

BAM Treatment of PFAS in Water

Fire Fighting Training Facility – Denmark

Pilot Treatment

Project Summary: ORIN took part in a cooperative effort to test treatment options for PFAS impacted water in Korsør, Denmark. Site PFAS contaminants originate from training activities using AFFF. Different technologies were tested with the remedial goal of achieving the Danish Environmental Protection Agency’s criteria for PFAS. The impacted groundwater exceeded the criteria for PFAS (22 List) <100 ng/l and PFAS (4 List) <2 ng/l. The PFAS (4 list) includes PFOA, PFOS, PFNA, & PFHxS. As part of a multi-faceted study for the Danish authorities, 500 liters of process water was collected from the site’s filtration network of groundwater and surface water. BAM material was homogenized into the impacted matrix for treatment. Complimentary nutrients and active aeration for the duration of 18 weeks supported natural bioremediation of the sorbed PFAS within BAM.



Project Results:

BAM Ultra was successful in the following ways:

- PFAS reduction in water exceeded 99.99%
- BAM was the only treatment method to reach the project goal
- Treated water was less than Denmark’s PFAS criteria for both groundwater and drinking water (PFAS 4 List <2 ng/l; PFAS 22 List <100 ng/l) - in the first sampling event at 4 weeks post treatment
- No rebounding; further PFAS reduction by 18 weeks post treatment

Site Conditions:

Contaminants –

PFAS (4 list): 28,000 ng/l

PFAS (22 list): 36,000 ng/l

Impacted Matrix –

Groundwater/Wastewater

Treatment Technology –

BAM Ultra

Oxygenation

Nutrients

