

INNOVATIVE ENVIRONMENTAL SOLUTIONS IN OUR NEW WORLD

AN AECOM ENVIRONMENTAL WEBINAR SERIES
SEPTEMBER WEBINARS



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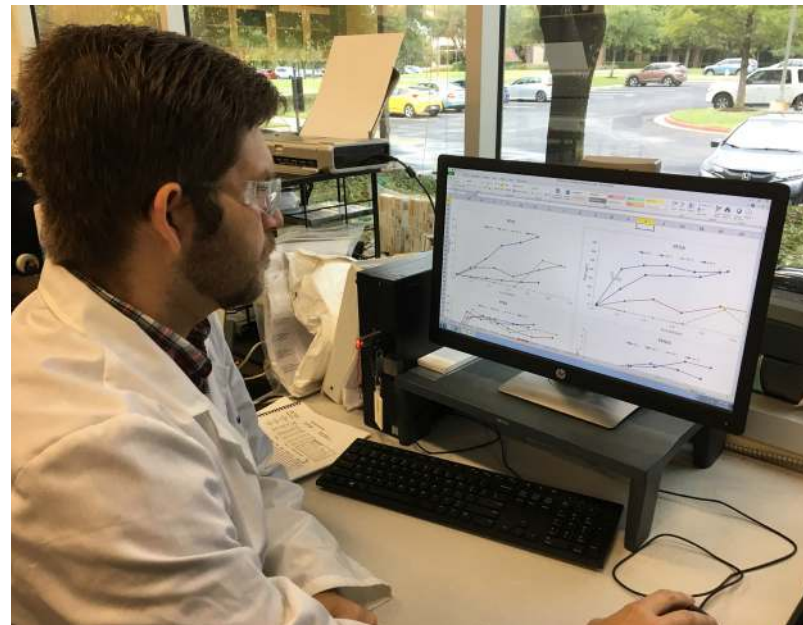
Tuesday, September 1, 2020 11:00 am EDT
**Bench-Scale Remediation Treatability Tests:
A Start to Remediation Success**

OUR SPEAKER:
DR. FRANCISCO BARAJAS



Dr. Francisco Barajas supports AECOM remediation practitioners across the globe, to evaluate remediation alternatives and improve remediation design via bench-scale treatability tests. Francisco holds a doctorate degree in Environmental Engineering from Clemson University, where he performed extensive research on the remediation of 1,4-dioxane, specifically on aerobic cometabolic biodegradation. As AECOM's treatability laboratory director, he has performed bench-scale tests to evaluate the treatment of PFAS in various media employing different approaches such as enzyme-mediated degradation, adsorption onto media such as biochar and granular activated carbon (GAC) and testing of AECOM's DE-FLUORO™ electrochemical oxidation technology to achieve complete degradation. In addition, he has performed dozens of treatability tests to treat complex industrial wastewater, and for remediation of sediment, soil, and groundwater impacted with organic contaminants and heavy metals via chemical oxidation, bioremediation, and in situ stabilization/immobilization.

Bench-scale treatability tests are an important tool for the remediation process as they allow you to compare treatment alternatives, evaluate reagent amendments, dosages and application methods, and provide proof-of-concept evidence for novel remedial technologies. These tests evaluate chemical, biological, and physical treatment processes at a small scale, and therefore require minimum resources to execute. They have a shorter duration, are easier to implement, and are more economical than pilot-scale tests. The data obtained from the tests can lead to cost-reduction or to the selection of the best remediation alternative. This presentation focuses on the value provided by these tests and showcases a few case studies.



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Thursday, September 3, 2020 12:00 pm EDT
**Keeping up with Coal Ash: The End of Social Distancing -
Tricks of the Trade for Effective Stakeholder Engagement**

OUR SPEAKER:
JOHN KONKUS



For over two decades, John Konkus has worked in Washington, D.C., New York, and Florida and has managed many governmental and political offices and books of business. Along the way, John developed and implemented many influential public relations campaigns and winning strategies. Immediately before joining AECOM in July 2019, John served as Deputy Associate Administrator at the U.S. Environmental Protection Agency (EPA) where he was a top advisor to two members of the President's cabinet. John directed the successful confirmation communications campaigns for both of President Trump's EPA Administrator nominees. He was the communications director for environmental policy and the EPA on the 2016/17 Presidential Transition.

As a means to connect and engage with you on the many developments in the dynamic Coal Combustion Residuals marketplace, AECOM is hosting a microburst of presentations through a 9-Part "Keeping Up With Coal Ash" Webinar Series beginning in May. We have assembled a group of great speakers on various topics of current interest to the CCR community from AECOM and others. Each session will be one hour, allowing for a 30-minute presentation and interactive Q&A while not overstressing your already very busy days. To capture a wide audience, the presentations will be recorded for future viewing, and you can attend any combination you choose...or all of them!



