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# *20<sup>th</sup> APC Round Table & Expo*

**ESP, Fabric Filter, SO<sub>3</sub> Mitigation, HAPS,  
Scrubber and Mercury Control**

*Show Guide*  
**2013**



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# 2013 APC/PCUG Conference



The 20th Annual APC/PCUG Conference is  
 presented by Reinhold Environmental ([www.reinholdenvironmental.com](http://www.reinholdenvironmental.com))  
 Hosted by Ameren IL and Ameren UE

*Special thanks to the Conference Sponsors and Utility Hosts*



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# 2013 APC Round Table Agenda

July 8, 2013 - Monday - APC Round Table

Registration opens at 7:00 am outside of Ballroom / Expo opens at 7:00 am with Continental Breakfast in Ballroom

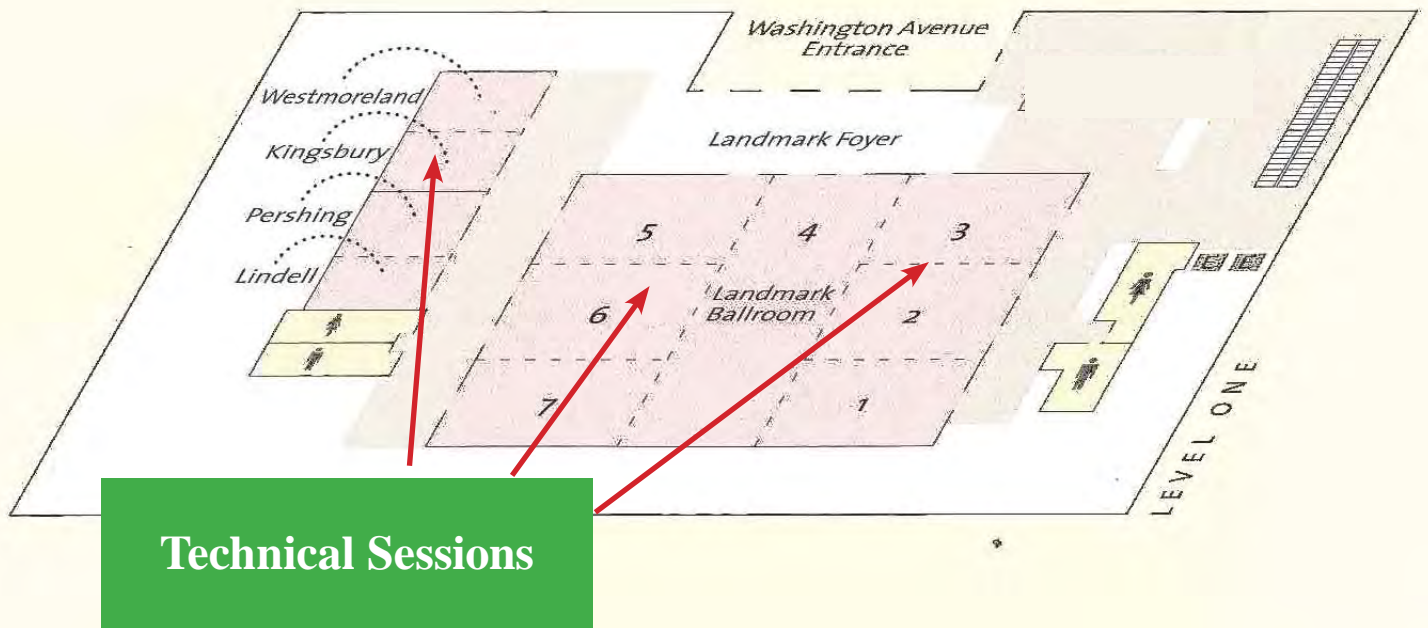
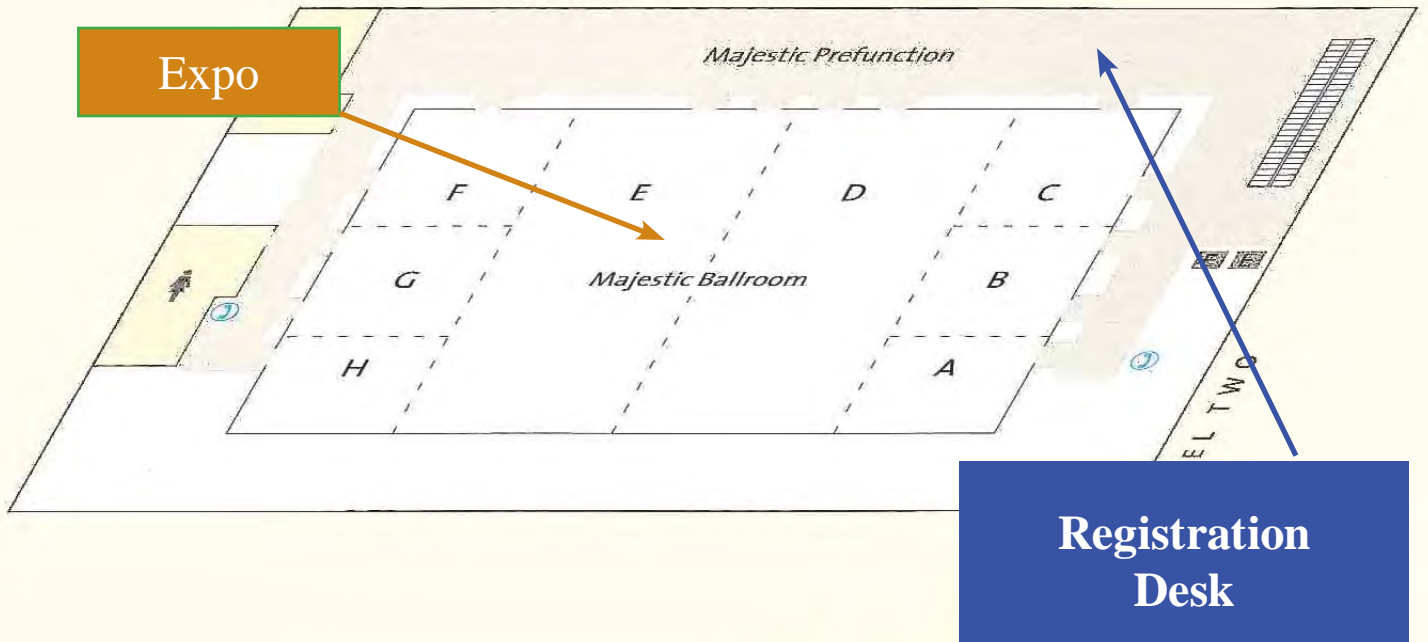
## Technical Training Classes 8:00-11:30

8:00 - 9:30	<b>Training Class 1: Landmark Ballroom 5</b> Fabric Filter O&M by Florin Popovici, Evonik	<b>Training Class 2: Landmark Ballroom 6</b> ESP 101 Operation Paul Ford, Redkoh Industries Don Steinhart, Stein Industries	<b>Training Class 3: Landmark Ballroom 1-2</b> Fuel Flexibility Challenges (refined fuels, re-tuning, etc.) by Tony Wideman, REC	<b>Training Class 4: Westmoreland/Kingsbury</b> Water Balance - "Water Hierarchy" by Bruce Salsbury, AFS	<b>Training Class 5: Landmark Ballroom 7</b> Wet Limestone Scrubber Technical Overview by John Van Woy, Hitachi
9:30 - 10:00	<b>Training Class 6: Landmark Ballroom 5</b> Dominion Energy Brayton Point Units 1&2 PJFF / Filter Bags and Cage Replacement Project by Tim Stark, GE Air Filtration; Chris Wedlig, CB&I/Shaw Group	<b>Training Class 7: Landmark Ballroom 6</b> ESP Inspection & Repair John Walker, Duke Energy	<b>Training Class 8: Landmark Ballroom 1-2</b> Mercury Overview by Scott Hinton, WS Hinton & Assoc.	<b>Training Class 9: Westmoreland/Kingsbury</b> WFGD Chemistry, Tuning and Optimization for Improved Wastewater Characteristics and Treatment by Shannon Brown and Dan Johnson, Babcock & Wilcox	<b>Training Class 10: Landmark Ballroom 7</b> Mist Eliminators 101 by Ron Richard, REC
10:00-11:30					
11:30 - 1:00	Lunch in Exhibition Hall in Ballroom				
1:00 - 2:30	<b>General Session: Landmark Ballroom 1-4</b>				
	<b>Presentation of Round Table Lifetime Award by Susan Reinhold .....Safety Note by Hotel..... Keynote Speech: Coal Plant Operation - Today and into the Future by Charles D. Nastand, Executive VP Corp Operations Oversight, Ameren</b>				
2:45 - 3:45	<b>Workshop 1: Landmark Ballroom 5</b> Deciding Which Pulse Jet Filter Media Choice is Best for Your Utility CFB Application by John McKenna, ETS	<b>Workshop 2: Landmark Ballroom 6</b> Hopper Management by Paul Ford, Redkoh Industries Matt Richards, Hofjail	<b>Workshop 3: Landmark Ballroom 1-2</b> Alternatives to ACI for Hg Control by John Meter, Nalco	<b>Workshop 4: Westmoreland/Kingsbury</b> Biological Wastewater Treatment by Jay Harwood, GE	<b>Workshop 5: Landmark Ballroom 7</b> SDA Dry Scrubber O&M by Gabriel Pacheco, Siemens
3:45-4:30	<b>Workshop 6: Landmark Ballroom 5</b> Converting ESP to FF by Tom Lager, MET	<b>Workshop 7: Landmark Ballroom 6</b> Reducing ESP Hopper Re-entrainment for ACI/DSI Operation by Rob Mudry, Airflow Sciences and Gerry Klenn, Southern Company	<b>Workshop 8: Landmark Ballroom 1-2</b> DSI Capture of Heavy Metals by Connie Santor, ADA-ES	<b>Workshop 9: Westmoreland/Kingsbury</b> Wastewater Treatment and Zero Liquid Discharge Technologies Overview and New Development by Gordon Malter, URS	<b>Workshop 10: Landmark Ballroom 7</b> Meeting the Next Level of Wastewater Quality for Metals and Selenium by Rich Marsan, STEAG
4:30 - 5:30					
5:30-6:30	Reception in Exhibition Hall (open to all attendees and their families)				
	<b>July 9, 2013 - Tuesday - APC Round Table</b>				
7:30 - 8:30	Registration opens at 7:30 am outside of Ballroom / Expo opens at 7:30 am with Continental Breakfast in Ballroom				
8:30-9:30	<b>Workshop 11: Landmark Ballroom 5</b> High Frequency Power Supplies O&M (changes to rapper control procedures, voltage harmonics, reliability, tuning, maintenance) by Russ Ridgeway, SHELL-B EE Consulting	<b>Workshop 12: Landmark Ballroom 1-4</b> Ash Handling System Modifications and Operation as a Result of MATS Compliance Discussion Group moderated by Carla Piening, LG&E/KU Group: Kevin McDonough, UCC; Lou Zotti, Allen-Sherman-Hoff; Jim Chaney, Ameren; TBD	<b>Workshop 13: Landmark Ballroom 7</b> DSI / ACI System Design and Performance for Continuous Emissions Compliance by Mark Thomas, Mark Thomas & Assoc.	<b>Workshop 14: Landmark Ballroom 7</b> Corrosion on Stainless Steel by Ron Richard, REC	<b>Workshop 15: Landmark Ballroom 7</b> Selenium Control Using a Combustion Additive by Mandar Gadgil, B&W
9:30-10:30	<b>Workshop 14: Landmark Ballroom 5</b> Corona Gone Bad by John Krapik and Rob Hummel, B&W	<b>Workshop 15: Landmark Ballroom 6</b> Case Study: Preventing ESP Distribution Plate Buildups with Sonic Horns by Jake Shelton, SCR-Tech	<b>Workshop 16: Landmark Ballroom 7</b> Panel II: Landmark Ballroom 1-4 ACI and/or DSI for MATS Compliance - Good, Bad and the Ugly Chairman: Gary Tommacheo, WorleyParsons / Panelists: Jim Chaney, Ameren; Jamie Fessenden, Cabot Corp; Darryl Wall, Southern Company; Michael Thiel, Nol-Tec; Curt Biehn, Mississippi Lime; Mike Atwell, Solvay; Chad Donner, Duke Energy	<b>Workshop 17: Landmark Ballroom 5</b> Energizing ESPs with High Frequency Power Supplies - 20 years of operation, experiences and future solutions by Per Ransstad, Alstom	<b>Workshop 18: Landmark Ballroom 6</b> Impact of DSI and ACI on ESPs/FF by Jean Bistard, ADA-ES
10:30-11:30					
11:30-12:00					
12:00 - 1:30	Lunch in Exhibition Hall in Ballroom				
1:30 - 2:30	<b>Workshop 17: Landmark Ballroom 5</b> Taking the Mystery Out of Precipitator Power Supplies by David Johnston, B&W	<b>Workshop 18: Landmark Ballroom 6</b> Duct and Casing Design for Long Term Reliability by Tim Mallory, Air-Advantage	<b>Workshop 19: Landmark Ballroom 7</b> Update on Gore Hg Control Technology by Jeff Kalde, W.L. Gore Jonas Klingspor, URS	<b>Workshop 20: Landmark Ballroom 5</b> High Reactivity Hydrated Lime Benefits for DSI Applications by Curt Biehn, Mississippi Lime	<b>Workshop 21: Landmark Ballroom 7</b> Re-Emission Drivers and Options by Mark Ehrnschwender, STEAG
2:45-3:45					
3:45-4:30	<b>Workshop 25: Landmark Ballroom 5</b> Circulating Dry Scrubbing Technology Provides Multi-Pollutant Removal Capabilities by Bob Giglio, Foster Wheeler	<b>Workshop 26: Landmark Ballroom 6</b> TDL Based HCl CEMS for MATS Compliance by Tim Kuitken, Cemtek	<b>Workshop 27: Landmark Ballroom 1-2</b> MATS Compliance Monitoring by Scott Evans, CleanAir Engineering	<b>Workshop 28: Westmoreland/Kingsbury</b> Acid Gas Stratification and Its Impact on DSI by Chetan Chothani, Green Energy	<b>Workshop 29: Landmark Ballroom 7</b> Practical Aspects of ELG Implementation by Michelle Mayfield and Mark Rokoff, URS
4:30-5:30	<b>APC Round Table Conference Event / Ballgame and Dinner at Busch Stadium 6:00pm to 10:00pm ..... families invited</b>				
	<b>July 10-11, 2013 - Wednesday &amp; Thursday - PCUG Meeting for Users only</b>				

