

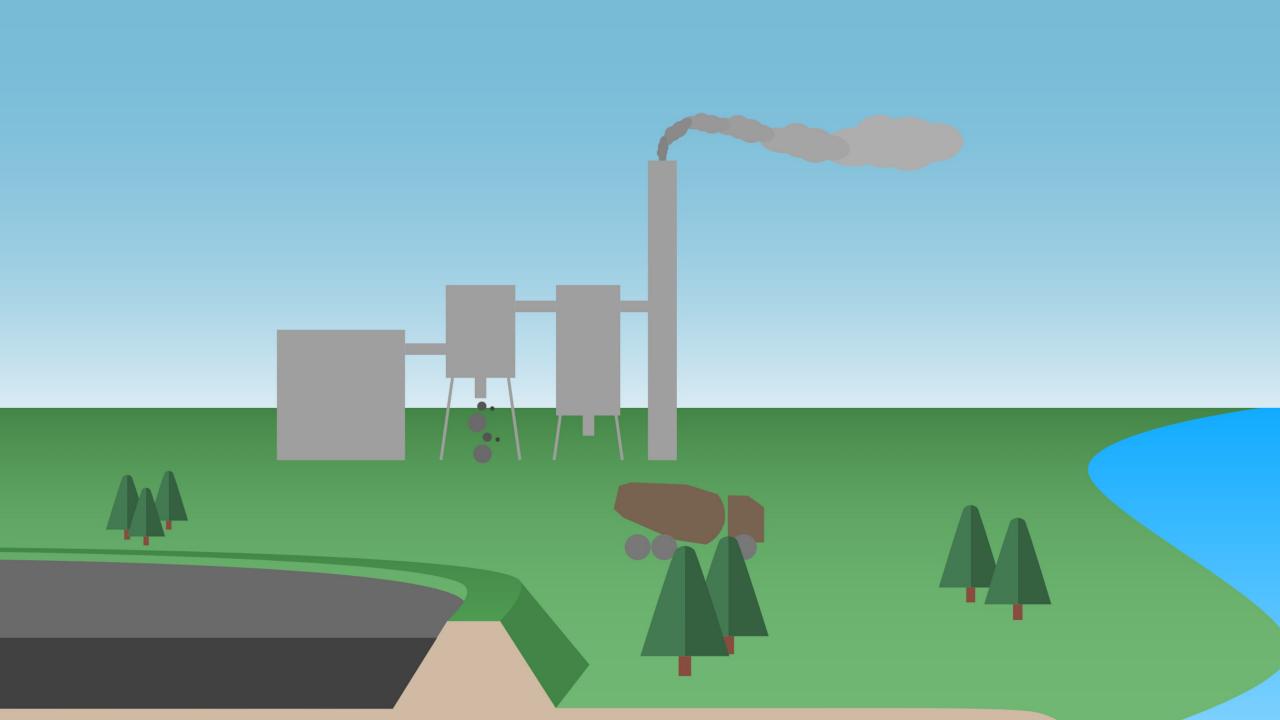


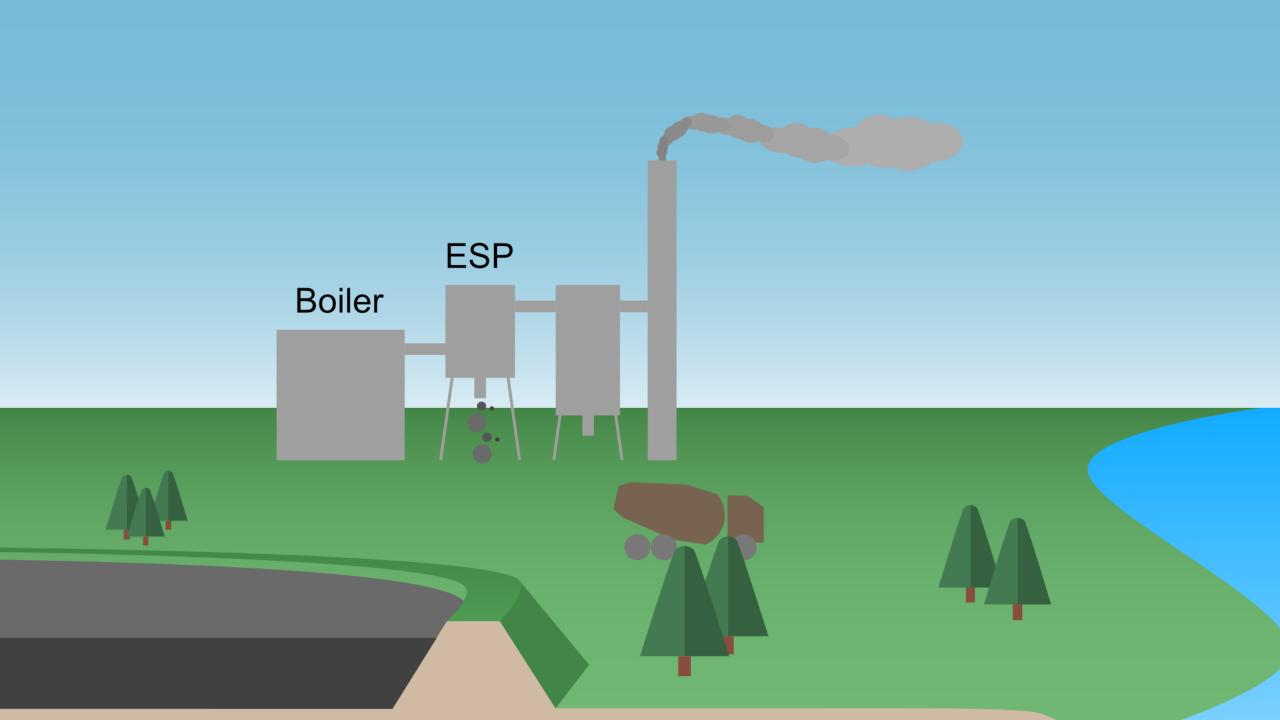
## Fly ash releases from surface impoundments can be identified through