

Environmental Forensics - Past, Present and Future

March 6, 2024, 12:00-1:00pm (EST)



R. Paul Philp, Ph.D.
Professor
School of Geology and Geophysics
The University of Oklahoma

Abstract: The concept of environmental forensics has evolved significantly over the years but is primarily concerned with establishing the relationship between contaminant(s) in the environment and suspected source(s), or points of release. A wide variety of techniques exist to characterize and establish their potential relationship between contaminants and possible sources or points of release. Anyone involved in interpreting environmental forensic data must have the ability to interpret the analytical data as well as an understanding of processes that can impact the contaminants after release into the environment. Forensic investigations typically use a tiered approach in terms of fingerprinting tools. Preliminary characterization is undertaken by gas chromatography (GC) followed by more detailed analyses using gas chromatography-mass spectrometry (GCMS). However, there are many cases where the GC and GCMS data are ambiguous and possibly misleading. In such cases, it is possible to go to a more specialized tier of analyses and utilize the stable isotope composition of individual contaminants. The potential for using the forensic approach to evaluate the origin and fate of emerging contaminants and micropollutants such as PFAS components will also be discussed along with limitations for certain compounds.

Bio: Dr. Paul Philp is an Emeritus Prof. of Petroleum and Environmental Forensic Geochemistry at the University of Oklahoma. Prior to arriving there in 1984, he had worked as a Principal Research Scientist at C.S.I.R.O., Sydney, Australia for seven years and Associate Research Chemist at the University of California, Berkeley for four years. He received D. Sc. (1998) and Ph.D. (1972) degrees from the University of Sydney, Australia, and a B.Sc. degree (1968) from the University of Aberdeen, Scotland. His research interests include petroleum, environmental, and forensic geochemistry with the emphasis on molecular and isotopic characterization of oils, gases, rock extracts and contaminants for the purposes of source determination, characterization of depositional environments, maturity, biodegradation and for correlation purposes. He has published over 400 articles and presented papers at numerous international meetings and conferences. In addition, he has taught a number of Petroleum and Environmental Geochemistry courses to many companies in four continents including Africa, Asia, Australia, and South American.

[Click here to register](#)

Any questions, contact dr.Ronghong.lin@gmail.com

Or scan to
register