Level One - Technical Sessions

Level Two - Exhibition  
Registration Desk

# Hotel Floor Plan





# Mercury Control Technology

Let your wet FGD do the work - See us at Booth: #26

The coal-fired power generation fleet faces increasingly tighter U.S. emission regulations. STEAG's simple patented mercury removal technology solution provides a unique solution not only capturing greater than 90 percent of mercury from the flue gas, but also has the capability to consolidate the mercury waste material. What's next? STEAG is working to reduce mercury and selenium levels in waste water to below drinking water limits. Come by our booth!

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# Workshops and Panels

Monday, July 8, 2013

8:00 to 9:30 am

## **Training Class 1: “Fabric Filter O&M”** by Florin Popovici, Evonik (Landmark Ballroom 5)

This training class describes the management of the major bag house components regarding O&M, emission control optimization, energy saving, condition monitoring and bag life extension. The filtration mechanism and the dust cake implications are explained in relation to the selection of an efficient filter media.

## **Training Class 2: “ESP 101 Operation”** by Paul Ford, Redkoh Industries and Dan Steinhaur, Stein Industries, (Landmark Ballroom 6)

During this training class precipitator operations will be discussed. Attention will be given to operations from an electrical and instrument engineers perspective. References will include: current limiting reactors, electrical control systems, electrical sectionalization, electrode management, gas flow distribution, gas flow sneakage, hopper problems, particulate distribution, particulate resistivity, rapping re-entrainment, transformer rectifiers, voltage vs. current curves, and wire breakage.

## **Training Class 3: “Fuel Flexibility Challenges (Refined Fuels, Re-tuning, etc.)”** by Tony Widenman, RE Consulting (Landmark Ballroom 1-2)

Your coal buyer just got you a deal on a coal to blend with your PRB. The buyer says it's the same as your other coal and don't worry about the quality. You go with the offer and slag your boiler after the first shipment. This training class will show you what to look for so you don't get caught in this scenario.

## **Training Class 4: “Water Balance – Water Hierarchy”** by Bruce Salisbury, APS (Westmoreland/Kingsbury)

A western view of the impending water regulations told from the perspective of a desert region where water is a very precious, and very expensive commodity.

## **Training Class 5: “Wet Limestone Scrubber Technical Overview”** by John Van Woy, Hitachi (Landmark Ballroom 7)

A scrubber works in synergy with the other components of the AQCS to remove SO<sub>2</sub> and other gases, pollutants and particulates. Two ways of achieving this are maximizing the gas/liquid contact and achieving high forced oxidation efficiency.

10:00 to 11:30 am

## **Training Class 6: “Dominion Energy Brayton Point Units 1 & 2 PJFF / Filter Bags and Cage Replacement Project”** by Tim Stark, GE Air Filtration and Chris Wedig, CB&I (Landmark Ballroom 5)

This training class will discuss the project to replace all the filter bags and support cages at Brayton Point Units 1 and 2 pulse jet fabric filter (PJFF) systems. It includes a description of the project, goals, team organization, need to replace old bags and cages, planning, specification of bags and cages, development of bidders list, comparison of bids, award of contract, description and characteristics of new bags and cages, schedule of project, co-ordination, division of responsibilities (DOR), project management, outage schedule of Units 1 and 2, execution of the project, pre-outage inspections, team meetings, outage activities, installation of the new bags and cages, quality assurance and control, safety, disposal of spent bags and cages, field testing, and other activities of the project. The presentation describes the type of new bags and cages, fabrication, delivery, handling, storage, installation, leak testing, pre-coating of the bags, bag monitoring program, and other topics related to the new bags and cages. The presentation also discusses the pre-outage activities, cleaning out deposits in the PJFF “J” tubes, and cleaning the compartments and vacuum inlet and outlet ductwork, and the replacement of compartment cover gaskets, during the project. In addition, the presentation covers the operational changes made to Units 1 & 2 PJFF systems, including pulse pressure lowered, pulsing sequence changed per suppliers' recommendations, and start-up procedure revised to start pulsing sequence at recommended pressure drop across PJFF.

## **Training Class 7: “ESP Inspection and Repair”** by John Walker, Duke Energy (Landmark Ballroom 6)

This training class will be a “Show and Talk”. A virtual interactive session that presents photos of equipment issues and attendees will try to identify the specific issue. A root cause and remedy will be discussed between the presenters and attendees. Knowledge, repair methods and diagnosis procedures will be shared with the intent of increasing everyone's ability to keep their precipitators at peak performance. There are no assurances or guarantees that this enhanced ability will earn you a bonus/raise/promotion, but it probably won't hurt.

# Workshops and Panels

Monday, July 8, 2013

10:00 to 11:30 am (cont.)

**Training Class 8: “Mercury Overview”** by Scott Hinton, WS Hinton & Associates (Landmark Ballroom 1-2)

During this training class an overview of mercury behavior in coal-fired units will be presented encompassing the entire system - fuels to stack. The information is designed to provide a fundamental understanding of Hg chemistry and the factors impacting Hg.

**Training Class 9: “WFGD Chemistry, Tuning and Optimization for Improved Wastewater Characteristics and Treatment”** by Shannon Brown and Dan Johnson, Babcock & Wilcox (Westmoreland/Kingsbury)

This training class will cover many aspects of WFGD chemistry including, oxidation reduction potential (ORP), mercury and selenium speciation. Discussion of potential causes of swings in ORP will be provided, along with the implication of this chemistry upon wastewater treatment. AQCS train and absorber tuning for improved characteristics of WFGD blow down will be covered.

**Training Class 10: “Mist Eliminators 101”** by Ron Richard, RE Consulting (Landmark Ballroom 7)

There are choices that can be made concerning the design and operation of a mist eliminator and its wash system that have a large impact on reliability and the potential for forced outages of the absorber tower. This training class discusses what these choices are and how to optimize reliability.

**LUNCH in Exhibition Hall (11:30 to 1:00 pm)**

1:00 to 2:30 pm

**Welcome: “Presentation of Round Table Lifetime Awards”** by Susan Reinhold, Reinhold Environmental (Landmark Ballroom 1-4)

The Round Table Awards will be given to Bruce Salisbury, APS; Greg Betenson, PacifiCorp and Greg Bielawski, Babcock & Wilcox.

**Keynote Speech: “Coal Plant Operation – Today and Into the Future”** by Charles D. Naslund, Executive Vice President Corporate Operations Oversight, Ameren (Landmark Ballroom 1-4)

Mr. Naslund will discuss coal plant challenges for today including production cost, market forces and environmental issues. Also covered will be challenges for the future including understanding O&M, environmental issues, retirements and unclear future power pricing.

2:45 to 3:45 pm

**Workshop 1: “Deciding Which Pulse Jet Filter Media Choice is Best for Your Utility CFB Application”** by John McKenna, ETS (Landmark Ballroom 5)

There are three techno-economically feasible filter bag material options available for use in coal-fired boiler pulse jet baghouses. These are PPS, P-84, and woven fiberglass. This workshop discusses the available database which helps you make the best choice.

**Workshop 2: “Hopper Management”** by Paul Ford, Redkoh Industries and Matt Richards, Hotfoil (Landmark Ballroom 6)

An often overlooked element of precipitators and bag house performance is that of hopper management. This will be discussed and an insight offered as to how good hopper management can assist in minimizing emissions and reducing cost of operations.

**Workshop 3: “Alternatives to ACI for Hg Control”** by John Meier, Nalco (Landmark Ballroom 1-2)

This workshop will discuss recent experience in controlling mercury re-emission in wet FGDs with a liquid, non-carbon, non-halogen additive used to suppress mercury re-emission in wet FGDs. Nalco has mitigated mercury re-emission in several demonstrations over the past two years. The workshop will outline recent experience on a sub-bituminous fired unit equipped with an SCR and wFGD.

