

Using Electrochemical Oxidation to Remove PFAS in Simulated Investigation-Derived Waste (IDW): Laboratory and Pilot-Scale experiments

Amy Yanagida^a, Elise Webb^b, Clifford E. Harris^c, Mark Christenson^b, and Steve
Comfort^{a,*}

Supplementary Material (SM)

1 Figure

^a *School of Natural Resources, University of Nebraska, Lincoln, NE 68583-0915, USA;
scomfort@unl.edu.*

^b *AirLift Environmental, LLC, 5900 N. 58th, Suite 5, Lincoln, NE 68507, USA*

^c *Department of Chemistry, Albion College, MI 49224*

* Corresponding author: Email Address: S. Comfort; scomfort@unl.edu

2. Materials and methods

2.2 Chemical analysis

Preliminary batch experiments were conducted using $\mu\text{g L}^{-1}$ (ppb) concentrations of PFOS and PFOA and analyzing samples with a Quattro Micro LC-MS/MS (Waters Corp) using a negative mode electrospray ionization. All fluoroethylene polymer tubing was replaced with PEEK tubing and a Restek PFAS delay phase column (50x2.1mm) was installed between the pump mixer and the C-18 column (250x2.1mm). Mobile phases are water with 20 mM ammonium acetate and methanol.

3. Results

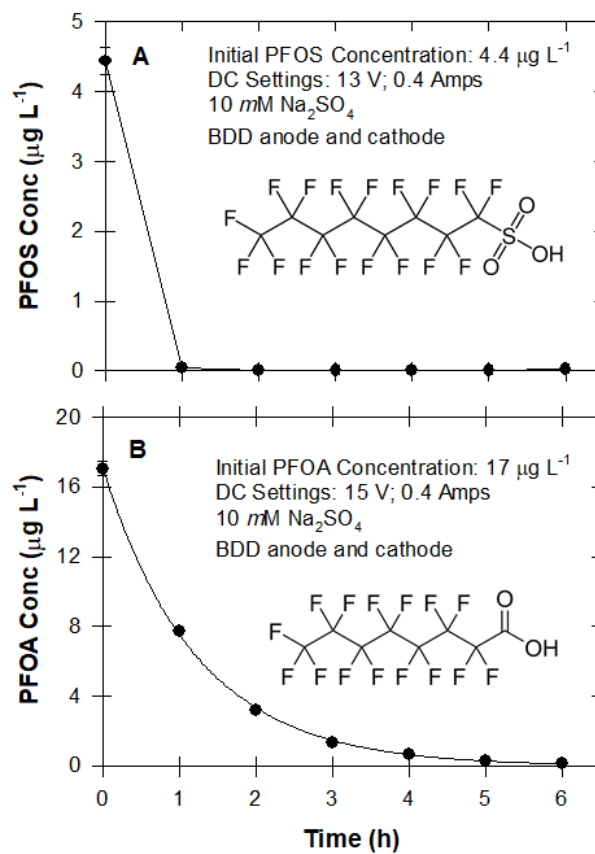


Figure S1. Temporal changes in PFOS and PFOA concentrations following treatment with EC-BDD.