spICP-TOF-MS fingerprinting

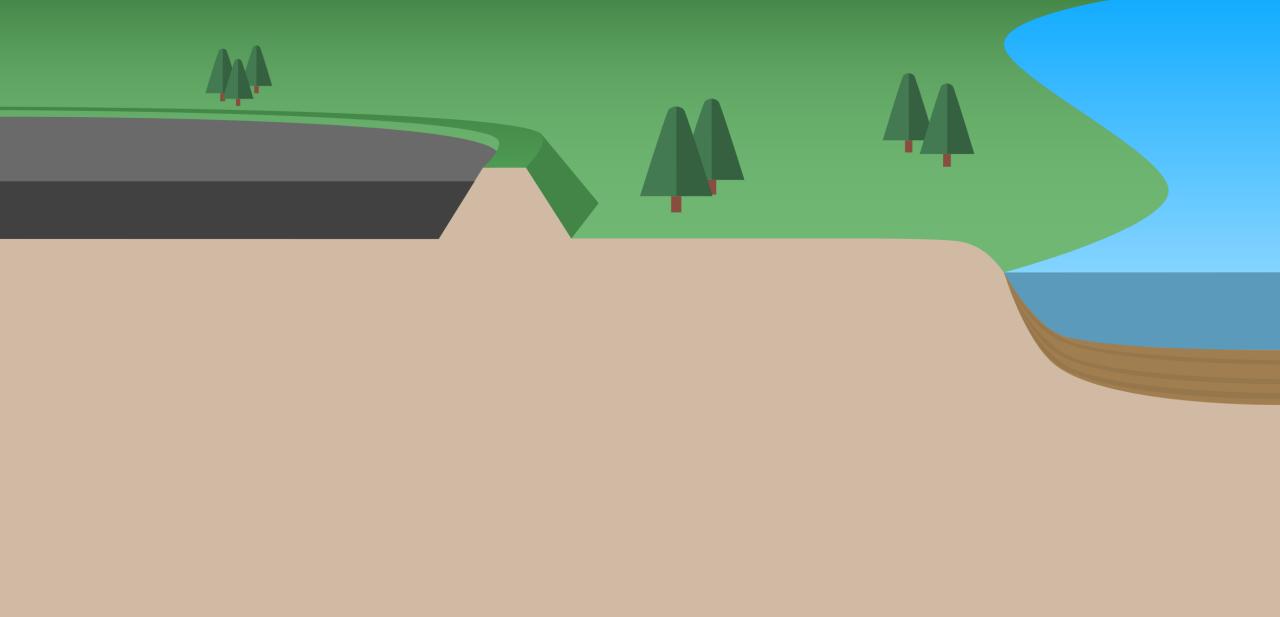
Jan Schüürman, Vesna Micić, Frank von der Kammer, Thilo Hofmann (University of Vienna)