**Workshop 4: “Biological Wastewater Treatment”** by Jay Harwood, GE (Westmoreland/Kingsbury)

The U.S. EPA has released the pre-publication draft of the Effluent Limitation Guidelines for the Steam-Electric Power Industry. These guidelines will change the way that wastewater discharges, such as wet-FGD blowdown stream are treated and handled. Biological treatment is a key solution in meeting these guidelines and this presentation will explore the common technologies used.

# Workshops and Panels

**Monday, July 8, 2013**

**2:45 to 3:45 pm (cont.)**

**Workshop 5: “SDA Dry Scrubber O&M”** by *Gabriel Pacheco, Siemens* (Landmark Ballroom 7)

The operation and maintenance of SDA dry scrubbing systems has a critical effect on acid gas removal. This workshop will discuss several of the key parameters of dry scrubber operation that must be monitored to achieve expected performance. Critical subsystems of dry scrubbers and their principal maintenance issues will also be reviewed.

**4:30 to 5:30 pm**

**Workshop 6: “Converting ESP to FF”** by *Tom Lugar, MET* (Landmark Ballroom 5)

What are the issues to consider and what makes a good ESP to fabric filter conversion candidate? These questions will be answered and a case study of a recent ESP conversion will be presented that will describe the key design considerations that were made to assure a successful conversion and optimum fabric filter performance. How these design considerations are affected by the use of PAC/DSI injection will also be discussed.

**Workshop 7: “Reducing ESP Hopper Re-entrainment for ACI/DSI Operation”** by *Rob Mudry, Airflow Sciences and Gerry Klemm, Southern Company* (Landmark Ballroom 6)

This workshop discusses an ESP rebuild at Gulf Power Plant Crist. An in-depth flow modeling study was completed during the design stage to examine hopper flow patterns and minimize potential for re-entrainment of ACI and DSI. This included some novel analysis methods along with a unique final design. Results of the flow modeling will be reviewed, and utility personnel will present actual plant data collected after unit start up.

**Workshop 8: “DSI Capture of Heavy Metals”** by *Connie Senior, ADA-ES* (Landmark Ballroom 1-2)

Dry sorbent injection (DSI) is used to control acid gases ( $\text{SO}_2$ ,  $\text{SO}_3$ , HCl) in coal-fired boilers. Alkaline DSI sorbents can react with certain metals, which are present in the gas phase at the injection point. This workshop will cover the reactions between sodium or calcium sorbents and metals such as arsenic and selenium, as well as the downstream impacts such as leaching from the solid byproducts.

**Workshop 9: “Wastewater Treatment and Zero Liquid Discharge Technologies Overview and New Development”** by *Gordon Maller, URS* (Westmoreland/Kingsbury)

This workshop will discuss the new ELG and CCR rules and provide an overview of existing and emerging WWT and ZLD technology to comply with the new rules. Lower cost strategies for plants to operate as ZLD, optimize water usage and water management and accomplish necessary improvements such as closing waste impoundments will also be discussed.

**Workshop 10: “Meeting the Next Level of Wastewater Quality for Metals and Selenium”** by *Rich Marsan, STEAG* (Landmark Ballroom 7)

Environmental mandates for air, waste and water are increasingly recognized as being interrelated. Recent EPA rules and timing of those actions suggest acknowledgement of the potential cross effect of each constituent product stream. For example, air emission control solutions can negatively affect byproducts and plant effluent discharges. A proactive and holistic approach that identifies and characterizes impacts suggests exploring solutions in parallel whenever considering plant process alterations. This discipline will lead to cost efficiencies and avoidance of simply shifting the problem from one monitored outflow to another.

**RECEPTION in Exhibit Hall (5:30 to 6:30 pm)**

**Tuesday, July 9, 2013**

**8:30 to 9:30 am**

**Workshop 11: “High Frequency Power Supplies O&M”** by *Russ Ridgeway, SHEL-B EE Consulting* (Landmark Ballroom 5)

High frequency TR sets are not your Father's Oldsmobile. These new sets improve ESP performance, but require a change in thinking. What will their impact be to the ESP operation and its associated equipment? How do their failure rates compare to conventional TR sets?

# Workshops and Panels

Tuesday, July 9, 2013 (cont.)

8:30 to 9:30 am (cont.)

**Discussion Group I: “Ash Handling System Modifications and Operation as a Result of MATS Compliance”** *Discussion Group Moderator: Carla Piening, LG&E/KU / Discussion Group Panelists: Kevin McDonough, UCC; Louis Zotti, Allen Sherman Hoff; Jim Chaney, Ameren (Landmark Ballroom 1-4)*

This discussion group will focus on equipment performance on coal fired units that are undergoing changes related to new compliance issues.

**Workshop 12: “DSI / ACI System Design and Performance for Continuous Emissions Compliance”** *by Mark Thomas, Mark Thomas & Associates Consulting (Westmoreland/Kingsbury)*

For continuous MATS compliance DSI and ACI systems will need to operate continuously often at drastically higher feed rates than existing systems. This workshop will discuss the associated challenges and economical solutions for increased reliability and continuous, efficient DSI and ACI system performance.

**Workshop 13: “Corrosion on Stainless Steel”** *by Ron Richard, RE Consulting (Landmark Ballroom 7)*

During this workshop we will discuss the various factors that control the rate of corrosion in the various grades of stainless steel used in FGD systems.

10:30 to 11:30 am

**Workshop 14: “Corona Gone Bad”** *by John Knapik and Rob Hummel, Babcock & Wilcox (Landmark Ballroom 5)*

It is amazing how much area of the ESP collecting plate receives little or no current. This workshop shows our recent R&D effort to map every square inch of the collecting plate and its' current flow. The results appear in very easy to follow color zones, almost like a topographic map. Most commonly available electrodes were tested and the results might prove surprising.

**Workshop 15: “Case Study: Preventing ESP Distribution Plate Buildups with Sonic Horn”** *by Jake Shelton, SCR-Tech (Landmark Ballroom 6)*

Ash buildups on ESP gas distribution plates create poor gas distribution, which in turn closes down passages, leading to a venturi effect that raises gas velocity, shortens residence time, and increases particulate entrainment. In this workshop, Jake will look at the success with this system in an ESP application at a coal-fired power plant in Florida. Here the acoustic energy from the sonic horns reduced the buildup on the gas distribution plates, preventing a boiler derate that could have cost the plant more than \$5 million.

**Workshop 16: “Selenium Control Using a Combustion Additive”** *by Mandar Gadgil, B&W (Landmark Ballroom 7)*

For many power plants, injection of calcium bromide is a reliable and cost effective method for mercury emissions compliance. Recently, research has shown that bromine injection has a negative impact on selenium speciation. Bromine injection reduces the amount of selenium in the particulate bound phase and, as a result, increases the amount of in the gas phase. This results in increased selenium entering the flue gas desulfurization equipment. For WFGD systems, higher selenium in the gas phase is problematic as selenium is very soluble in the absorber slurry. This is of particular concern with limestone forced oxidation systems where some of the selenium is oxidized from the Se (IV) to the Se (VI) oxidation state as Se (VI) is very difficult to remove using conventional waste water treatment systems. Results of a full scale field testing which was done to evaluate the impact of injecting a combustion additive to reduce the amount of gas phase selenium entering the WFGD even with bromine injection will be presented

10:30 to 12:00 noon

**Panel I: “ACI and/or DSI for MATS Compliance – Good, Bad and the Ugly”** *Panel Chairman: Gary Tonnemacher, WorleyParsons / Panelists: Jim Chaney, Ameren; Jamie Fessenden, Norit; Darryl Wall, Southern Company; Michael Thiel, Nol-Tec; Curt Biehn, Mississippi Lime; Mike Atwell, Solvay; Chad Donner, Duke Energy (Landmark Ballroom 1-4)*

The ACI/DSI panel discussion will focus on the current state of Activated Carbon Injection and Dry Sorbent Injection System capabilities and performance. Sorbent manufacturers, system suppliers and utility representatives will discuss their experience and considerations with the application of these technologies for reduction of HCl, SO<sub>2</sub> and SO<sub>3</sub> emissions.

**LUNCH in Exhibition Hall (12:00 to 1:30 pm)**

# Workshops and Panels

Tuesday, July 9, 2013 (cont.)

1:30 to 2:30 pm

## **Workshop 17: “Energizing ESPs with High Frequency Power Supplies – 20 Years of Operation, Experiences and Future Solutions”** by *Per Ranstad, Alstom* (Landmark Ballroom 5)

This workshop will give a perspective of upgrading ESPs with high frequency power supplies, from first installations 1993 to date. Technical opportunities and future challenges, such as how to overcome negative effects from DSI and ACI in the context of mercury removal and ESP collecting efficiency will be covered.

## **Workshop 18: “Impact of DSI and ACI on ESPs/FF”** by *Jean Bustard, ADA-ES* (Landmark Ballroom 6)

ACI and DSI technologies introduce dry, powdered sorbents with different particle properties into the flue gas where they react to reduce mercury and acid gas emissions. Particulate characteristics and loading are key factors affecting ESP and fabric filter performance, including particulate emissions. This workshop will discuss the potential impacts and present findings from project experience.

## **Workshop 19: “Update on Gore Hg Control Technology”** by *Jeff Kolde, W.L. Gore and Jonas Klingspor, URS* (Landmark Ballroom 7)

A novel fixed bed system for mercury control that can be installed within a wet FGD will be discussed in this workshop. Test results from pilot tests, as well as full-scale installation, will be presented, along with information regarding other planned installations in the coming months. The operating costs will be compared to other approaches to mercury control for different types of coal-fired power plants.

## **Discussion Group II: “O&M Issues in WFGD”** Discussion Group Moderator: *Steve Wolsiffer, REC Discussion Group* Panelists: *Greg Bielawski, Babcock & Wilcox; Tony Licata, Licata Energy; Ron Laws, Duke Energy; Roger Ferguson, Ameren* (Landmark Ballroom 1-4)

This discussion group intends to be interactive with the attendees and offers them the opportunity to solicit answers and comments from this panel of industry personnel. FGD design and retrofit experiences with an emphasis on Operation/Maintenance issues will be directed by audience questions. This format belongs to the attendees and encourages participation.

2:45 to 3:45 pm

## **Workshop 20: “Taking the Mystery Out of Precipitator Power Supplies”** by *David Johnston, Babcock & Wilcox* (Landmark Ballroom 5)

With so many precipitator power supply options today, how do you evaluate them? This workshop will show how we use advanced software modeling to determine what you can expect from each power supply type. The attendee will gain an increased understanding of the application of the little gray box (precipitator power supply) to the big gray box (precipitator).

## **Workshop 21: “Duct and Casing Design for Long Term Reliability”** by *Tim Mallory, Air Advantage* (Landmark Ballroom 6)

This workshop will cover the practical application of structural theory to flue gas ducting and associated structures.

## **Workshop 22: “CFD/Physical Modeling of DSI/ACI Distribution”** by *Matt Gentry, Airflow Sciences* (Landmark Ballroom 1-2)

The basic principles behind modeling of sorbent injection systems using computational fluid dynamics or physical scale modeling will be discussed. The two modeling techniques will be compared and sorbent distribution optimization strategies and techniques will be presented.

