

ENSOr Symposium

- **Technical Solution for the Removal of PFAS in Water**

- **Jurgen Buhl**

buhl@cornelsen-umwelt.de Cell: +49 173 2585 481

- **Cornelsen Umwelttechnologie GmbH, Germany**

Topics

- Remediation Techniques
- PerfluorAd Solution
- Results
- Fire-Fighting Water



Remediation Techniques

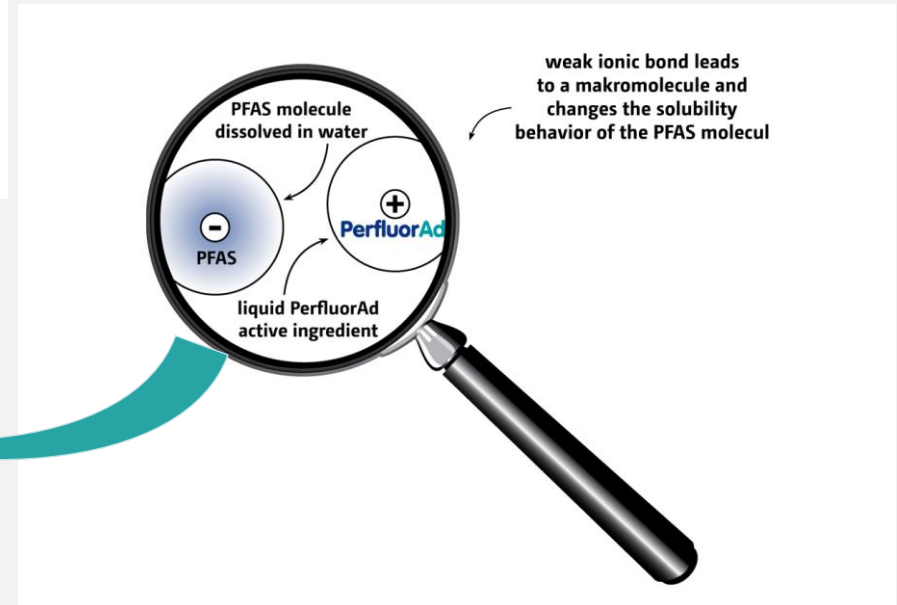
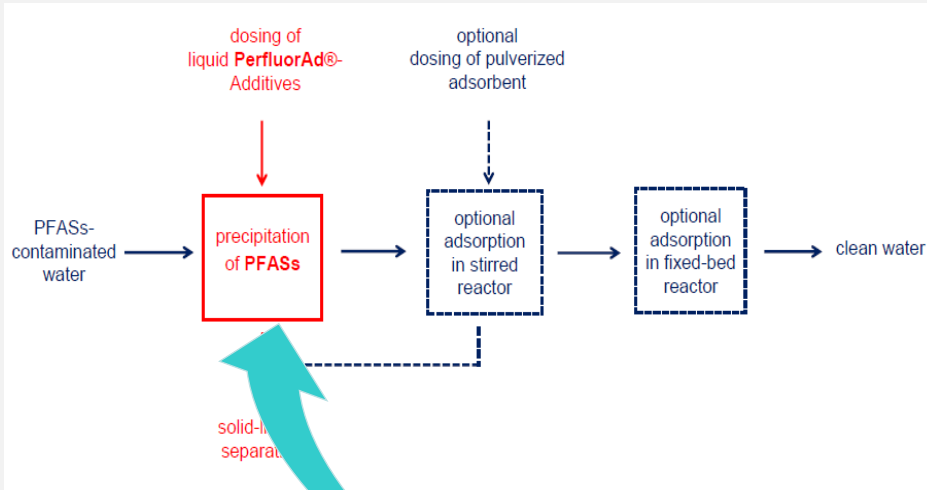
Water

- GAC (granular activated carbon)
- IX (ion exchanger)
- RO (reverse osmosis)
- Flocculation/Precip. (PerfluorAd)

