

2017 COAL COMBUSTION RESIDUALS

March, 30-31, 2017
Hyatt Regency Suites Atlanta NW
Atlanta, GA

PRE-CONFERENCE WORKSHOP

**Draining and
Stabilizing Fly Ash**

WEDNESDAY, MARCH 29, 2017

POST-CONFERENCE WORKSHOP

**Power Plant Wastewater
Treatment to Meet a Changing
Regulatory Environment**

FRIDAY, MARCH 31, 2017

SPONSORS



EUCI is authorized by IACET to offer 0.9 CEUs for the conference, 0.4 CEUs for Pre-Conference workshop and 0.3 CEUs for Post-Conference workshop



Stantec



OVERVIEW

Power generators have developed and revised their ash management, ash storage procedures, groundwater monitoring, and wastewater stream management plans to keep their facilities in regulation and continue to adapt and meet changes that may still come. These changes, some of which stem from important legislation that passed near the end of the 2016 Congressional session and the possible approach to be taken by the EPA in light of that legislation and the new administration, are all topics on the minds of those in the industry.

This coal ash focused conference will start the discussion of those changes and how they may affect the changing industry with some discussion on generators' ash management plans, the CCR and ELG Rule's regulations and their impacts, ash marketing and mining of ponds, closure service contracting options, and how utilities are accomplishing closures, remediation issues and more.

LEARNING OUTCOMES

- Discuss the timely issue of how the states and EPA are likely to be implementing CCR regulation considering critically important legislation that passed near the end of the 2016 Congressional session
- Assess the lessons learned through Southern Company's closure activities and challenges
- Review beneficial pilot studies and how the results are used in the closure process
- Listen to Alliant Energy's recent experience navigating rule regimes in multiple states and their list of considerations
- Review a numerical modeling study and its practical implications for long term management of ash ponds
- Review a deep-dive on the various methods of contracting services for utilities
- Review Duke Energy's CCR beneficial re-use program's practices and successes
- Engage in a discussion with various contractors on which method of contracting closure and environmental work may be the best fit for your company
- List the opportunities and challenges that Indianapolis Power and Light sees in ash and gypsum mining/reuse through the framework of current and possible future regulation
- Discuss the practices being used for dredging and de-watering at Georgia Power's impoundments
- Review solutions for the wastewater challenges faced by power plants due to the ELG, water-quality-based effluent limits and the CCR Rule



"EUCI organized an engaging and balanced program with speakers from utilities, regulatory agencies, marketers, and consultants."

Senior geotechnical engineer, Golder Associates



"Well done!"

President, Clayton Engineering



"Worth the time invested."

Professional Engineer, HHNT

AGENDA

THURSDAY, MARCH 30, 2017

- 8:00 – 8:30 am** **Registration and Continental Breakfast**
- 8:30 – 8:40 am** **Welcome and Introductions**
- 8:40 – 9:25 am** **A Whole New World: CCR Regulation in the Wake of New Legislation from Congress and a New President**
This discussion will address the timely issue of how the states and EPA are likely to be implementing CCR regulation in light of critically important legislation that passed near the end of the 2016 Congressional session. The likely approach to be taken by the EPA in light of that legislation and the new administration will be the key focus of this presentation. Compliance timelines, state program approval processes, and alternative compliance options will be addressed based on up-to-date information from the states and EPA.
Michael J. Nasi, Partner, Jackson Walker LLP, Counsel, Texas CCP Coalition
- 9:25 – 10:05 am** **Lessons Learned through Ash Pond Closures**
Review Southern Company’s closure activities, challenges and some lessons learned through the preparation for and on-going work being done at multiple sites.
Stacey H. Simpson, P.E., Land and CCR Group, Southern Company Technical Services
- 10:05 – 10:35 am** **Networking Break**
- 10:35 – 11:15 am** **Highlights from Duke Energy’s CCR Beneficial Reuse Program**
This discussion will review in detail what Duke Energy has accomplished, the challenges faced and what is in store for the future in regards to CCR’s and their beneficial reuse at Duke Energy.
Brian Weisker, VP of Coal Combustion Products (CCP) O&M, Duke Energy
- 11:15 am – 12:00 pm** **Considerations for CCR Surface Impoundment Closure Under State and Federal Rule Regimes**
Utilities planning for closure of CCR surface impoundments must simultaneously comply with the federal CCR Rule and other applicable state rules. This presentation will provide an overview of one utility’s recent experience navigating dual rule regimes in Iowa and Wisconsin, and offer a list of considerations for others that are engaged in closure planning.
Jeff Maxted, Senior Environmental Specialist, Alliant Energy
- 12:00 – 1:00 pm** **Group Luncheon**
- 1:00 – 1:45 pm** **Ash Pond Dewatering: A Numerical Modeling Study and Practical Implications for Long Term Management of Ash Ponds**
This presentation will focus on unsaturated flow modeling of ash ponds. Heterogeneity and layering of ash observed in the field and field dewatering rates were used to calibrate the model and develop long term projections of water in the ash and how it relates to the shear strength of the ash.
Prof. Milind V Khire, PhD., P.E., Technical Director of Coal Ash and Liquid Management Office, UNC Charlotte

