

EMERGING CONTAMINANTS

Per- and polyfluoroalkyl substances (PFAS) and perfluorooctane sulfonate (PFOS)

PFAS and PFOS are synthetic chemicals that have been widely used since the 1940s in various industrial and consumer products, such as non-stick cookware, stain-resistant carpets, water-repellent clothing, firefighting foams, and cosmetics. They are also known as “forever chemicals” because they are very persistent in the environment and in the human body. PFAS and PFOS do not break down easily and can accumulate over time. The compounds can contaminate drinking water, soil, air, and food. They can also enter the human body through ingestion, inhalation, or skin contact and can cause adverse health effects, such as liver damage, thyroid disease, decreased fertility, high cholesterol, obesity, hormone disruption, and cancer.

Examples of products that contain PFAS/PFOS

- Non-stick cookware
 - Teflon
 - Silverstone
 - Calphalon
- Stain-resistant carpets, rugs, and upholstery
 - Scotchgard
 - Stainmaster
 - Gore-Tex
- Water-repellent clothing
 - jackets
 - shoes
 - hats
- Firefighting foams
 - airports
 - military bases
- Cosmetics
 - nail polish
 - eye makeup
 - shaving cream
- Food packaging
 - pizza boxes
 - microwave popcorn bags
 - fast-food wrappers
- Dental floss
 - Oral-B Glide

BIOACCUMULATE
in the food chain and poses a threat to the health of fish, birds, and mammals



INTERFERES
with the natural functions of plants such as photosynthesis, growth, and reproduction



TRAVELS
long distances in air/water and can affect wildlife and ecosystems in remote areas



ALTERS
the soil quality and reduces the crop yield



Regulations

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that have been linked to various health problems. The U.S. Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ) have set a health advisory level for two of the most common PFAS, PFOS and PFOA, in drinking water, and have taken steps to regulate, monitor, and clean up these contaminants.



The **Environmental Protection Agency (EPA)** has issued a health advisory level of 70 parts per trillion (ppt) for the combined concentration of PFAS and PFOS in drinking water. This means that exposure to PFAS and PFOS above this level may pose a health risk.

The EPA has also established a list of priority actions to address PFAS and PFOS, such as developing a national drinking water standard, designating PFAS and PFOS as hazardous substances, and enforcing cleanup of contaminated sites.



The **Texas Commission on Environmental Quality (TCEQ)** has adopted the EPA's health advisory level of 70 ppt for PFAS and PFOS in drinking water, and has initiated a statewide sampling program to monitor the occurrence of PFAS and PFOS in public water systems.

The TCEQ has also developed a guidance document for the assessment and remediation of PFAS and PFOS in soil and groundwater, and has provided technical assistance to local authorities and stakeholders.

COMPANY OVERVIEW

ESE offers innovative and sustainable approaches in environmental problem solving. Our services include due diligence, remediation, compliance, natural resources, cultural resources, and building sciences. The depth of our diverse experience, physical presence in major markets and knowledge of environmental regulations allow us to respond with urgency and deliver honest, quality-driven results.

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