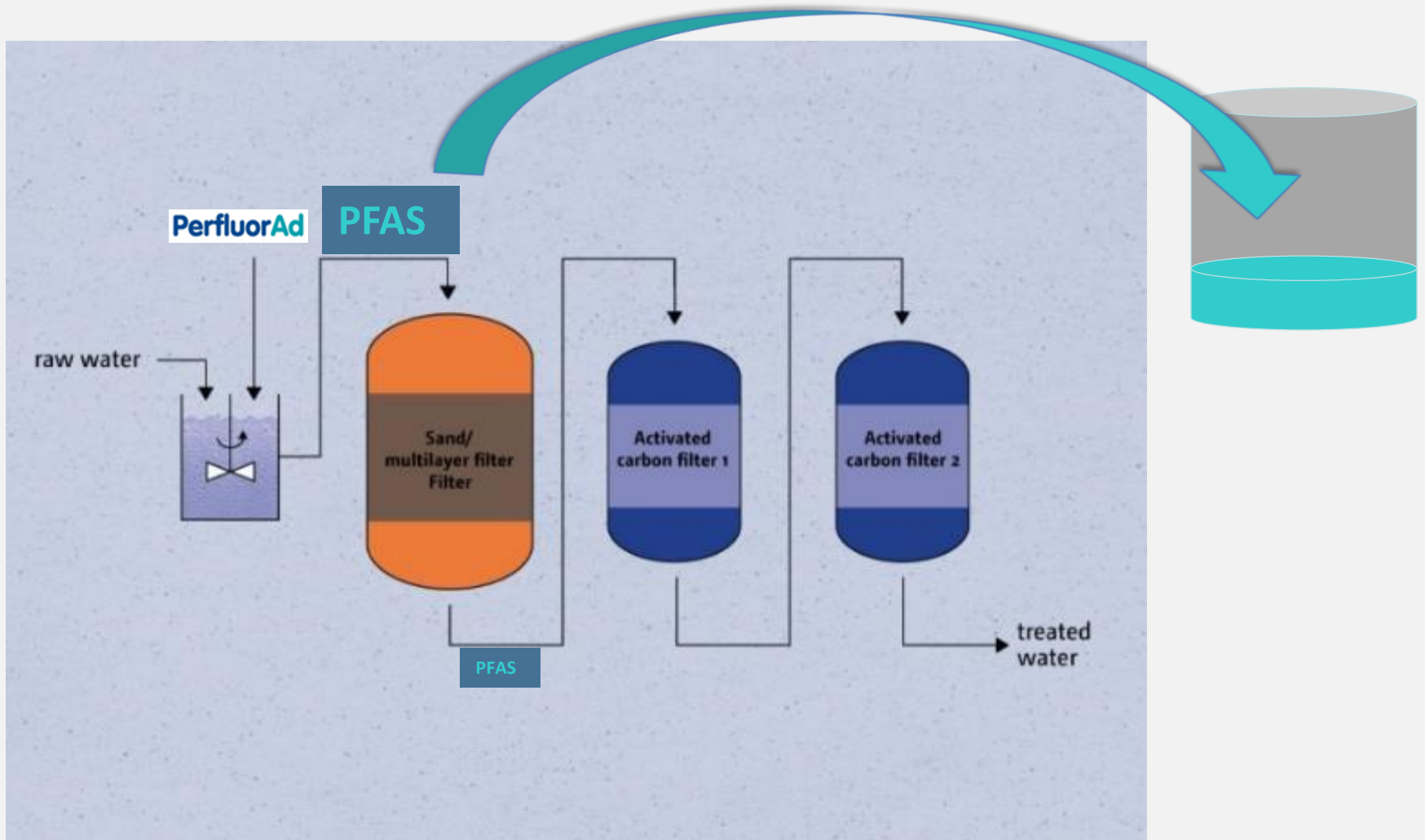
Soil

- Landfill
- Incineration (high temperature)
- Soil washing (gravel, sand) – **water**
- Immobilisation (eg RemBind)
- Heating