## **Workshop 23: “High Reactivity Hydrated Lime Benefits for DSI Applications”** by *Curt Biehn, Mississippi Lime* (Westmoreland/Kingsbury)

A high reactivity hydrated lime offers many benefits for DSI applications. Faster in-flight capture of acidic pollutants improves hydrate utilization, reduces particulate in the gas stream, or allows the Utility to obtain higher removal of pollutants such as  $\text{SO}_3/\text{H}_2\text{SO}_4$ , HCl or even  $\text{SO}_2$ . This workshop will outline the benefits of HR Hydrate and provide full scale examples of improved performance.

# Workshops and Panels

**Tuesday, July 9, 2013 (cont.)**

**2:45 to 3:45 pm (cont.)**

**Workshop 24: “Re-Emission Drivers and Options”** by *Mark Ehrnschwender, STEAG* (Landmark Ballroom 7)

As Mercury capture levels are increased, re-emission of mercury that is initially captured in the FGD system becomes a major concern. We will explore the causes for re-emissions, potential solutions for mitigating the re-emission of mercury and the fate of the mercury once captured.

**4:30 to 5:30 pm**

**Workshop 25: “Circulating Dry Scrubbing Technology Provides Multi-Pollutant Removal Capabilities”** by *Bob Giglio, Foster Wheeler* (Landmark Ballroom 5)

The number of regulated air emission constituents is increasing while the acceptable amounts for release are decreasing. In the long run, picking the most flexible multi-pollutant technology is surely the least cost and best strategic option.

**Workshop 26: “TDL Based HCl CEMS for MATS Compliance”** by *Tim Kuiken, Cemtek* (Landmark Ballroom 6)

With the upcoming compliance date for meeting the MATS rule new monitoring requirements, HCl CEMS development to meet EPA requirements has been on a fast track. A demonstration test of a tunable diode laser (TDL) HCl CEMS has recently been completed at a St. Louis area cement facility. This workshop will discuss the initial testing and results to comply with preliminary Performance Specification 18 for HCl CEMS including the system limit of detection, calibration drift, and RATA.

**Workshop 27: “MATS Compliance Monitoring”** by *Scott Evans, CleanAir Engineering* (Landmark Ballroom 1-2)

This workshop will focus on methods used for MATS Compliance monitoring and the issues affected sources should consider when selecting a monitoring method. Bias and interference issues will be emphasized.

**Workshop 28: “Acid Gas Stratification and its Impact on DSI”** by *Chetan Chothani, Breen Energy* (Westmoreland/Kingsbury)

This workshop will discuss Acid Gas Stratification, particularly after the Air Preheater and the challenges it poses for Dry Sorbent Injection system design. Data will be presented to show this stratification as well as Sorbent stratification from DSI systems. A new tool will be introduced that allows the measurement for such acid gas stratification in a two dimensional grid.

**Workshop 29: “Practical Aspects of ELG Implementation”** by *Michelle Mayfield and Mark Rokoff, URS* (Landmark Ballroom 7)

The recently proposed Effluent Limitation Guidelines included eight regulatory options, stricter limits for FGD wastewater, no discharge requirements for coal ash transport water, best management controls for coal combustion residuals impoundments, and optional extensions for plants willing to implement controls above the regulatory requirements. We'll wade through the rule and assess practical impacts to coal-fired plants.

## Baseball Tickets and Bus Information

- **Baseball Game Tickets must be picked up between 2:15 pm and 4:15 pm on Tuesday, July 9th next to the Registration Counters. Any ticket not picked up will be passed to the next in line on the wait list.**
- **There will be two (2) 55 passenger buses making a round robin runs from the St. Charles entrance (this is by the front desk) of the Renaissance Grand to the Stadium starting at 5:45 pm. At the end of the game, they will again make round robin runs until everyone has returned to the hotel.**

**You will require a baseball game ticket in order to get on the bus.**

**Questions/ Comments/ Etc. – Please contact Tressie Martin Cell 850.624.6964**



# Conference Event: **Cardinal Baseball Game**

*all attendees and families are invited for dinner and a Ballgame on 7/9/13 - busing provided*

## Cardinals vs. Astros

July 9, 2013 / Evening Game and Dinner  
Coca-Cola Scoreboard Patio



# **DRY SORBENT INJECTION**

with **HIGH REACTIVITY HYDRATED LIME**



## **The Clear Choice™**

Utilities have successfully used High Reactivity Hydrated Lime to control SO<sub>3</sub> and HCl flue gas emissions. High Reactivity Hydrated Lime is The *Clear Choice* for DSI:

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- *Low SO<sub>3</sub> emissions*
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- *Better in-flight capture*
- *Reduced annual sorbent costs*

Mississippi Lime has continuously supported the industry through product and supply chain development, key test programs, and optimization of conveying systems. We are proud to be a sponsor for the 2013 APC Conference.

Welcome to St. Louis!

For more information on Hydrated Lime DSI, please contact us at [technicalservices@mississippilime.com](mailto:technicalservices@mississippilime.com).

**Visit us at booths 42 & 43**

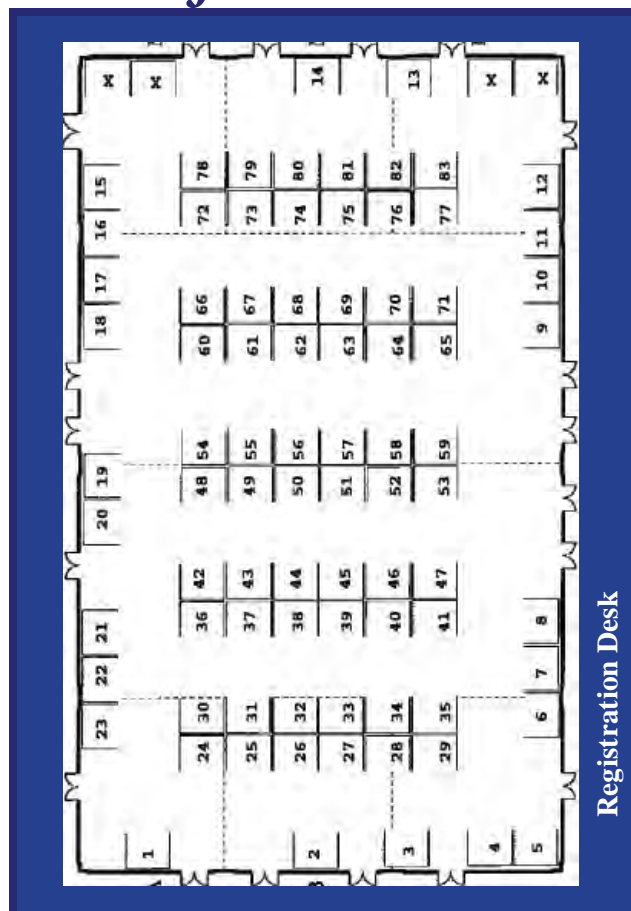


1.800.437.5463 [www.mississippilime.com](http://www.mississippilime.com)

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# 2013 APC Round Table Exhibitors

## ADA-ES, Inc.....54

9135 S. Ridgeline Blvd, Suite 200  
Highlands Ranch, CO 80129  
Jim Mitchell, Director of Sales and Marketing  
jamesm@adaes.com  
Business: 303-734-1727 / www.adaes.com



ADA-ES, Inc. and its affiliated companies offer activated carbon injection systems for mercury control, dry sorbent injection systems for HCl and SOx control, flue gas conditioning chemicals and injection systems, coal additive systems, emissions testing services, and refined coal technologies. ADA's products and services maximize capital asset value and support operating efficiency improvements and many are designed to meet challenging emissions control regulations for coal-fired power plants, industrial boilers, Portland cement kilns, and related industries. ADA continues to advance cleaner energy by developing solutions for the future including CO<sub>2</sub> capture technologies and options to stabilize waste and reduce water usage.

## ADA Carbon Solutions.....74

1460 West Canal Court, Ste 100  
Littleton, CO 80120  
Samantha Sigler, Executive Administrator to the CEO  
samantha.sigler@ada-cs.com  
Business: 303-962-1985 / www.ada-cs.com



ADA Carbon Solutions, LLC is a leading manufacturer of powdered activated carbon (PAC) products that are optimized for mercury removal. Our flagship plant in Red River Louisiana is the largest, most automated and environmentally friendly manufacturing facility in North America focused on products for coal fired boiler mercury control. We aim to leverage our industry leading expertise in emission control and the reliability afforded by our assets to deliver superior emission control solutions. Our goal is to help our customers achieve compliance....reliability and cost effectively. Expertise. Reliability. Compliance.

## Airflow Sciences Corporation.....24-25

12190 Hubbard  
Livonia, MI 48150  
Robert G. Mudry, P.E., President  
rmudry@airflowsciences.com  
Business: 734-525-0300 / www.airflowsciences.com



Experts in CFD, physical flow modeling, and field testing since 1975. Our modeling provides cost-effective designs for ducts, pulverizers, windboxes, SCR's, ESP's, baghouses, scrubbers, and stacks. Custom field test equipment ensures accurate and efficient measurement of flow, temperature, chemical species, and particulate. The combination of modeling, testing, and engineering expertise makes ASC the one-stop shop for all your flow-related needs.

## AirTek.....60

P.O. Box 388, 700 Hudson St.  
Troy, AL 36081  
John Roberts, President  
jr@airtek-troy.com  
Business: 334-566-7400 / www.airtek-troy.com



Since 1988, AirTek has been a leading provider of precipitator services. These services include field service engineering, consulting services, construction management, maintenance, new construction, major rebuilds, and the supply of spare parts. AirTek offers this full range of services, in addition to our own line of ESP's, to all users of air pollution control equipment.

## Albemarle Corp.....82

451 Florida Street  
Baton Rouge, LA 70801  
Daryl Lipscomb, Global Business Manager, Environmental Division  
daryl.lipscomb@albemarle.com  
Business: 225-388-7041 / www.albemarle



Albemarle Corporation provides full-service, mercury emission control solutions to the coal-fired utility, cement kiln, and industrial boiler markets, supplying a portfolio of proprietary, powdered activated carbon (PAC) mercury sorbents, Calcium Bromide and other bromine chemicals for mercury removal. Albemarle also supplies activated

carbon injection (ACI) systems, and mercury testing and demonstration services and systems. Albemarle's broad portfolio and experience base enable us to develop solutions for industries with simple and complex mercury challenges. Albemarle Corporation, headquartered in Baton Rouge, Louisiana, is a leading global developer, manufacturer, and marketer of highly-engineered specialty chemicals for several industries and has three business segments, Polymer Solutions, Catalysts and Fine Chemistry. Corporate Responsibility Magazine selected Albemarle to its prestigious "100 Best Corporate Citizens" list for 2010, 2011 and 2013.

## Alstom Power (Environmental Services Op.).....30-31

9737 Cogdill Road, Suite 230A  
Knoxville, TN 37932  
Tapan Mukherjee, Business Development  
tapan.mukherjee@alstom.com  
Business: 1-800-966-0554 / www.alstom.com



Alstom is a global leader in supplying environmental control systems, high frequency power supplies, technical services, and replacement parts for the power generation markets. Alstom's portfolio includes complete systems, equipment upgrades, component rebuilds, replacement parts, construction, commissioning and technical services for SCR systems, wet and dry FGD systems, wet and dry ESPs, fabric filter systems and integrated solutions for mercury control. Alstom's track record spans over 100 years of delivering EXPERIENCE, INNOVATION, TECHNOLOGY, and LOGISTICS.

