PFAS in Landfills

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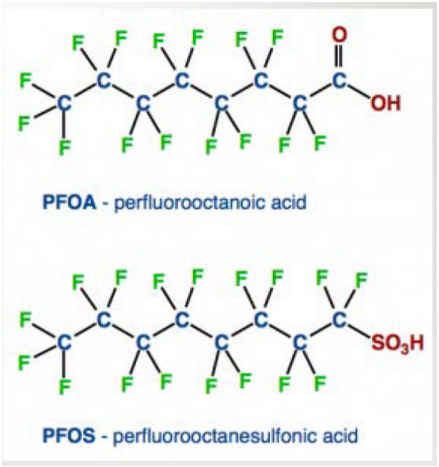
Message is simple: Landfills are not at all adequate disposal methods for PFAS

A Few Basics

Landfills

PFAS

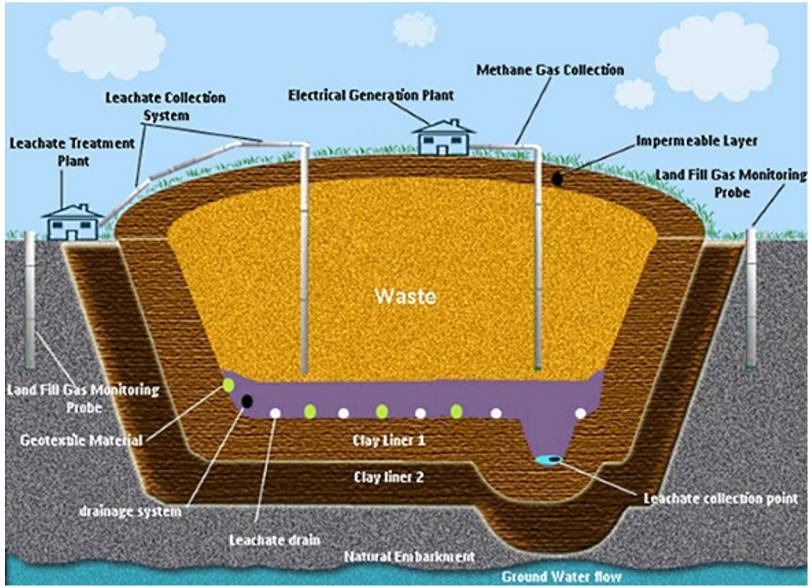


What is a Landfill?

- Landfills are essentially facilities where waste is thrown and buried
- Often sited near poor neighborhoods where public influence is not strong or organized
- Often the source of serious air, ground water, or even drinking water contamination
- There are three different types of landfills
  - Municipal Solid Waste Landfills
  - Industrial Waste Landfills
  - Hazardous Waste Landfills

Classic Landfill Design

- Most landfills have a 4-layer design that consists of:
  - A bottom liner
  - A drainage system
  - A gas collection system
  - The waste



PFAS Characteristics in the Environment

- They are water soluble
  - Dissolve and travel well in water
  - Also dissolve and travel well in oils
- Some have the ability to volatize into the air
  - Found as far as the artic
- Accumulate in the environment
  - Because of their resistance to chemical, biological and physical degradation processes

PFAS in Landfills: A Very Serious Problem for the Surrounding Community

Problems with Landfills

- **ALL** landfills leak
  - Water eventually enters the system and washes through the waste picking up chemicals and accumulating at the bottom of the landfill – leachate.
  - Clay liners develop cracks in less than 5 years, plastic liners are degraded by alcohols and bases in less than 10 years, and composite liners are just a combination of the two
- **ALL** landfills are poorly regulated
  - Lack of funding and poorly established financial incentives make regulations often not followed
  - Result is toxic and other hazardous materials making their way into municipal landfills
- **ALL** landfills are built to fail
  - Landfill design is inherently flawed - full containment of waste is impossible in a dynamic environment.
  - The basic design of a landfill has not changed in 60+ years.

Problems with PFAS in Landfills

- Since **ALL** landfills leak
  - PFAS will inevitably escape into the surrounding environment
  - Potentially affect the health of the surrounding community
- Since **ALL** landfills are poorly regulated
  - Despite any future regulations, if allowed to go into landfills, PFAS of all types and amounts will make their way in
- Since **ALL** landfills are built to fail
  - Landfills will turn into PFAS sinks that continuously expand as PFAS accumulates

Conclusion: PFAS Simply **Cannot** be Successfully Disposed of in Landfills

Solutions

- Continue to research other methods of disposal
- Invest in treatment/destruction technologies
- Actively prevent PFAS accumulation in landfills, where they would disproportionally impact minority and low-income communities

Questions?