PerfluorAd - Process



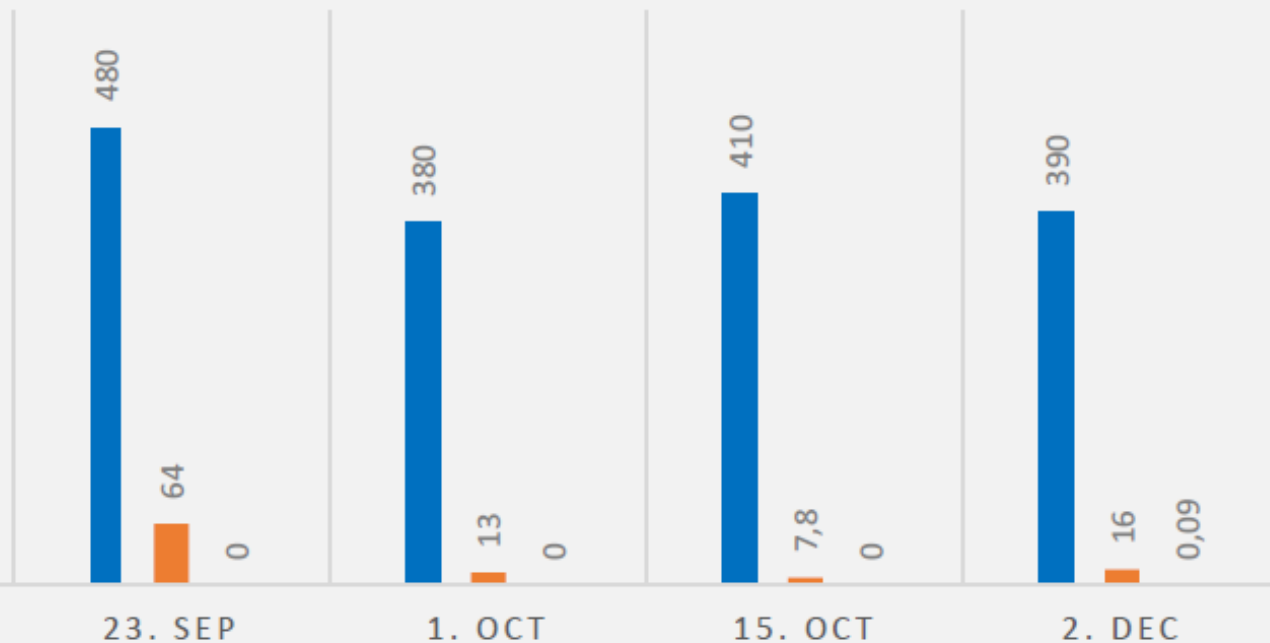
PerfluorAd - Process



PerfluorAd – Treatment Plant

Removal rate PFAS: PerfluorAd & filtration