## A.V.C. Specialists, Inc.....75

5146G Commerce Ave.  
Moorpark, CA 93021  
Mike Jakstis, General Manager  
sales@avcspecialists.com  
Business: 805-531-8900 / www.avcspecialists.com



A.V.C. Specialists designs and manufactures voltage control and rapper control systems featuring Modbus communication links with plant DCS. A.V.C. also supplies replacement and upgrade components for all precipitators. In addition to providing inspection and maintenance service, A.V.C. solves difficult rapping problems for hoppers, bins and SCR screen systems.

## The Babcock & Wilcox Company.....6-7

20 S. Van Buren Avenue  
Barberton, OH 44203  
Amy C. Rossi, Sales Development  
acrossi@babcock.com  
Business: 330-860-1004  
www.babcock.com



B&W is an international leader in the design, manufacture, service and construction of steam generating and environmental equipment. We provide a full suite of options and technologies to meet MATS compliance including SCR systems, FGD systems, fabric filters, electrostatic precipitators, and mercury control and carbon capture solutions. B&W also provides environmental equipment upgrades, conversions, replacement parts, fabric filter cage manufacturing and emissions monitoring systems and service.

## BASF.....21

25 Middlesex/Essen Turnpike  
Iselin, NJ 08830  
Stan Mack, Business Mgr. Clean Air  
stan.mack@basf.com  
Business: 732-205-6174 / www.calalysts.basf.com



BASF combined its expertise in mineral processing and concrete admixture chemistry to develop the superior composition of Mercury Sorbent HX™ enabling a low carbon solution for mercury emissions compliance. Electric utilities that operate coal fired boilers continue to seek new, cost-effective solutions for controlling mercury emissions to meet regulatory requirements. At the same time, they aim to preserve the value of the fly ash that they sell to the concrete industry as an admixture. This solution helps them meet those goals. At BASF, we understand that our customers need to both comply with environmental standards and operate cost effectively. To successfully meet this challenge, BASF offers years of experience developing innovative solutions that deliver proven results. Thousands of our high performance, low maintenance, and environmental catalysts are in use around the world, helping leaders in power generation reduce pollutants. We are constantly developing new technologies to help our customers be more successful.

# 2013 APC Round Table Exhibitors

## Blome International.....53

1450 Hoff Industrial Drive  
O'Fallon, MO 63366  
Andy Bernard, Partner  
andy@blome.com  
Business: 636-379-9119  
www.blome.com



Blome International is a full service polymer lining and ceramic tile lining supplier. Blome International has a 30+ year proven history in the power market and is the only coating supplier with a full range of FGD products. Product offerings include flake glass lining systems, ceramics tile systems for FGD modules, high temperature acid resistant gunites and borosilicate lining systems for stacks and ducts.

## Breen Energy Solutions.....38

104 Broadway Street  
Carnegie, PA 15106  
Chetan Chothoni, COO  
CChothoni@BreenES.com  
Business: 412-431-4499  
www.BreenES.com



Breen Energy Solutions (BES) provides technologies and solutions to Optimize Dry Sorbent Injection Systems to minimize reagent use, plant BOP impacts and meet the strict condensable/filterable PM requirements for Utility-MACT. BES has an installed base of over 100 AbSensor-SO<sub>3</sub> monitors in the industry with a majority of those in closed loop control for SCR/SNCR performance, Heat Rate Improvement, Air heater protection, Blue Plume and Wet/Dry Sorbent injection controls. BES conducts Dry Sorbent Injection demonstrations that deliver a proven closed-loop optimized sorbent injection control system.

## BWF Envirotec USA.....78

1800 Worldwide Drive  
Hebron, KY 41048  
Jeff Bernstein, Sales Manager  
jeff.bernstein@bwf-envirotec.us  
Business: 859-905-1240  
www.bwf-envirotec.us



BWF Envirotec is the world's leading supplier of filter bags to the power generation market. As both a needle felt producer and bag fabricator, BWF Envirotec has the unique ability to match the gas stream characteristics with the properties of the needle felt ensuring maximum bag performance. In addition the standard services offered by BWF Envirotec and the Environmental Services team are: baghouse maintenance service, change-outs, retrofits, and mechanical inspections.

## Cabot Norit Activated Carbon.....15-16

3200 University Ave., P.O. Box 790  
Marshall, TX 75671  
Rob Nebergall,  
Global Bus. Mgr., Emissions Control Technology  
Rob.Nebergall@cabotcorp.com  
Business: 903-935-4774 / www.cabotcorp.com



Cabot Norit Activated Carbon is the largest producer of powdered activated carbon worldwide and leads the power generation industry in activated carbon technology for mercury removal. Cabot also offers complete equipment systems, services capabilities and technical support. See Cabot's newest product, DARCO® Hg-LH EXTRA - which offers a lower cost per pound of mercury removed at booth 15-16. While there, learn how Cabot can assist you with compliance testing and ACI equipment, including emissions testing, evaluating treatment options, and product testing at your plant.

## Carbonxt, Inc.....76

4110 SW 34th Street, Ste. 22  
Gainesville, FL 32608  
Caitlin Gross, Marketing Director  
cgross@clearcarboninnovations.com  
Business: 352-378-4950 / www.carbonxt.com.au



Carbonxt offers non-halogenated (no bromine, bromide, or chlorine additives) activat-

ed carbons specifically developed for the removal of mercury from flue gas. Carbonxt PAC offers increased MATS compliance flexibility at lower injection rates, resulting in overall cost savings. Our carbons can be tailored for specific boiler conditions and their effectiveness has been demonstrated with multiple fuel types and air pollution control devices. The staff of Clear Carbon Innovations (CCI), the R&D division of Carbonxt, is composed of industry-recognized individuals who specialize in flue gas and wastewater product development and process improvement. Carbonxt offers full ACI testing capabilities including two ACI skids, mercury monitoring, and an onsite field team of engineers.

## Carmeuse Lime & Stone.....36

11 Stanwix Street, 21st Floor  
Pittsburgh, PA 15222  
Tony Pallotta, Communication Mgr.  
tony.pallotta@carmeusena.com  
Business: 412-995-4963  
www.carmeusena.com



Carmeuse Lime & Stone is a leading company, specializing in manufacturing and supplying lime and limestone for diverse applications including the power generation industry for treating flue gas emissions and waste water treatment. Carmeuse products benefit the environment in a variety of ways including cleaner air, cleaner water, and the preservation of land resources. Staffed by up to 2,000 people, Carmeuse has 28 plants that supply and serve most of the USA and Eastern Canada.

## Castell Interlocks, Inc.....71

150 North Michigan Avenue  
Suite 800, Chicago, IL 60601  
ussales@castell.com  
Business: 312-360-1516  
www.castell.com



Castell has manufactured trapped key interlocking systems since 1922. Our "end coding" allows for faster, more accurate delivery of products. Available in stainless steel or brass, our interlocks have a proven track record in tough environments including precipitators and baghouses. By forcing a predetermined sequence of operation, a trapped key interlock system improves personal and machine safety.

## Cemtek Environmental.....44

3041 S. Orange Avenue  
Santa Ana, CA 92707  
Ken Greaves  
joanne@cemteks.com  
Business: 714-437-7100  
www.cemteks.com



Cemtek Environmental provides a single source for reliable, accurate, and cost effective Emissions Monitoring Systems for Compliance and Process Improvement. We specialize in CEMS and process instrumentation design, integration, field services and spare parts. Cemtek's experience includes all Source and Ambient sections of 40 CFR Part 50, 51, 60, 63 and 75 monitoring and reporting requirements as well as Particulate Monitoring (PM), Mercury and HCl CEMS. Process Monitoring includes the Model 8000 for inlet and outlet NO<sub>x</sub> and inlet scrubber SO<sub>2</sub>, the Model 7000 TDL for HCl and NH<sub>3</sub>, and SO<sub>3</sub> CEMS. Please contact us at 888-400-0200 for a quote on CEMS, Process Monitors, field service or spare parts.

## Certified Constructors' Services, Inc.....1

5330 Fairfield Drive  
Crestview, FL 32536  
Deborah Henderson, President  
ccsi2004@ccsipower.com  
Business: 850-682-8953  
www.ccsipower.com



CCSI (Certified Constructors' Services, Inc.) has made a reputation for completing major precipitator rebuilds and boiler outages on time without delaying plant schedules. The services provided include precipitator and boiler inspections, major rebuilds, new construction and plant maintenance. All services provided are carried out with SAFETY as our number 1 goal, using the highest quality supervision and craft persons.

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## CleanAir Engineering.....5

110 Technology Drive  
Pittsburgh, PA 15275  
Allen Kephart, President  
akephart@cleanair.com  
Business: 412-787-9130 / www.cleanair.com



CleanAir is a global leader providing testing, consulting and equipment solutions for air emissions compliance. Areas of expertise include testing for Hg/SO<sub>2</sub>/SO<sub>3</sub>/NO<sub>x</sub>/NH<sub>3</sub>/HCl and particulate, mercury and HAPs monitoring systems, APC equipment optimization, cooling tower drift emissions, fly ash resistivity analysis and particle sizing, stack sampling equipment and instrument rental.

## Clyde Bergemann Power Group.....9

74015 Presidential Pkwy  
Atlanta, GA 30340  
Bill Rafferty, Sr. VP Sales and Marketing  
info@us.cbpg.com  
Business: 770-557-3600 / www.cbpg.com



Clyde Bergemann Power Group is a globally active enterprise supplying systems and solutions for the energy services market. Clyde Bergemann is world market leading in several business fields and is mainly active in boiler efficiency; on-load boiler cleaning; material handling; air pollution control; air-gas handling; combustion optimization and emission control.

## CoorsTek.....8

600 9th Street  
Golden, CO 80401  
Laura Trebilcock, Product Sales Manager  
precipitators@coorstek.com  
Business: 303-277-4365 / www.coorstek.com



CoorsTek removes technological barriers for the power-generation industry by manufacturing advanced 85% alumina ceramic support insulators and ESP components. Now the largest technical ceramics manufacturer in the world, CoorsTek designs, manufactures, assembles, and delivers critical components for technology-leading OEMs worldwide. For engineering assistance or quick-turn service, please contact CoorsTek Customer Service at 303.277.4365

## Durag, Inc.....14

1355 Mendota Heights Road, #200  
Mendota Heights, MN 55120  
Timothy McCreary,  
tim@durag.com  
Business: 651-451-1710 / www.durag.com



For more than 60 years, Durag, Inc., has been providing solutions to power, cement, oil/gas, and other industrial clients for their combustion and environmental monitoring needs. Durag's unique solution mix solves challenges from the pyro-side to the exhaust stack whether for power generation, steam for process use, or heating for sensitive manufacturing processes. Durag continues to meet the new challenges of regulatory compliance issues with on-line/continuous mercury monitors, continuous PM monitors and flow/temperature monitors, products that are selectively applied to meet specific plant requirements. Best-in-class technology and quality. Our customers are our best sales channels!