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Thursday, September 3, 2020 2:00 pm EDT Plantwide Applicability Limits Under New Source Review

OUR SPEAKER: JOE SULLIVAN



Mr. Joe Sullivan is a professional engineer in Chemical Engineering with 30 years of environmental consulting experience, primarily focused on air quality permitting, compliance and regulatory development. He has worked with a wide variety of industries throughout the U.S. and conducted a myriad of major NSR avoidance and PSD projects. He has also conducted numerous instructional courses on major NSR.

THE SITUATION. On August 5, 2020, the U.S. EPA released a memorandum entitled "Guidance on Plantwide Applicability Limitation (PAL) Provisions Under the New Source Review Regulations." Its purpose is twofold: to address specific concerns about PALs which are raised by stakeholders and to improve the understanding of PAL with the intention of increasing the use of this option. PALs were promulgated almost two decades ago and confusion associated with key aspects of the regulation has led to a relatively low adoption rate. PALs are an optional, flexible permitting mechanism that involves the establishment of a plantwide emissions limit, in tons per year, for one or more regulated pollutants. Once established, modifications can be made without triggering major NSR or even the need to conduct major NSR applicability analyses.

WEBINAR OBJECTIVES & KEY TAKEAWAYS:

The webinar will include the following:

1. cursory overview of the major NSR program and applicability
2. Description of PALs, qualifications for PALs and benefits of PALs
3. Discussion of EPA's and presenter's responses to nine areas of concern, plus increasing a PAL during the term
4. Practical examples of when PALs could be advantageous
5. Considerations for conducting scoping study to determine if a PAL is right for you

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Wednesday, September 16, 2020 11:00 am EDT Eyes in the Skies: UAS (Drone) Applications to Develop Meaningful Data

OUR SPEAKER: MATTHEW NANNEY



Matthew Nanney has over 15 years of experience in the applications of videography, modeling, photogrammetry, inspections, GIS mobile data collection, GPS solutions, data analysis, statistical/geospatial analysis, and surveying. Matthew is a Senior UAS Instructor, has been a Part 107 FAA UAV pilot since 2016 and has operated UAS since 2014. He has served as the UAS Manager, Senior UAS Instructor, and Mobile Technology Manager in all aspects of UAS and GIS data mobile data collection. His team specializes in mobile data collection, UAS, terrestrial LiDAR, data visualization and BIM to support environmental assessments and permitting activities. Project experience includes Energy sector, Disaster Recovery, and Environmental Compliance work mainly in linear permitting of power transmission systems, natural gas pipelines, offshore pipelines, power generating facilities, and other critical infrastructure.

WEBINAR OBJECTIVES & KEY TAKEAWAYS:

1. Present a variety of drone applications to collect meaningful data
2. Drones as a tool for data collection to facilitate better decisions
3. Federal and state laws and regulations that govern drone operations
4. Dispelling misconceptions on UAS – Limitations and Opportunities (Choosing the right drone(s) for the right job)
5. Understanding the Lifecycle of UAS applications: (Data Collection, photogrammetric data processing, machine learning and AI capabilities, change detection & change over time)

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Thursday, September 17, 2020 1:00 pm EDT

Race to the Finish! Regional Haze Rule – Second Decadal Review

OUR SPEAKER: BOB PAINE



Bob Paine is a Certified Consulting Meteorologist and a Qualified Environmental Professional with 45 years of experience in air quality modeling and consulting with AECOM. Mr. Paine has followed the implementation of the Regional Haze Rule during its entire existence, which began in 1999 with a final rule and continued through its implementation over the past 20 years. He was heavily involved in assisting several clients for the first decadal review, which involved Best Available Retrofit Technology (BART) review. The current phase of this rule's implementation for the second decadal review presents new challenges and opportunities which will be discussed within the presentation.

THE SITUATION. The Regional Haze Rule (RHR) has a goal to reduce haze-causing pollutant emissions to natural levels in pristine, Class I areas (such as national parks) over a period ending in 2064. A check on progress toward this goal happens every 10 years, and we are now in the second round.

We are within one year of the date when State Implementation Plans (SIPs) are due to EPA. States are required to submit to EPA a new SIP by July 31, 2021 that must, in conjunction with states in the same region, provide a demonstration that the projected source inventory as of the year 2028 will lead to visibility improvements as required by the RHR. This reasonable-progress goal requires the state to review an inventory of SO₂ and NO_x emissions and to identify facilities with emissions that are high enough and close enough to the nearest Class I area to trigger further review and possibly additional emission controls on SO₂ and NO_x emissions. Backing up from the SIP submittal date indicates that to accommodate the various reviews, states need to draft their SIPs by the end of this calendar year. Therefore, there is little time in this race to the finish for affected sources (as stakeholders) to influence the draft SIPs.

The key issue for sources with sizeable emissions that trigger this review is the requirement for a 4-factor analysis that covers the following issues: 1) costs of the controls, 2) time necessary to install the controls, 3) energy and non-air quality environmental impacts of the controls, and 4) remaining useful life of the source. The most important factor is the first one, since if the cost of controls is

more than an agreed-upon threshold, then the control may be determined not to be cost-effective and is not required to be installed. For marginal cases of cost effectiveness, then a fifth factor, the expected visibility improvement, could be a key issue if the state decides to consider this factor as well.

