LEVELS FROM OTHER STUDIES

Table 2 shows information for comparing PFOA levels to other groups: other communities with PFOA in drinking water, people who worked with PFOA and the general U.S. population.

- Comparing PFOA levels in Table 1 and Table 2 shows that the middle PFOA level for Hoosick Falls area participants (28.3 µg/L) are within the range of levels shown for communities where there was contamination of drinking water with PFOA.
- The middle levels shown for all Hoosick Falls area participants combined (Table 1) are higher than the middle and 95th percentile levels in the general U.S. population.

<b>Table 2</b>		
<b>PFOA Levels in Blood from Other Studies:</b>		
<b>Other communities with PFOA contamination in drinking water, people who worked with PFOA, and general U.S. population</b>		
<b>PFOA RESULTS FOR COMPARISON</b>	<b>Results in µg/L</b>	
<b>Other communities with PFOA in drinking water:</b>	<b>Average level</b>	
Little Hocking, Ohio	228	N.A.
Lubeck, West Virginia	92	N.A.
Tuppers Plains, Ohio	42	N.A.
Mason County, West Virginia	16	N.A.
<b>People who worked with PFOA:</b>	<b>Average level</b>	
3M workers, Decatur, Alabama	1125	N.A.
DuPont workers, Parkersburg, West Virginia	410	N.A.
<b>General U.S. population:</b>	<b>Middle level (50<sup>th</sup> percentile)</b>	<b>High level (95<sup>th</sup> percentile)</b>
U.S. population age 12 and up	2.08	5.68
Males only	2.38	5.62
Females only	1.78	5.68
Young people age 12-19	1.74	3.59

### NOTES FOR TABLE 2:

**µg/L = micrograms per liter:** A microgram per liter equals one part per billion, about one drop of liquid in an Olympic-size swimming pool.

**Middle level (50<sup>th</sup> percentile):** Half the people had a result below and half had a result above this level.

**High level (95<sup>th</sup> percentile):** 95 of every 100 people had results below this level.

**Average level:** The average is usually very similar to the middle level. In the published community studies, the average level is used.

**N.A.:** These levels are not available in the published studies about these communities.

### References:

1. General U.S. population: National Health and Nutrition Examination Survey (NHANES), National Report on Human Exposure to Environmental Chemicals, U.S. Centers for Disease Control and Prevention (CDC), 2011-12.218.
2. Ohio/West Virginia communities: Paustenbach DJ, Panko JM, Scott PK et al (2007). A methodology for estimating human exposure to perfluorooctanoic acid (PFOA): a retrospective exposure assessment of a community (1951-2003). J Toxicol Environ Health 70:28-57.
3. Workers: Olsen GW (2015) "PFAS biomonitoring in higher exposed populations," in DeWitt JC (ed.) Toxicological effects of perfluoroalkyl and polyfluoroalkyl substances. Humana Press, Springer.

**FOR MORE INFORMATION:** NYS DOH, Center for Environmental Health, Bureau of Environmental and Occupational Epidemiology, Corning Tower, Albany NY 12237 518-402-7950 or BEOE@health.ny.gov