■ Groundwater (Inlet) ■ Effluent Pre-Treatm. ■ Effluent GAC



Key:
14 PFC
in ppb

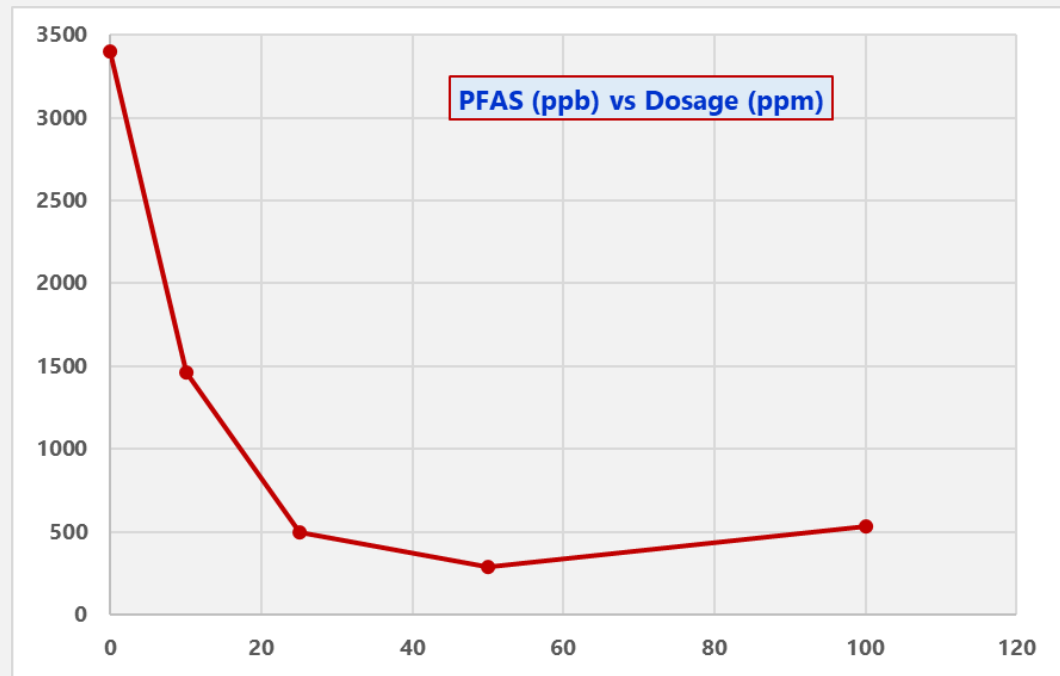
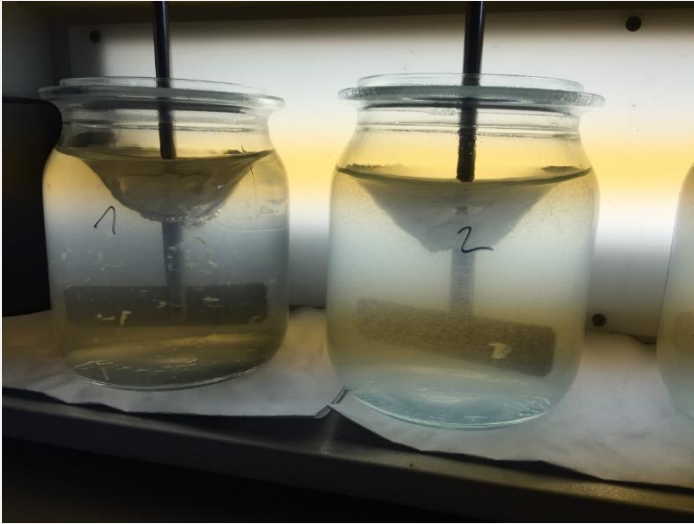
- 86.7%