At this time, most of the 4-factor analyses have been submitted, but states are still reviewing them to determine their final recommended list of additional emission controls that will be part of their SIP. For specific controls that are marginally cost-effective, consideration of the fifth factor can be a critical issue.

THIS PRESENTATION. This webinar will provide an update to affected facilities regarding additional steps they can take in the limited time remaining to be effective stakeholders. The presentation will provide key insights into how the factors discussed above can influence the outcome of the additional controls specified in the draft SIPs.

Discussion will focus on insights as to how the modeled visibility impacts could be helpful in the state's decision-making process. Additionally, discussion will include how states need to consider the adoption of an updated "Uniform Rate of Progress", or "glide path", that indicates a goal for 2028 and beyond for visibility improvement in Class I areas. This glide path is a goal for the state's Reasonable Progress results to meet in order for the SIP to be deemed adequate. Appropriate updates for the glide path incorporate issues such as international haze contributions that cannot be addressed by emission reductions in the USA.

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Tuesday, September 22, 2020 12:00 pm EDT In Situ Chemical Oxidation (ISCO) Challenges and Success Stories

OUR SPEAKERS: ASSAF REES & DUSTIN BYTAUTAS



MR. REES is a Remediation Engineering Manager and Technical Leader with 17 years of professional experience. He is a subject matter expert in the design, planning, and implementation of in situ remedial technologies, specifically in situ chemical oxidation (ISCO) and aerobic bioremediation. Assaf lead AECOM's Chemical Oxidation and Remediation Technical Practice Group for six years and acts as Lead Remediation Engineer and Project Manager for several programs. He is a Licensed Civil Engineer in California, has presented his work in national and international conferences and symposiums, and published several articles in professional journals.

MR. BYTAUTAS has over 14 years of experience in engineering design and project management of large-scale remediation projects in the US and internationally. He has been responsible for the direction of teams comprised of multi-discipline technical experts and support staff to meet the objectives of clients with a focus on delivery, quality, schedule and financial management. He is a technical expert in in situ chemical oxidation (ISCO) and bioremediation having been involved in the implementation of in situ applications at over forty sites. Projects have included managing remediation activities for treatment at sites with contamination associated with chlorinated solvents, manufactured gas plant residuals, petroleum residuals, and other waste products or byproducts of industrial processes and commercial activities. Dustin manages a team of environmental engineers and scientists and is responsible for their development and growth.

The webinar will explore approaches and methods for implemented ISCO, discuss challenges faced, and review results of several injections at source areas and plumes for remediation of various contaminant classes.



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Thursday, September 24, 2020 12:00 pm EDT 2020, The Year of Change... and Wetland Regulatory Updates

OUR SPEAKER: MARK FELTON



Mr. Felton has over 36 years of experience in project management, engineering and environmental planning, design and permitting, construction and field operations. Mark is a prominent wetland scientist and serves as a past President of the Society of Wetland Scientists, the primary wetland science society in the world. Additionally, Mark serves as the leader of the AECOM Wetland Permitting & Restoration Technical Practice Group in the Americas.

This webinar will provide a discussion of two current topics significantly pertinent to the regulation of wetlands and waterbodies – the Navigable Waters Protection Rule and the nationwide permitting program. The Navigable Waters Protection Rule, published in the Federal Register on April 21, 2020, assigns a new definition to 'waters of the United States' and, hence, the scope of waters which are federally regulated under the Clean Water Act. We will review the key changes imparted by the Rule, along with the resulting effects. In this, we'll examine any available regulatory clarity the USEPA and what the Department of the Army has provided at the time of the presentation with passing of the Rule.

A significant event happening in parallel with the issuance of the Navigable Waters Protection Rule is the recent vacatur of nationwide permit (NWP) 12, which authorizes discharges associated with the construction, maintenance, repair, and removal of utility lines and associated facilities. The USACE has issued an announcement of their intent for the potential early reissuance of the existing nationwide permits, with some modifications, and their proposal to issue five new nationwide permits. The utility line activities currently authorized under NWP 12, would be divided among three separate nationwide permits.

WEBINAR OBJECTIVES & KEY TAKEAWAYS.

1. Provide awareness of recent changes in wetland/waterbody policy and permitting
2. Summarize key changes imparted by the Navigable Waters Protection Rule
3. Discuss the status of the nationwide permit program, especially in the implications for utility line activities

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About AECOM

AECOM is the world's premier infrastructure consulting firm, delivering professional services throughout the project lifecycle – from planning, design and engineering to program and construction management. We partner with our clients in the public and private sectors to solve their most complex challenges and build legacies for generations to come. On projects spanning transportation, buildings, water, governments, energy and the environment, our teams are driven by a common purpose to deliver a better world. AECOM is a Fortune 500 firm with revenue of approximately \$20.2 billion during fiscal year 2019.

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