AGENDA

THURSDAY, MARCH 30, 2017 (CONTINUED)

1:45 – 2:30 pm

Contracting Service Options for Closure Work

As a precursor to the panel discussion later in the program, this presentation will go into a deep-dive on the various methods of contracting services for utilities. A detailed review of the major types will be discussed and reviewed from utility and contractor experience. Further questions and input from a variety of companies will provide more insights during the panel discussion.

Invited Utility Speaker (TBD)

Don Fuller II, Senior Principal, Stantec

2:30 – 3:00 pm

Networking Break

3:00 – 3:45 pm

The Benefits of Pilot Studies for CCR Pond Closures

Pilot studies can be a cost-effective, useful tool to assist in the decision-making process regarding closure of CCR Ponds. This presentation will provide an overview and case studies of beneficial pilot studies and how the results are used in the closure process, including dewatering, material and water management, contractor selection, cost estimating, constructability, and implementation ability.

Kent Nilsson, Senior Engineer, TRC Solutions

3:45 – 5:00 pm

Closure Services Contracting Panel Discussion

Engage in a discussion with various contractors on which method of contracting closure and environmental work may be the best fit for your company. Various types of contracts such as: lump sum contract, item rate contract/schedule contract, lump sum and scheduled contract, cost plus fixed fee contract and EPC contract options will be discussed.

Moderator: Brian Weisker, VP of Coal Combustion Products (CCP) O&M, Duke Energy

Don Fuller II, Senior Principal, Stantec

Joel Roberts, Vice-President Construction, TRC Solutions

Paul Schmall, Ph.D., P.E., Chief Engineer, Senior Vice President, Moretrench

Mark Loerop, Principal, Hard Hat Services

Brad Mizell, Vice-President, AMEC Foster Wheeler

5:00 – 6:00 pm

Networking Reception



“As an OEM supplier of equipment, it was helpful to understand what my utility customers are dealing with and facing in terms of mandates so that I can better present my solutions.”

Product manager, Ash Technology, Clyde Bergemann Power Group



“Outstanding lineup of true experts on the topics.”

AVP –EHS, LS Power

AGENDA

FRIDAY, MARCH 31, 2017

8:00 – 8:30 am

Continental Breakfast

8:30 – 9:45 am

Coal Ash Wars - Back to the Future

Due to a combination of factors, coal and coal ash (and gypsum) are roaring back after a challenging past few years. With the new administration, there is hope that the War on Coal is over and a sustainable recovery of coal is in the making, and harmful regulatory burdens will be rolled back. But it won't happen overnight, repairing the damage of over-regulation and low gas price completion will take time. And much of the damage cannot be repaired.

This presentation will go into the interplay of all the above factors, including the interplay with a renewed push for mine reclamation using ash and gypsum. The impacts on utility and coal mine operations and the myriad opportunities that abound will also be discussed. Personal experiences from past participation in both EPA and OSM (Federal Office of Surface Mining), state and federal regulatory efforts and legal issues involved in litigation will be mixed into the discussion. Ash and gypsum sales in different markets will also be discussed, and will be tied to predictions of what the future will bring. Specifics regarding the valuable materials in ash, including rare earth minerals, cenospheres, et al, will be shared. Specific examples of the current market situation including a push to "reminere" existing ash ponds will be presented. And finally, the interplay of the EPA CCR Rule (both negative and positive impacts) and a potential OSM CCR Rule will be discussed.

Dana G. Meier, Manager, Coal Combustion Products, Indianapolis Power & Light Company

Steve Putrich, Senior VP - Engineering and GeoEnvironmental Projects - Haley & Aldrich, Inc.

9:45 – 10:15 am

Networking Break

10:15 – 11:00 am

Dredging / Dewatering Impoundments / Coal Yard Reclamation

This presentation will discuss the economic and environmental impact of landfill avoidance, time management, and risk mitigation using innovative equipment technology.