- 96.4%

- 98.1%

- 95.9%

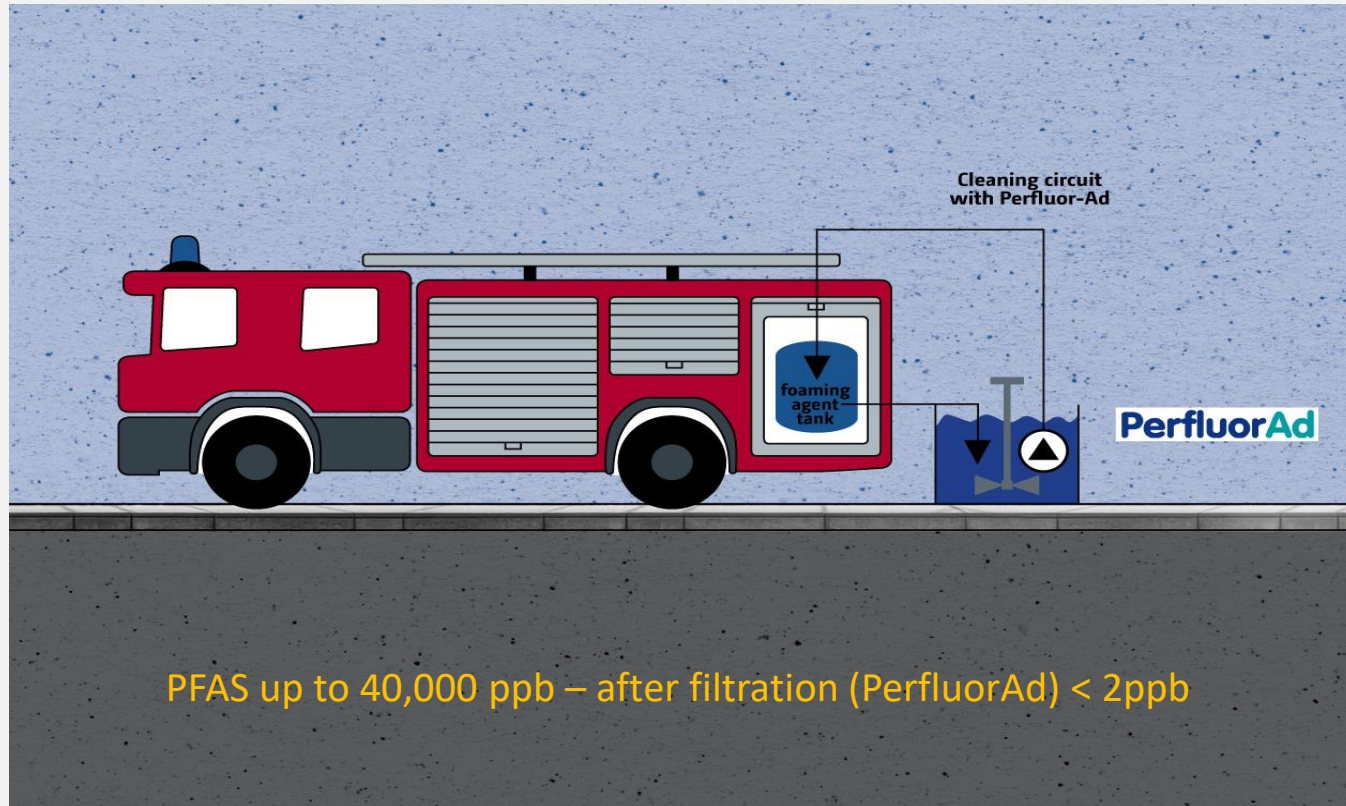
PerfluorAd - Lab Test



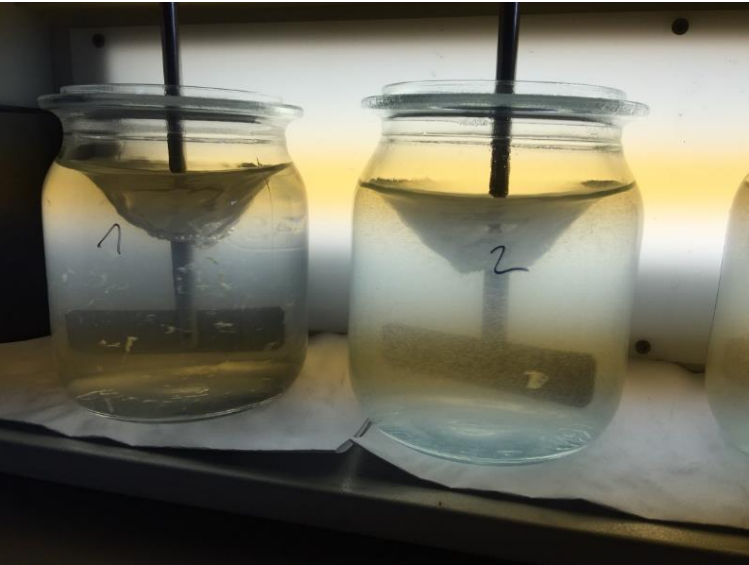
Fire-Fighting Water



Replacement AFFF



Questions



Jurgen BUHL

buhl@cornelsen-umwelt.de

+49 173 25 85 481

