A.1 Technology Name

Sentinel™ Integrative Passive Sampler for PFAS

A.1.1 Source

P.L. Edmiston; E. Carter; K. Toth; R. Hershberger; N. Hill; P. Versluis; P. Hollinden; and C. Divine. Field Evaluation of the Sentinel™ Integrative Passive Sampler for the Measurement of Perfluoroalkyl and Polyfluoroalkyl Substances in Water Using a Modified Organosilica Adsorbent. 2023. Groundwater Monitoring and Remediation 43(4) pp. 38-54.

A.1.2 Summary

Media:	Groundwater and Surface Water
Study Type:	Side-by-side
Technology:	Accumulation
Peer Reviewed:	Yes
Publication Date:	Fall 2023

A.1.3 Site Description

- Four study areas included: i) Santa Ana River Basin (6 surface water locations); ii) Petersen Air Force Base (7 groundwater locations); Ohio River (15 surface water locations); and Ellsworth Air Force Base (5 surface water locations)
- Multiple deployment events at each location (except for single event along Ohio River) were completed with deployment duration between 4 and 50 days.
- Grab/side-by-side samples were collected with at least one grab sample per passive sampling location.
- 96 samplers in total were deployed in 2021 and 2022 across the field sites for PFAS compound concentrations.
- Samplers were deployed across diverse field environments, ranges of PFAS concentrations, and across a range of other field and geochemical conditions (pH, chloride, sulfate, TOC, TDS)

A.1.4 Remedial Phase

Investigation.

A.1.5 Outcome

Field study data demonstrated the Sentinel passive sampler can provide reliable results for a wide range of PFAS compounds across over five orders of magnitude in concentration. Co-collected gab samplers indicated general equivalence between the two approaches (overall RPD of 18%).