Georgia Power Company Representative

Michael Rafter, CEO, RPM Solutions

11:00 – 11:45 am

Developing and Implementing Solutions to Wastewater and CCR Compliance Challenges at Coal-Fired Power Plants

This presentation will provide insights on the wastewater challenges faced by power plants due to the ELG, water-quality-based effluent limits and the CCR Rule. As the industry has faced these challenges for several years, this presentation will be an update based on CH2M's experience helping clients both develop compliance strategies through data collection, permitting strategy development, alternative evaluations, and treatability testing; and strategy implementation through design, construction, startup and operations. We will provide updates on industry trends, lessons learned, and innovative means to address these challenges while minimizing cost and risk.

Heyward Suber, Project Engineer, CH2M Hill

Jeff Tudini, Associate Engineer, CH2M Hill

11:45 am

Conference Adjourns

PRE-CONFERENCE WORKSHOP

Draining and Stabilizing Fly Ash

WEDNESDAY, MARCH 29, 2017

OVERVIEW

Referencing the extensive dewatering, soil stabilization and water treatment experience earned through the closure of over a dozen ash ponds, the workshop experts will discuss the behavior and responsiveness of ash to drainage methods, the wide range of techniques that can be used, associated water treatment methods, the geotechnical investigations necessary, geotechnical verification and monitoring, and new advances in the technologies.

NOTE: This workshop is not open to direct competitors of Moretrench. Registrations received will be evaluated on a case-by-case basis and may not qualify for attendance. Any determination as to the fulfillment of a registration to attend this program shall reside solely with EUCI.

WORKSHOP TIMING

1:00 pm – 1:30 pm **Registration**

1:30 pm – 5:00 pm **Workshop Timing**

AGENDA

Geotechnical Behaviors of Fine Grained, Non-Cohesive Materials

- Geotechnical differences between soil and ash
- Moisture sensitivity
- Capillarity
- Vibration sensitivity

The Typical “Construction” of an Ash Pond

The Behavior of a Typical Ash Pond as it Pertains to Closure Work

- Instability
- Stable crust thickness
- Localized liquefaction

Methods of Improving Ash Behavior

- Drainage
 - o Rim ditching and sumping
 - o Wellpoints
 - o Deep wells
 - o Other drainage methods
- Ground improvement methods for ash

AGENDA

WEDNESDAY, MARCH 29, 2017 (CONTINUED)

What is an “Adequate” Geotechnical Investigation?

- Investigation for dewatering
- Investigation for other geotechnical concerns
- When pilot testing is warranted

Instrumentation and Monitoring

- Pore water pressure
- Shear strength

Case Studies in Ash Stabilization

- Shallow & deep ponds
- Lined and unlined impoundments

Water Treatment

- Poned water
- Ash pore water

An Integrated Approach to Closure

New Advancements in Practice

- Measurement of geotechnical parameters (and difficult access work)
- Drainage methods/devices

WORKSHOP EXPERTS

Paul Schmall

Ph.D., P.E., Chief Engineer, Senior Vice President, Moretrench

Greg Landry

P.E., Chief Engineer, Dewatering & Groundwater Control, Moretrench



REGISTRATION
to register [CLICK HERE](#) or

Call: 201 871 0474
fax: 253 663 7224
email: register@pmaconference.com
web: <http://pmaconference.com/>
Mail: POB 2303 Falls Church Va 22042

POST-CONFERENCE WORKSHOP

Power Plant Wastewater Treatment to Meet a Changing Regulatory Environment

FRIDAY, MARCH 31, 2017

OVERVIEW

As the rapidly changing regulatory picture reshapes the industry, this workshop will assist in meeting compliance and staying there as quickly and as economically as possible. Using proven internal water management approaches and new and adapted wastewater treatment technologies that anticipate coming regulations, this workshop will present strategies to meet the coming water quality compliance challenges you face.

NOTE: This workshop is not open to direct competitors of CH2M Hill. Registrations received will be evaluated on a case-by-case basis and may not qualify for attendance. Any determination as to the fulfillment of a registration to attend this program shall reside solely with EUCI.

WORKSHOP TIMING

12:30 – 1:00 pm **Registration**

1:00 – 4:00 pm **Workshop Timing**

AGENDA

- Regulatory Update
 - o Regulatory overview
 - o Regulatory impacts – coal ash management
 - o Drivers for ZLD
 - o Effluent Limitation Guidelines (ELGs)
 - o Regulatory environment – for mercury, nitrogen, selenium, total dissolved solids (TDS), chlorides, boron, and other metals issues
- Power Plant Wastewater Overview
 - o Key project considerations
 - o Framing the challenge to set road map to compliance
- Top Ten Lessons Learned
- Ash Pond Replacement
- FGD Wastewater Characteristics
- Compliance Through Negotiating Permit Conditions
- Modifying Scrubbers to Reduce Treatment Requirements
 - o Problem - selenium
 - o Problem – mercury
 - o Testing to control mercury and selenium

