PFAS, Environmental Contamination, and Health

Abt Global offers comprehensive expertise in investigating and addressing the environmental and health impacts of PFAS contamination. Our multidisciplinary teams support federal, state, tribal, and private clients through advanced modeling, site assessments, regulatory support, and health studies to protect vulnerable populations and guide remediation efforts.

More Information: Spotlight On: PFAS, Environmental Contamination, and Health

Expertise

Abt Global brings deep scientific and technical expertise to PFAS-related challenges, combining environmental science, toxicology, epidemiology, and statistical modeling. Our work spans hazard characterization, groundwater analysis, and health communication, with notable projects including pharmacokinetic modeling for blood PFAS estimation, historical contamination reconstruction, and multi-site epidemiological studies on potential health impacts. Abt's integrated approach enables us to assess exposure pathways, support litigation and regulation, and deliver actionable insights for community health and environmental resilience. Our multidisciplinary team of health professionals and environmental scientists design, implement, conduct, and manage a wide range of assessments, evaluations, and investigations to find solutions to complex challenges.

GSA Contract Vehicles

Abt Global and subsidiary TSPi LLC GSA options:

- GSA MAS
- GSA OASIS+
- GSA 8(a) STARS III
- GSA direct award option:
  Sandhill Global Partners Joint Venture (Sandhill JV), a partnership between Miami Technical Services and Abt Global.

Key Capabilities

- Development of pharmacokinetic models and web tools to estimate blood PFAS levels.
- Historical reconstruction of PFAS contamination using advanced modeling techniques.
- Natural resource damage assessments and site evaluations for PFAS exposure.
- Site assessment and groundwater characterization.
- Implementation of epidemiologic studies to assess health effects of in communities with PFAS-contamination.

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PFAS Treatment Technologies and Human Health

PFAS Treatment Costs for Small Drinking Wates Systems
Client: U.S. Environmental Protection Agency (EPA)

Abt is developing tailored treatment cost estimates for small drinking water systems in West Virginia that are likely to exceed the new drinking water standards due to PFAS contamination. We are applying EPA's treatment cost and performance models to provide estimates that compare capital, operating, and maintenance costs across the available treatment options. The estimates are tailored for each water system to incorporate site-specific data on PFAS occurrence, treatment capacity requirements, system characteristics, and local economic conditions. The results will help systems make treatment decisions and comply with the final PFAS rule.

Blood PFAS Estimator Tool
Client: Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Centers for Disease Control and Prevention (CDC)

Abt developed a series of pharmacokinetic (PK) models to estimate blood PFAS levels resulting from consumption of contaminated drinking water. These models incorporate background exposures and the person's life stage, and account for uncertainty in the person's potential exposure to PFAS (e.g., how much tainted water was consumed). The models also underwent extensive calibration and evaluation using Bayesian methodologies. After evaluation, the models were incorporated into a web tool designed to guide concerned citizens through a series of questions that help estimate their own blood PFAS levels in lieu of direct blood testing.

Pease PFAS Health Study — Proof of Concept and Multi-Site Studies
Client: ASTDR, CDC

Abt implemented an epidemiologic study to assess the health effects of possible exposure to PFAS-contaminated drinking water at the Pease International Tradeport prior to May 2014. Abt developed an outreach strategy to enroll potentially exposed adults and children, along with a small comparison group. Once enrolled, Abt collected a blood sample and a range of data from participants. Abt also abstracted additional information from medical and school records. In addition, Abt collected PFAS sampling data on supply wells and the water system serving the Pease Tradeport and the City of Portsmouth. To characterize the historical presence of PFAS, we collected well construction and production logs, aquifer tests, and water-level data for local supply wells. We also obtained historic hydrogeologic contamination reports and records of the use of aqueous film-forming foam (AFFF), a PFAS contaminant, at the former Air Force Base.

Abt then expanded our support by using lessons learned from the pilot study to further support ATSDR as the data and lab coordination center for a multi-site study examining the health effects of PFAS exposure from drinking water at seven sites across the US. This multi-site study (MSS) aimed to recruit at least 2,100 children and 7,000 adults across all sites. Abt developed standardized data collection tools, coordinated laboratory testing, conducted data quality checks, and created a comprehensive aggregated dataset that includes all site survey information, laboratory results, and records abstraction data.

Abt Global is a mission-driven consulting and data analysis firm. For 60 years, Abt has tackled society's toughest problems, pioneering evidence and innovation that improve policy, systems, and lives. Together with our subsidiary TSPi, we help clients accelerate modernization and deliver real results through advanced automation, data science, and mission-aligned platforms.