

Biomonitoring (Blood Sampling) Program for PFOA in the Hoosick Falls Area

- We expect approximately 3,000 people will have had their blood drawn at Hoosick Falls and Petersburg area biomonitoring events.
- Analysis of PFOA is a complex process, requiring sophisticated equipment and specialized staff.
- Only a handful of labs in the entire country are capable of performing PFOA analysis, and we are fortunate to have the Wadsworth Center in the NY State Department of Health.
- This is very different from “routine” blood work at annual check-ups.



BEHIND THE SCENES



- 1 At the end of every blood collection event, vials of drawn blood are placed in a centrifuge machine to separate out the serum – the liquid fraction of the whole blood.
- 2 The serum is carefully transferred to a clean vial, packaged, labeled with the patient unique identification number, and delivered to Wadsworth that same day.



- 3 Once the serum arrives at Wadsworth, information is confidentially recorded for every vial and it receives a laboratory bar code.



- 4 A portion of the serum is then transferred from the vial to a tray that contains 96 small wells. A special machine places one serum sample from each vial into each well. This machine tracks the ID # of the sample and its location in the tray along with several quality control samples.



- 5 The next step is to remove the fats and proteins that would “gunk up” the equipment. The fat and proteins stick to a resin material in each of the 96 wells, and the purified serum passes through the resin into another 96 well plate.



- 6 You can see the before and after – the clean plate before serum is placed in the wells and then the plate where the tan-colored proteins and fats have bound to the resin. This step leaves a cleaner sample from which to measure the PFOA. It is a very precise process, carefully quantitated to ensure each sample meets the expected standard.



- 7 The PFOA sample extracts are concentrated, and then transferred onto a sample injection plate.



- 8 The samples are then analyzed by liquid chromatography - mass spectrometry. Basically, this separates, detects and identifies how much of a chemical is there.



- 9 From this process, we know the amount of PFOA in each sample. You can see the results on the chromatograph. All of the results are computerized and tracked.