AGENDA

FRIDAY MARCH 31, 2017 9 (CONTINUED)

- Biological Treatment
 - o Tank-based treatment
 - o Passive systems
- Zero Liquid Discharge (ZLD) and Near ZLD Treatment
 - o Spray dryers
 - o Thermal ZLD
 - o Underground injection
- Practical Power Plant Wastewater Treatment
 - o Tank-based physical/chemical treatment
 - o FGD wastewater treatment design guidance
- Modifying Existing Treatment Systems for Compliance
- Open Discussion Forum

WORKSHOP EXPERTS

Heyward Suber

Project Engineer, CH2M Hill

Jeff Tudini

Associate Engineer, CH2M Hill

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INSTRUCTIONAL METHODS

Case studies, PowerPoint presentations, and group discussion will be used in this event.

REQUIREMENTS FOR SUCCESSFUL COMPLETION

Participants must sign in/out each day and be in attendance for the entirety of the conference to be eligible for continuing education credit.

IACET CREDITS



EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.

EUCI is authorized by IACET to offer 0.9 CEUs for the conference, 0.4 CEUs for pre-conference workshop and 0.3 CEUs for post-conference workshop

EVENT LOCATION

A room block has been reserved at the Hyatt Regency Suites Atlanta NW, 2999 Windy Hill Road, Marietta, GA 30067 for the nights of March 27-30, 2017. Room rates are US \$139 plus applicable tax. Call **1-770-956-1234** or [click here](#) for reservations and mention the EUCI event to get the group rate. The cutoff date to receive the group rate is March 5, 2017 but as there are a limited number of rooms available at this rate, the room block may close sooner. **Please make your reservations early.**

REGISTER 3, SEND THE 4TH FREE

Any organization wishing to send multiple attendees to these conferences may send 1 FREE for every 3 delegates registered. Please note that all registrations must be made at the same time to qualify.



Please make checks payable to: "PMA"

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PLEASE SELECT

- ATTEND ALL EVENTS: COAL ASH LANDFILL MANAGEMENT COURSE, 7TH ANNUAL COAL COMBUSTION RESIDUALS CONFERENCE AND BOTH PRE AND POST CONFERENCE WORKSHOPS,** MARCH, 28-31, 2017: US \$3095, EARLY BIRD on or before MARCH 10, 2017: US \$2895
- ATTEND COAL ASH LANDFILL MANAGEMENT COURSE, CONFERENCE AND ONE WORKSHOP** (Make Selection Below) MARCH, 28-31, 2017: US \$2695, EARLY BIRD ON OR BEFORE MARCH 10, 2017: US \$2495
 - PRE-CONFERENCE WORKSHOP: WEDNESDAY, MARCH 29, 2017
 - POST-CONFERENCE WORKSHOP: FRIDAY, MARCH 31, 2017
- ATTEND CONFERENCE AND BOTH WORKSHOPS:** MARCH, 30-31, 2017: US \$2195, EARLY BIRD on or before MARCH 10, 2017: US \$1995
- CONFERENCE AND ONE WORKSHOP:** (Make Selection Below) MARCH, 30-31, 2017: US \$1795: EARLY BIRD on or before MARCH 10, 2017: US \$1595
 - PRE-CONFERENCE WORKSHOP: WEDNESDAY, MARCH 29, 2017
 - POST-CONFERENCE WORKSHOP: FRIDAY MARCH 31, 2017
- ATTEND COAL ASH LANDFILL MANAGEMENT COURSE AND CONFERENCE:** MARCH 28 - 31, 2017: US \$2295, EARLY BIRD on or before MARCH 10, 2017: US \$2095
- 7TH ANNUAL COAL COMBUSTION RESIDUALS CONFERENCE ONLY:** MARCH, 30-31, 2017: US \$1395 EARLY BIRD on or before MARCH 10, 2017 US \$1195
- WORKSHOP ONLY** (Make Selection Below) US \$595: EARLY BIRD on or before MARCH 10, 2017: US \$495 EACH
 - PRE-CONFERENCE WORKSHOP: WEDNESDAY, MARCH 29, 2017
 - POST-CONFERENCE WORKSHOP: FRIDAY MARCH 31, 2017

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How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.)

Print Name Job Title

Company

What name do you prefer on your name badge?

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List any dietary or accessibility needs here

CREDIT CARD INFORMATION

Name on Card Account Number

Billing Address Billing City Billing State

Billing Zip Code/Postal Code Exp. Date Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)

OR Enclosed is a check for \$ _____ to cover _____ registrations.

Substitutions & Cancellations

Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before February 24, 2017 in order to be refunded and will be subject to a US \$195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCL event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of course cancellation, EUCL's liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices at (201) 871-0474.