mg/kg/day groups, respectively. After the 52-week recovery period, the serum levels were 21.4 ± 2.01and 41.4 ± 1.15µg/ml for the females in the 0.15 and 0.75 mg/kg/day groups, respectively; for males, the average concentrations were 19.1 ± 0.805 and 41.1 ± 25.9 µg/ml in the 0.15 and 0.75 mg/kg/day groups, respectively.

The potential carcinogenicity of PFOS has been examined in a dietary 2-year bioassay in Sprague-Dawley rats. There was a significant increase in the incidence of hepatocellular adenomas in males and females at the highest dose of 20 ppm; the females at 20 ppm also had a significant increase in combined hepatocellular adenomas and carcinomas. In addition, there was a significant increase in thyroid follicular cell adenomas and combined thyroid follicular cell adenomas and carcinomas in the male recovery group at 20 ppm. There was no evidence of peroxisome proliferation in the livers of the treated animals.

Postnatal deaths and other developmental effects were reported at low doses in offspring in a 2-generation reproductive toxicity study in rats. At the two highest doses of 1.6 and 3.2 mg/kg/day, pup survival in the first generation was significantly decreased. All first generation offspring (F1 pups) at the highest dose died within a day after birth while close to 30% of the F1 pups in the 1.6 mg/kg/day dose group died within 4 days after birth. As a result of the pup mortality in the two top dose groups, only the two lowest dose groups, 0.1 and 0.4 mg/kg/day, were continued into the second generation. The NOAEL and LOAEL for the second generation offspring (F2 pups) were 0.1 mg/kg/day and 0.4 mg/kg/day, respectively, based on reductions in pup body weight.

The liver and serum from the F0 and F1 animals was analyzed for PFOS. Qualitatively, the results for the F0 animals indicate that all rats (including controls) had detectable levels of PFOS in serum and livers. PFOS concentration increased with dose. PFOS concentrations were higher in the liver than in the serum, and males had greatly increased PFOS concentrations in serum and liver when compared with females of