## Dustex Corp - Systems Division.....10

100 Chastain Center Blvd. NW, Suite 195  
Kennesaw, Georgia 30144  
Business: 770-429-5575  
mail@dustex.com / www.dustex.com



Dustex Corporation designs and manufactures Circulating Dry Scrubbers (CDS), Dry Sorbent Injection (DSI) Systems for acid gas control, Activated Carbon Injection (ACI) systems for high efficiency mercury capture, and fabric filters. Established in 1947, and with over 18 patents in the Air Pollution Control (APC) Industry, Dustex offers unique technical advantages making us a front runner in the industry. Dustex provides MACT compliance support for our customers in addition to the equipment and design. We continue to provide the most efficient, innovative, & cost effective products on the APC market.

## ETS, Inc.....3

1401 Municipal Road, NW  
Roanoke, VA 24012, USA  
John McKenna PhD, Principal  
jmck@etsi-inc.com  
Business: 540-265-0004 ext 293  
www.etsi-inc.com



Founded 1973, ETS, Inc. a testing/training firm specializing in particulate emission control, recognized as the world's leading baghouse consultant, has an independent bag/fabric testing laboratory which conducts filtration performance testing that complies with methods ASTM D6830-02 and VDI 3926. The firm has a reputation for successfully troubleshooting APC equipment, providing specification assistance, executing fabric/bag quality assurance programs as well as bag life monitoring & optimization programs, providing expert testimony, and conducting its Baghouse Seminar plus Pollution Control Training Programs.

## Evonik Fibres GmbH.....27

11 Tammie Rd  
Hopedale, MA 01747  
Ken Spindola  
ken.spindola@evonik.com  
Business: 508-478-2414 / www.evonik.com



The main markets are Europe, N.Am, Middle East and Asia but also in Africa where the perspectives are good. Besides the production of P84 fibers, Evonik Fibres has added an additional fiber to its sales portfolio, Procon, a PPS fiber made by Toyobo in Japan. With this product range Evonik Fibres covers the upper end of the worldwide filtration market. P84 polyimide fibers is the main product being only produced in Austria. This fiber has several properties that are unmatched in the industry. First of all it is the irregular shaped cross section which provides almost double the surface area compared to conventional round or oval shaped fibers resulting in the best filtration efficiency of all fibers on the market. Besides excellent efficiency, high temperature resistance combined with a good chemical resistance over a wide pH range are additional features of P84 fibers. These fiber characteristics have made P84 a preferred filter media for all kinds of waste incineration, cement kilns and steel plants. PPS fibers made by Toyobo in Japan are sold under the trade name of Procon. Except in Japan and Korea, Evonik Fibres is the exclusive representative for Procon worldwide and has successfully introduced this highly chemical resistant fiber in the world's biggest coal fired power stations in South Africa and Australia.

## FLSmidth.....77

2040 Avenue C  
Bethlehem, PA 18017-2188  
info-us@flsmidth.com  
Business: 610-264-6011 / www.flsmidth.com



FLSmidth is a leading supplier of equipment and services to the global cement and minerals and power generation industries. We develop and supply Air Pollution Control systems with extensive knowledge on fabric filters, ESPs, conditioning towers, scrubber systems, heavy metal removal, and multi-pollution control systems. Furthermore, we provide systems for conveying flyash and reagents for desulfurization and mercury removal with the ability to perform full-scale pneumatic conveying, rail car loading, as well as pilot-scale demonstrations covering all product lines, on virtually any material.

## FMC Corporation.....23

1735 Market Street  
Philadelphia, PA 19103  
Bob Crynack  
Manager, Air Pollution Control  
Mobile: 412.551.0925 / www.environmental.fmc.com



FMC Environmental Solutions Division provides proprietary and specialty solutions that prevent or remediate contamination of air, soil and water. FMC offers the power and manufacturing industries solutions for SO<sub>x</sub> and NO<sub>x</sub> abatement. PerNOxideSM provides a simple, low-cost way to reduce NO<sub>x</sub> up to 70%. FMC's patented technology uses hydrogen peroxide to oxidize nitrogen oxide (NO) and elemental mercury (Hg<sup>0</sup>) in flue gas to forms that can be captured by existing flue-gas desulfurization (FGD) systems. PerNOxide allows industrial and utility boilers to achieve significant levels of NO<sub>x</sub> reduction without the large capital investment or ongoing maintenance costs associated with selective catalytic reduction (SCR).

# 2013 APC Round Table Exhibitors

## Foster Wheeler.....19-20

53 Frontage Road  
Hampton, NJ 08827  
Robert Giglio,  
Vice President, Strategic Planning and Marketing  
robert\_giglio@fwc.com  
Business: 908-713-2561 / www.fwc.com



Foster Wheeler offers a full range of steam generator equipment, aftermarket products and services to the power, industrial, and waste-to-energy sectors. Our global manufacturing and engineering network can deliver cutting-edge products and expertise, quickly and cost competitively with best-in-class quality. Established in 1891, our experience comes from over a century of designing, servicing, and continually improving steam generating equipment.

## Fox Equipment.....56

965 Bunker Avenue  
Green Cove Springs, FL 32043  
Greg Norton, Sales Manager  
GregN@FoxEquipment.com  
Business: 904-235-2939  
www.foxequipment.com



Fox Equipment designs, engineers and manufactures utility-grade dampers and expansion joints for the power-generation industry. We fabricate in our 70,000 sq.ft. facility in Green Cove Springs, FL and at 25,000 sq.ft. Paragon Metals in Cincinnati where our Ohio office is located. Our markets include coal fired power plants, Combined Cycle Natural Gas units, HRSG's, Oil & Gas Refineries, Steel, Concrete, Chemical and Process Industries.

## Fuel Tech, Inc.....70

27601 Bella Vista Parkway  
Warrenville, IL 60555  
Kevin Dougherty,  
VP Business Dev't & Marketing  
info@ftek.com  
Business: 630-845-4500  
www.ftek.com



Fuel Tech, Inc. provides multi-pollutant emission control and advanced combustion technologies. Technologies include: optimization services, low NOx burners and over fire air systems, chemical injection programs designed to improve boiler efficiency, and modeling services to provide solutions for power plant systems. Technologies include: NOxOUT® and HERT™ SNCR systems, ASCR™ Advanced SCR systems, ULTRA™ process used to generate on-site ammonia for SCR, sorbent injection systems to control SO<sub>2</sub>, flue gas conditioning systems, CFD and Physical (Experimental) Modeling, and TIFI® Targeted in Furnace Injection programs to reduce slagging, SO<sub>2</sub> and CO<sub>2</sub> emissions, while improving boiler performance.

## GE Air Filtration.....33

8800 E. 63rd St.  
Kansas City, MO 64133  
Timothy (Tim) Stark, Sales Director Industrial Filtration Am.  
Timothy.Stark@ge.com  
Business: 800-821-2222 / www.ge-energy.com/filtration



GE Energy's Air Filtration team serves energy industry producers with integrated and flexible emissions control technology and services for fabric filtration systems. From high efficiency filtration to Powerwave acoustic and impulse cleaning systems, GE evaluates your entire process and applies the right technology to help improve the performance of your dust collection systems.

## Greenbank-CBP.....81

185 Plumpton Ave.  
Washington, PA 15301  
Don Halulko, VP/Group Sales Director  
halulko@cbpengineering.com  
Business: 724-229-1180  
www.cbpengineering.com



The Greenbank Group companies include Greenbank Energy Solutions a leading sup-

plier of combustion optimization through coal and primary airflow balancing to the burners with high performance VARB© splitters, on-line & real-time coal mass flow and LOI measurement technologies, complimented by Loesche Coal Pulverizers and Dynamic Classifiers retrofits

## Hadek Protective Systems, Inc.....73

Foster Plaza 5, 651 Holiday Drive  
Pittsburgh, PA 15220  
Benjamin Beck, Vice President of Operation  
b.beck@hadek.com  
Business: 412-204-0028  
www.hadek.com



Hadek Protective Systems is the worldwide distributor of the Pennguard® Block Lining System and the global leader in corrosion protection for power plant chimneys and ductwork. We provide project feasibility studies, detailed engineering, full-time technical support during installation, single source warranty, insurance coverage for warranty and lifetime performance monitoring systems. Visit www.hadek.com

## Hendrick Manufacturing.....63

One Seventh Avenue  
Carbondale, PA 18407  
Darran Zimmermann  
National Sales Manager  
Darran.zimmermann@hendrickmfg.com  
Business: 570-947-9881 / www.hendrickmfg.com



Hendrick Manufacturing is a manufacturer of perforated and fabricated metal. We have been in business for over 130 years and have been servicing the power generation industry for quite some time. Our products include precipitator plates, tube sheets, acoustical panels for turbine enclosures, and other fabricated parts. We work with many OEM manufacturers, and our engineering staff would be happy to help you design the most cost effective solution for your upcoming project.

## Hitachi Power Systems America.....11-12

645 Martinsville Road  
Basking Ridge, NJ 07920  
Bob Nicolo  
robert.nicolo@hal.hitachi.com  
Business: 908-605-2848 / www.hitachipowersystems.us



Hitachi Power Systems America, Ltd. (HPSA), Ltd., headquartered in Basking Ridge, New Jersey, is a leading supplier of equipment and services for the Power Generation Market including Thermal, Nuclear and Hydroelectric facilities. Products include advanced Pulverized Coal Boilers and Pressure Parts, Heat Recovery Steam Generators, Steam, Gas, and Hydro Turbines and Generators, Substation Equipment, and Air Quality Control Systems for new plants and retrofit applications. HPSA is Hitachi's Global Center of Excellence for the emissions market including Wet Flue Gas Desulfurization, Enhanced All-Dry Scrubber, Fabric Filters, Mercury Removal Systems, SCR technology, Low NOx Burners and CO<sub>2</sub> mitigation technologies. Services include operation and plant assessments, engineering studies, environmental upgrades and coal to gas conversions. For more information, visit us at www.hitachipowersystems.us.

## Horn Industrial Services.....55

1800 Worldwide Blvd.  
Owensboro, KY 42303  
Brad Phelan  
Business Development  
brad.phelan@hornhis.com  
Business: 270-683-6564 / www.hornindustrialservices.com



Horn Industrial Services is the Parent company of Titan Contracting, Titan Fabricators, National Steel Erection, Inco Services, MIM and Milco Constructors. The Horn Companies are one of the leading full service contracting and fabricating companies in the Power Industry. Services include New Construction, Existing Plant Modifications and Repair and Maintenance. Specialties include Power and Process Piping, Balance of Plant Disciplines, Turbine and HRSG Installations, ASME boiler and tube repair, Tank Fabrication (Shop and Field Installations), Existing Plant Modifications/Upgrades, Environmental Equipment Installation/ Retrofits, and AQCS installations and Maintenance.

# 2013 APC Round Table Exhibitors

## Hotfoil-EHS Inc.....34-35

2960 East State Street Extension  
Hamilton, NJ 08619  
Neville W. Richards, President  
Neville@HotfoilEHS.com  
Business: 609-588-0900 / www.HOTFOILEHS.com



Design and manufacture of: Modular electric heaters for fly ash hoppers on FFs and ESP; Freeze protection of coal and material handling systems; Tank heaters; Pre-heating and stress relieving for application temperatures up to 2200°F; Also Hotfoil and Redkoh have also joined with APM Solutions for Hopper Level Measurement and GEECOM for Specialized Discharge Electrodes. Isolation transformers up to 210KVA; Specialty welding power supplies and Grid Systems; Distributors for Eurotherm controls; Digital and graphic recording equipment; Pipe tracing.

