

# Innovative Environmental Solutions in Our New World

AN AECOM ENVIRONMENTAL WEBINAR SERIES OCTOBER WEBINARS



### Thursday, October 12, 2023 • 11:00 a.m. Eastern Daylight Time\*

## The Application of PRISM<sup>®</sup> to the Investigation and Remediation of Groundwater-Contaminated Sites





Highly heterogenous and complex geologic settings present significant challenges in remediating contamination and guickly achieving cleanup goals. Implementing a correlation approach that addresses subsurface heterogeneity between boreholes is critical for effective remedial decisionmaking. AECOM's PRISM<sup>®</sup> methodology provides a realistic subsurface correlation based on predictable distribution of sediments in different depositional environments. The three-dimensional geologic framework derived from PRISM<sup>®</sup> is used to map the heterogeneity

between high and low permeability units across multiple scales and beyond the existing site data set.

AECOM's PRISM<sup>®</sup> methodology was selected as a peer-reviewed chapter in a book entitled 'Advances in the Characterization and Remediation of Sites Contaminated with Petroleum Hydrocarbons' which is slated for publication by Springer Nature on October 28, 2023. This webinar discusses the methodology and case study elaborated in the book chapter as a preview of the upcoming publication.

**OUR SPEAKERS:** Dr. Junaid Sadeque and Ryan Samuels, PG



DR. JUNAID SADEQUE. Junaid Sadeo is a senior geologist at AECOM. He received a M.Sc. (petroleum geology) from the University of Bergen, Norway and a Ph.D. (sequence stratigraphy) from the University of Texas at Dallas, USA. Prior to joining AECOM, Dr. Sadeque worked for over 15 years as a clastic stratigrapher in the petroleum industry. Now, he is playing a leadersh role in applying sequence stratigraphic concepts to contaminant investigation and remediation projects. Over the year he has taught many professional cours in applied sequence stratigraphy, both for the petroleum and the environment industry world-wide.



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que	<b>RYAN SAMUELS, PG</b> . Ryan Samuels
	is a recognized SME in sequence
	stratigraphy and sedimentology. As a
	lead geologist/stratigrapher on AECOM's
	PRISM <sup>®</sup> team, he plays a pivotal role
	in applying sequence stratigraphy to
	develop high-resolution conceptual
	site models, identify data gaps, advise
	site investigation activities, and inform
ip	effective remedial decision-making. He
)	has led and managed the implementation
l	of PRISM <sup>®</sup> at over 100 complex sites
ars,	across the US, Canada, and Europe. He
ses	has been published in some of the world's
	most prestigious academic journals,
al	and has taught numerous professional
	courses. He received his bachelor's
	degree in geology from Franklin &
	Marshall College and his master's degree
	in geology from Texas A&M University.

## Tuesday, October 24, 2023 • 1:00 p.m. Eastern Daylight Time\* PFAS Forensics through Applied Statistics

To identify and characterize potential sources, the complex nature of per- and polyfluoroalkyl substance (PFAS) contamination requires a data-rich forensic fingerprinting approach, combining data science applications for pattern recognition with analytical chemistry techniques. We have developed and applied an exploratory, adaptive forensic investigation approach that maximizes the information extracted from PFAS data using various statistical programming techniques from the fields of chemometrics, unsupervised pattern recognition, and machine learning. These powerful tools use the data at hand to reveal emergent patterns that are otherwise hidden by the limitations of our own perception.



OUR SPEAKER Zach Neigh



ZACH NEIGH. Mr. Neigh serves as a Project Chemist, Subject Matter Exper and Data Manager on several national/ multi-site environmental projects, where he provides high-level forensic insights, writing QAPPs, producing technical memoranda, providing laboratory oversight/validating data, performing statistical data analyses, and managing data through relational databases such as Earthsoft EQuIS. He also develops automated tools to aid data validation/analysis/management through several programming language Zach has experience providing forensid interpretations for various kinds of



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	chemical data, including THC, PCBs,
t.	inorganics, and PFAS. His expertise
-,	applying data science practices to
	complex forensic investigations allows
	clients to transform their analytical data
	into valuable forensic information. He
	frequently presents his ongoing research
	at conferences such as the SETAC PFAS
	Focus Meeting (2019), the Northwest
	Environmental Business Council (2020),
ė	SETAC North America (2021), and
	the Battelle Chlorinated Remediation
	Conference (2022/2023) where he was
es.	the session chair for the PFAS Forensics
C	and Source Considerations session.
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#### Thursday, October 26, 2023 • 11:00 a.m. Eastern Daylight Time\*

## Exploring DE-FLUORO<sup>™</sup>: a Compact, Sustainable, Cost-effective PFAS Destruction Technology

DESTRUCTION TECH

Increasingly stringent global restrictions on PFAS manufacturing, use, treatment, and disposal have created a significant need for permanent PFAS solutions, specifically, destruction technologies that eliminate PFAS from waste streams.

DE-FLUORO<sup>™</sup> is a scalable technology that destroys PFAS from contaminated liquids, including Aqueous Film Forming Foam (AFFF) and concentrated PFASimpacted water and liquid waste using electrochemical oxidation to achieve acceptable final liquid discharge requirements. Having completed demonstrations of DE-FLUORO up to field-scale in both coupled and standalone configurations, we are ready to share the results of and are poised to deploy DE-FLUORO in commercial applications. Learn more about PFAS restrictions around the globe and the role of DE-FLUORO at our upcoming webinar.

**OUR SPEAKERS:** Gavin Scherer and Dr. Rosa Gwinn



**GAVIN SCHERER.** Gavin has over 24 years of consulting experience in environmental and contaminated land assessment and remediation, of which the past 16 years has been in the servi of AECOM. During his time at AECOM, Gavin has led teams in both Australia and New Zealand, including Australia's largest Geosciences and Remediation Services team, the Australian Departm of Defence client account, as well as Australia and New Zealand's PFAS Response Teams. Currently Gavin lead AECOM's Global PFAS Commercializat strategy, which includes focusing AECOM's global team to develop, trial and bring to market a 'world first', onsit cost effective PFAS destruction solution known as DE-FLUORO™.



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	DR. RUSA GWINN. WITH OVER 30 years
	at AECOM and legacy companies, Dr.
	Gwinn's primary technical focus has
	been characterization and remediation
се	of environmental contaminants as
	they emerged. With a foundation in
	solving thorny remediation issues, she
	recognized the need to focus AFCOM's
	creative strength on PFAS in drinking
ent	water, wastewater, and the environment
	In her role, she is responsible for sharing
	our PFAS thought leadership and driving
ls.	technical innovation into AFCOM's
ion	execution of PEAS work. Central to this
1011	role is interfacing with clients academic
	nartners trade associations and
Ō	government agencies and anticipating
.0, an	and influencing PEAS regulations as
511,	they continually evolve. Dr. Gwinn has a
	PhD and masters in goochomistry from
	Brown University and a bachelor's degree
	in geological sciences from Harvard
	University.



#### About AECOM

AECOM is the world's trusted infrastructure consulting firm, delivering professional services throughout the project lifecycle - from advisory, planning, design and engineering to program and construction management. On projects spanning transportation, buildings, water, new energy and the environment, our public- and private-sector clients trust us to solve their most complex challenges. Our teams are driven by a common purpose to deliver a better world through our unrivaled technical and digital expertise, a culture of equity, diversity and inclusion, and a commitment to environmental, social and governance priorities. AECOM is a Fortune 500 firm and its Professional Services business had revenue of \$13.1 billion in fiscal year 2022.

See how we are delivering sustainable legacies for generations to come at aecom.com and @AECOM.







