ppm; SD = 1.07), 0.72 ppm (range 0.06-1.84 ppm; SD = 0.64), and 0.31 ppm (range 0.02-1.25 ppm; SD = 0.40), respectively. The mean serum half-life for PFOS was 8.67 years (range 2.29-21.3 years; SD = 6.12). The mean serum half-life for PFOA was 4.37 years (range 1.50-13.49 years; SD = 3.53). The mean serum half-life for PFHS was -2.27 years (range -47.63 - 30.12 years; SD = 23.14).

Multivariable regression analyses examined the influence of age, BMI, number of years worked or years since retired on the serum-half life. None of these variables were significant predictors of the serum half-lives.

DISCUSSION

The results from the first interim analysis suggested that the serum half-life of PFOS in humans was likely in the range of 139-640 days with a median half-life of 270 days. The serum half-life of PFOA appeared to be approximately one year. The half-life for PFHS was deferred because the assay measurement of PFHS was inconsistent (e.g., many subsequently collected samples were at higher levels than initial samples). There were several limitations noted in the first interim report, the most important being the limited data available, to date, and the range of the serum levels measured (PFOS range 0.2-2.0 ppm; PFOA 0.1-3.1 ppm). In addition, serum concentrations were based on a single measurement of each collected sample with the analytical measurements being conducted on different days and using slightly different analytical methods. This created an imprecise assessment of the serum fluorochemical concentrations. Finally, reference material purity was not determined until after the t_0-t_2 samples had been analyzed. The lack of adjustment for the reference material likely biased the fluorochemical values from 9-16% depending on the specific analyte. Because of these limitations, a subset of nine retirees had all their serum fluorochemical concentrations remeasured in triplicate.