## KC Cottrell Inc.....59

2319 Timberloch Place, Suite E  
The Woodlands, TX 77380  
Heather Stephens, Business Dev. Mgr.  
hstephens@kccottrell.us / Business : 281-465-9498 / www.kccottrell.us



KC Cottrell Inc. (formerly Lodge Cottrell) is a full-service provider of OEM air pollution control systems, upgrades, process consulting, aftermarket parts and field service. We offer a wide portfolio of technologies to control particulates, SO<sub>2</sub>, NO<sub>x</sub>, acid gas, metals and other air toxics. Our emphasis is maintaining and improving the performance of existing air pollution control systems as well as retrofit of upgrades and new systems. We offer ESPs, fabric filters, scrubbers, SCR and sorbent injection. KC Cottrell offers engineering studies and consulting services including our fly ash resistivity lab and evaluation of existing equipment.

## Kiewit/TIC.....37

9401 Renner Blvd.  
Lenexa, KS 66219  
Michael Ross, President, Kiewit Power Eng.  
Michael.ross@kiewit.com  
Business: 913-928-7000 / www.kiewit.com



As a subsidiary of Kiewit Corporation, Kiewit Power offers our clients a fully integrated delivery model for engineering, procurement, construction and startup services for your power needs. With the acquisition of TIC – The Industrial Company (TIC) in 2008, Kiewit has advanced its cutting-edge capabilities to better serve the power industry.

## Kirk Key Interlock Co.....51-52

211 Wetmore Ave S.E.  
Massillon, OH 44646  
William Trautmann, Vice President of Sales & Marketing  
wtrautmann@kirkkey.com  
Business: 330-833-8223 / www.kirkkey.com



Kirk Key Interlock Company has proven to be the leading U.S. manufacturer of trapped key interlocks since 1932. The Heavy Duty (HD) and Medium Duty (MD) Series are the ideal choice for ESP and Baghouse applications. Both interlock series use a robust style key with a dowel pin design that makes Kirk Key the most reliable Interlocks available. Please contact us for a complete on-site review of your existing interlock system.

## KraftPowercon, Inc.....65

2810 Trinity Mills # 209 – 361  
Carrollton, TX 75006  
David Rogers  
david.rogers@kraftpowercon.com  
Business: 972-416-4952 / www.kraftpowercon.com



KraftPowercon is a technology pioneer and world leader in Precipitator Power Supplies. Founded in Sweden in 1935, we have over 15,000 installations powering ESPs across the globe. With 4 manufacturing plants, and 13 Sales & Service Centers, we are equipped to provide support worldwide. KraftPowercon makes Power Supplies with Single Phase / Three Phase Thyristor and SMPS technologies, and offers a variety of Accessories - Controllers, Control Cabinets, Grounding Switches and Energy Management Software

## Lechler Inc.....50

445 Kautz Road  
St. Charles, IL 60174-2926  
Robert Van Durme, P.E., Senior Account Mgr,  
environmental@lechlerusa.com  
Business: 800-777-2926 ext. 6812  
www.LechlerUSA.com



Lechler USA Inc. is a leading supplier of technical solutions in the application of spray nozzle injection systems, pump-valve skids and controls for SCR, SNCR, WetFGD, and semi-dry FGD (CFB and SDA) processes. We take pride in our innovative approach and unique nozzle designs that have helped OEM's and plants meet the most stringent emission levels required. Our experience enables us to provide you with the best solutions for your chemical/water injection requirements. Ask us about our innovative Twin-Absorb® Wet FGD nozzles and Spray Dry Evaporator (SDE) technology.

## Lhoist North America, Inc.....61

3700 Hulen Street  
Fort Worth, Texas 76107  
Howard B. Fitzgerald,  
New Business Development Manager, FGT Solutions  
howard.fitzgerald@lhoist.com  
Business: 817-732-8164  
www.lhoist.com



Lhoist North America (Lhoist NA) was formed with the merger of two premier calcium product companies: Chemical Lime Company with the production of high quality quicklime and hydrated lime and Franklin Industrial Minerals with its production of milled chemical grade limestone. Lhoist NA operates 15 lime production facilities across the US with 33 kilns, 34 distribution terminals, and 7 limestone processing facilities with annual production capacity of over 6 million tons of lime and 4.5 million tons of limestone. Lhoist Group (LNA's parent) is the worldwide leader in Calcium products - operating in 17 countries on 5 continents. Lhoist is known as the leader in acid gas control with its line of Sorbocal® Optimized Hydrated Lime products. Please contact Lhoist's FGT Solutions Group to discuss how Sorbocal® can benefit you.

## M&C TechGroup.....18

6019 Olivas Park Drive, Suite G  
Ventura, CA 93003  
Cliff Gordon, President and CEO  
cgordon@mac-products.com  
Business: 805-654-6970  
www.mc-techgroup.com



M&C TechGroup is the leading manufacturer of Paramagnetic Oxygen Sensors, Sample Conditioning Equipment, Particulate Monitor, Automated Control Panels for Dilution and/or Straight Extractive Systems for wet or dry source applications. We have the experience and the equipment to ensure you get a representative sample to your analyzer of choice as well as to make your system more reliable and trouble free. From Probe to Filter, we are your single solution for a monitoring system. We manufacture, Straight Extractive and Dilution Probes, Heated and Non-Heated Stingers, Gas and Liquid Coolers, Refrigerant and Peltier Chillers, Particulate Filters, Gas Conditioners, Standard and Automated Flow Drawers, Optical and Alarm Sensors, Electronic Controllers, Flow Meters, Valves, Gas Converters, PLC Control Panels, and Paramagnetic Oxygen Analyzers. Discuss your sampling problems with us and we will help you find the solution to a more dependable sampling system.

## Martin Engineering.....13

One Martin Place  
Neponset IL 61356  
Jeff Shelton, Global Business Development Manager  
jeffs@martin-eng.com  
Business: 800-544-2947  
www.martin-eng.com



For nearly 70 years, Martin Engineering has solved problems in the handling of particulates. Martin Solutions include sonic horns like the game-changing Martin MEGA Horn that sends more acoustic energy over longer distances, and a new, easy-opening High Temperature Door that swings totally out of the way for full access to enclosures with service temperatures to 1000° F. With Martin, problem solved!

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## MET.....28-29

200 North Seventh Street  
Lebanon, PA 17046  
Barry Stolzman, Sr. VP of Sales and Marketing  
bstolzman@met.net  
Business: 484-714-7364 / www.met.net



MET – Marsulex Environmental Technologies is a full service Air Quality Control company that offers technologies to meet the rigid emission requirements of the 21st century. MET is proud to include the acquisition of the Buell team, and their technology and industry experience. With this acquisition, MET's innovative solutions include original equipment and system upgrades in addition to engineering studies for Wet FGD, Dry FGD, SCR, SNCR, fabric filter, and electrostatic precipitator technologies.

## Mississippi Lime.....42-43

3870 S. Lindbergh Blvd. Suite 200  
St. Louis, MO 63127  
Eric Van Rens, Vice President, Sales and Marketing  
ecvanrens@mississippilime.com  
Business: 314.543.6365 / www.mississippilime.com



Mississippi Lime hydrated lime is a proven high performing sorbent for acid gas mitigation in Dry Sorbent Injection Systems or Circulating Dry Scrubbers. Our quicklime is a high purity, high conversion feedstock for Spray Dry Absorber scrubbing systems. The Reagent Technology Services division of Mississippi Lime will work with you to supply high purity milled limestone for Wet FGD applications. Our production facilities are located in Ste. Genevieve MO, Vicksburg MS, Verona KY, Weirton WV, Chester SC, and Mobile AL, with additional terminals located throughout North America. Please stop by our booth to hear how Mississippi Lime's technical support and supply chain capabilities can help you achieve cost-effective control of acid gas emissions.

## Nalco Air Protection Technologies (APT).....66

1601 W. Diehl Rd.  
Naperville, IL 60563  
Contact: David A. Johnson,  
General Marketing Manager  
Dajohnson2@nalco.com  
Office: 630-305-2419 / www.Nalco.com



Nalco APT has pioneered low capital cost solutions for mercury compliance in wet scrubbers (wFGD's) that demonstrate mercury re-emission. Many coal fired power plants experience the phenomenon of mercury re-emission. It is the chemical process within a wFGD where oxidized mercury is reverted back to elemental mercury. Elemental mercury, which is not soluble in water, is then not captured by the wFGD and escapes out the stack making the plant non-compliant. Nalco's approach is a non-carbon, low cost, non-capital intensive solution using Nalco's patented MerControl 8034 Plus for re-emission in wFGD's. In addition to Nalco's patented MerControl 7895 oxidant, both products are liquid injection, require minimal material handling and have extremely low toxicity. Nalco has performed over 60 customer trials to date with these solutions and both MerControl products are in use today keeping coal fired power plants in compliance without the addition of major capital equipment.

## National Filter Media.....2

8895 Deerfield Drive  
Olive Branch, MS 38654  
Keith Ogilvie, Director  
kogilvie@nfm-filter.com  
Business: 540-336-7407  
www.nfm-filter.com



Established in 1906, National Filter Media has been serving industry with quality products and relationships. NFM is a leader in dry filtration products for fabric filter baghouses (filter bags, cages, accessories and services). NFM has products for all types of baghouses; reverse-air, shake-deflate, and high/medium/low pressure pulse jet units. NFM is the North American distributor of Autel® pulse and solenoid valves, full immersion header tanks, piston-style low pressure pulse valves, as well as sequencing timers along with system cleaning software. Autel® are designed to be UL™, CE™ and ASME™ certified to meet project needs. NFM also has diverse line of wet filtration products for WFGD applications. Horizontal belts, vacuum filters, dewatering filters and press leafs are our specialties. Regionally located throughout North America, NFM can serve our partners from ten (10) facilities with just-in-time and economical deliveries.

## Nol-Tec Systems, Inc.....58

425 Apollo Drive  
Lino Lakes, MN 55014  
Jerry C. VanDerWerff, National Sales Mgr.  
JerryVanDerWerff@nol-tec.com  
Business: 651-780-8600 / www.nol-tec.com



Sorb-N-Ject Technology®, offered by Nol-Tec Systems, dry bulk sorbent injection systems to mitigate acid gases, Hg, and dioxins/furans emissions effectively and efficiently. We are a global, single-source supplier of custom engineered bulk material handling, pneumatic conveying and integrated control systems – including limestone and fly ash handling systems. Nol-Tec is dedicated to providing the best value in the form of high quality products and unparalleled customer service.