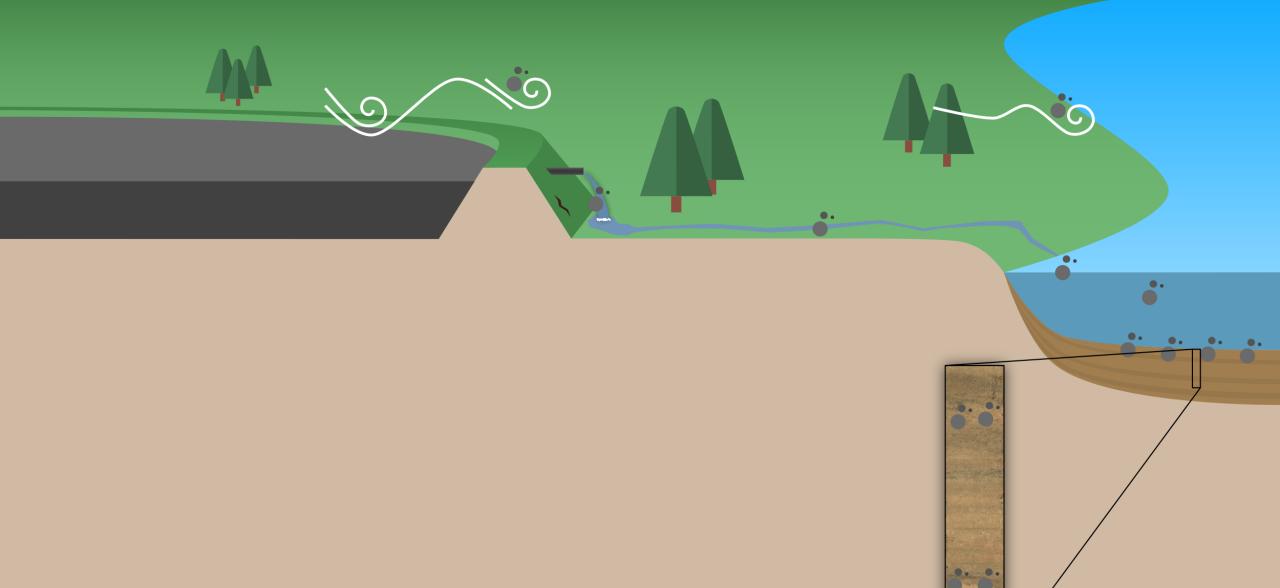








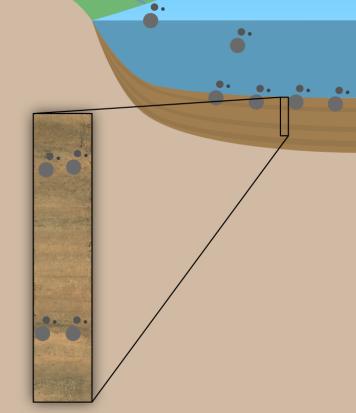






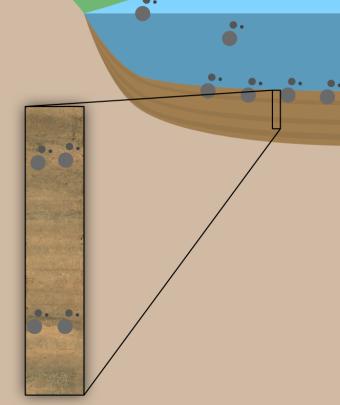
Identification of fly ash through:

- Grain morphology
- Magnetic susceptibility
- Mineralogy
- (Isotope) geochemistry





- Grain morphology
- Magnetic susceptibility
- Mineralogy
- (Isotope) geochemistry





Increasing volatility



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Be, **Co**, Cu, **Ni**, P, U, **V**, W

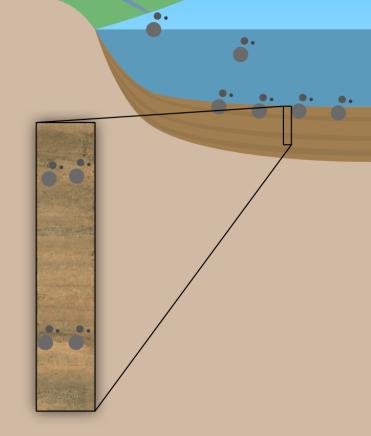
Ba, Cr, Mn, Na, Rb, Bi, Ta, Sr

Mn, P, Th, Al, Ca, Cs, Fe, Hf, K, Mg, REE, Sc,  $Si,\,Sr,\,\textbf{Ti},\,Zr$ 

in flue gas

in fly ash

in bottom ash and fly ash



Adapted from Hower, Fu, and Dai, 2020, Fuel