## Novinda Corporation.....64

999 18th St., Suite 1755 North Tower  
Denver, CO 80202  
Molly Hennessee, Office/Accounting Manager  
m.hennessee@novinda.com  
Business: 720-473-8340 / www.novinda.com



Novinda Corp. is a leading provider of non-carbon mercury capture solutions for coal-fired power plants. Novinda's products—Amended Silicates® and second-generation Amended Silicates® HgX—have proven to deliver economical, consistent and robust performance across a variety of power-plant configurations and operating conditions. In sustained, long-term, full-scale testing, Amended Silicates® HgX delivered up to 60 percent greater performance in meeting EPA Mercury & Air Toxics Standards (MATS) than Novinda's first generation product. The Amended Silicates® platform preserves the beneficial use of fly ash, has exceptional SO<sub>2</sub> tolerance, is less corrosive to the balance of plant, and operates in a broad range of operating temperatures. Amended Silicates® was named Product of the Year by Environmental Protection Magazine in the Air Quality and Climate category. www.novinda.com

## NWL.....72

312 Rising Sun Road,  
Bordentown, NJ 08505  
Joseph Manna, National Sales Manager  
jmanna@nwl.com / Business: 941-629-0436 / www.nwl.com



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## Paragon Airheater.....62

23143 Temescal Canyon Road, Ste B  
Corona, CA 92883  
Rich Wolff / rwofff@paragonairheater.com  
Business: 951-277-8035  
www.paragonairheater.com



Paragon Airheater specializes in the service and manufacturing of high-performance seals and replacement parts for rotary, regenerative air heaters. Whether you need to reduce leakage, combat ABS formation, replace baskets or improve overall efficiency, Paragon has the products and solutions. High performance seals, innovative technology, superior field service, inspections and exceptional engineering combined with world class customer service make Paragon the choice for your air heater needs.

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## Pollution Control Services, Inc.....67

4040 Ashland Avenue  
Pensacola, FL 32534  
Greg Carleton/ Paul Leanza  
greg@pcsesp.com; paul@pcsesp.com  
Business: 850-466-3788 / www.pcsesp.com



PCS provides all levels of post combustion control engineering, consulting, and on-site inspection services for coal and renewable fired electric generators. PCS brings extensive experienced staff, with more than 120 years of combined design, build and up-grade practical experience with SCRs, wet and dry ESPs, Baghouses, Dry Injection systems & Wet Scrubbers to solve the need to bring further heat rate improvement. PCS, in response to older cold-fired plants' requirements to achieve reduction in their carbon emissions, has a well established cold flow modeling lab which can lower the carbon-fired plant's overall aux power load through scale modeling of the entire gas path from boiler exit through the stack.

## RE Consulting.....79-80

3850 Bordeaux Drive  
Northbrook, IL 60062  
Gary D. Reinhold, President  
gary.reinhold@reconsulting.info  
Business: 847-562-8556 / www.reconsulting.info



RE Consulting is a division of Reinhold Environmental Ltd., a corporation which continues to provide numerous O&M services to the coal-burning utility industry since 1993. Using its team of industry experts, RE Consulting's current focus is to provide engineering studies, on-site training, and O&M based troubleshooting and consulting. In addition, RE Consulting provides training via its state-of-the-art, on-line training manuals.

## Redkoh Industries.....39

300 Valley Road  
Hillsborough, NJ 08844  
Paul Ford, President  
paul.ford@redkoh.com  
Business: 908-369-1590 / www.redkoh.com



Redkoh is a leading supplier of Control Systems for Precipitators. We provide conventional controls as well as a patented Switch Mode Power Supply. Our patented system allows both Redkoh's ESP controls as well as existing ESP controls to operate at elevated frequencies without replacing the existing TR Sets. Together with Stein Industries Redkoh provides TR sets, CLR's and controls. Redkoh and Hotfoil have also joined with APM Solutions for Hopper Level Measurement and GEECOM for Specialized Discharge Electrodes. Along with tribo-electric broken bag detectors and Hotfoil's Hopper heaters, Redkoh now enhances back end collection systems for both ESP and Fabric Filters..... Search "Redkoh" for our troubleshooting "App" for iPhone, Blackberry, and Android phones

## Sealeze.....83

8000 Whitepine Road  
Richmond, VA 23237  
Mary Harvey, Trade Show Coordinator  
mharvey@sealeze.com  
Business: 804-275-1675 x 204  
www.sealeze.com



XtraSeal HT™ is a patent-pending, high-temperature brush technology sealing system that is engineered for aggressive, repetitive or continuous motion environments where traditional seals have limited life and effectiveness. XtraSeal HT improves sealing in Air Preheaters providing a measurable reduction in fuel consumption, fan power usage and CO<sub>2</sub> emissions. Sealeze's XtraSeal HT seals provide excellent solution to air-in leakage problems of Auxiliary Steam Turbines.

## Siemens Environmental Systems & Services.....57

501 Grant Street, 4th Floor  
Pittsburgh, PA 15219-4429  
Mike Cornell,  
SESS Marketing Manager-NA  
environmental.pg@siemens.com  
Business: 412-562-7300 / www.siemens.com/energy



Siemens is a world leader in the design and supply of air pollution control systems and services for industrial and utility power generation facilities. Technologies include wet or dry FGD systems, fabric filters, wet or dry electrostatic precipitators, and mercury control technology. Aftermarket Services offers technical support, training, rebuild/ up-grade services and replacement parts.

## The SOLVAir® Solutions.....32

3333 Richmond Avenue  
Houston, TX 77098  
Mike Wood, Business Mgr, SOLVAir Products  
mike.wood@solvay.com  
Business: 713-525-6829 / www.solvair.us



SOLVAir Solutions, the market leader in providing sodium sorbents for Dry Sorbent Injection, has years of practical experience helping customers address their air pollution control concerns, ranging from cost-effective product implementation to regulations compliance. Supported by an international SOLVAir Solutions team, we continue to focus exclusively on North America, addressing the problems of SO<sub>x</sub>, HCl, and other stack emissions from power plants, metal refineries, and municipal waste incinerators, to name just a few. Go to www.solvair.us for a broader look at our products, services, and history.

## Southern Environmental, Inc.....46-47

6690 West Nine Mile Road  
Pensacola, FL 32526  
Michael R. Johnson,  
Director – Sales and Marketing  
apcsales@sei-group.com  
Business: 850-944-4475  
www.southernenvironmental.com



- Particulate Control Experts
- Electrostatic Precipitators
- Fabric Filters
- Specializing in Retrofit Systems and Solutions
- Tight schedules and difficult emission targets are our focus.

## Southern Research Institute.....45

Power Systems and Environmental Research  
P. O. Box 55305  
Birmingham, AL 35255-5305  
Ken Cushing,  
Manager, Environmental Services Group  
cushing@southernresearch.org  
Business: 205-581-2381 / www.southernresearch.org



Southern Research Institute's Power Systems and Environmental Research Department provides air pollution control research, testing and laboratory services for utility, industry, and government clients. Our areas of expertise include vapor-phase mercury monitoring, carbon trap mercury measurements, SCR catalyst activity testing, coal combustion research, flue gas analysis for SO<sub>2</sub>, Hg, HCl, FTIR gas analysis, ash resistivity testing, chemical analysis of coals and fly ashes, analysis of FGD scrubber liquids and slurries, and water treatment technologies. We operate the new Water Research Center that will be evaluating technologies to enhance water reuse and reduce consumption at EGUs in the following areas – cooling water, moisture recovery, zero liquid discharge, wastewater treatment, and solids disposal. Our new Bench-Scale SCR Catalyst Test Facility is operational and accepting commercial clients.

## Spectrum Systems, Inc.....68

3410 West Nine Mile Road  
Pensacola, FL 32526  
Richard Blanchard, Sales Manager  
ssi.cems@gmail.com  
Business: 850-944-3392  
www.spectrumsystems.com



Manufacturer of Continuous Emission Monitoring Systems, Continuous Opacity Monitoring Systems, Data Acquisition and Reporting Systems which comply with Federal, State, and Local regulations, as well as Process Monitoring Systems for SCR, FGD, and Boiler Control. Also provides preventive and emergency service, troubleshooting, training, consulting, repairs, spare parts, and Certification and Compliance testing.

# 2013 APC Round Table Exhibitors

## STEAG Energy Services LLC.....26

PO Box 1727 / 304 Linwood Road Suite 102  
Kings Mountain, NC 28086 USA  
Dorothee Seidel, Marketing Manager  
dorothee.seidel@steag.us  
Business: 704-734-0688  
www.steag.us



STEAG Energy Services provides a full scope of environmental engineering and consulting service to the North American energy industry including STEAG's patented mercury capture / sequester system and SCR and FGD Training / O&M services, SCR and SNCR system design and review, SCR catalyst management services including catalyst data interpretation, catalyst exchange strategies, catalyst cleaning, rejuvenation and regeneration, STEAG's patented/ pleated large particle ash screens, AIG tuning, combustion optimization services, complete in-house SCR catalyst bench scale testing and XRF testing services, and complete SCR on-site installation / removal services.

## Stein Industries Inc.....40-41

19 Artisans Crescent  
London, Ontario, Canada N5V5E9  
Bill Cooke, Contract Administrator  
info@steinindustriesinc.com  
Business: 519-659-3659 / www.steinindustriesinc.com



Designs and manufactures electrical apparatus for use with electrostatic precipitators, including transformer-rectifier sets (T/R's), current limiting reactors (CLR's) and control cabinets. And now including our 400 Hz mid-frequency integrated power supplies (MIPS). Providing field service as well as factory repairs and complete rebuilds of all T/R's, gives our customers a very unique advantage for their T/R fleet. Renewal parts are available 24 hours a day.

## Stock Equipment.....48-49

16490 Chillicothe Rd.  
Chagrin Falls, OH 44023  
Mike Volker, Regional Sales Manager  
stock.sales@stockequipment.com  
Business: 440-543-6000 / www.stockequipment.com



Stock Equipment Company, part of the Schenck Process Group, is a trusted leader in power generation solutions having served the global industry for over 80 years. Stock's Environmental Controls products can provide MATS compliance solutions to enhance precipitator efficiency with our ModuPower High Frequency SMPS, Fory AVC XM, Rapper Controls, and Conventional TR sets. Stock offers additional key product groups including Gravimetric & Volumetric Feeders, Valves, Bulk Material Handling Systems, Air Filtration, and Pneumatic Conveying Systems for fuel, sorbents, additives, and ash.

## United Conveyor Corporation.....17

2100 Norman Drive W  
Waukegan, IL 60085  
Jon Norman  
jonnorman@unitedconveyor.com  
Business: 847-473-5900 / www.unitedconveyor.com



United Conveyor Corporation (UCC) is a global leader in ash handling solutions for the power generation industry and preferred supplier for dry sorbent injection (DSI) and lime handling expertise. UCC is the industry leader in performance-based turnkey solutions for DSI. This includes predictive modeling, testing, demonstration, pneumatic system design, manufacture, installation and on-going service.

## Universal Blastco.....4

318 Neeley Street  
Sumter, SC 29150  
William Lenz, VP Business Dev.  
blenz@isginc.us  
Business: 803-804-9752 / www.isginc.us



Universal Blastco, with the industry's broadest experience in corrosion control, offers turnkey design and construction of ceramic tile-lined, reinforced concrete FGD absorbers and tanks delivering high performance corrosion and abrasion resistant protective lining and coating systems specializing in the demanding environments of coal fired power plants. Unimech offers turnkey maintenance and capital construction project

services. Unimech's mechanical services, including pipe fitting and fabrication as well as electrical, civil and millwright services has a long and storied resume of high performance project execution in the toughest of turnaround environments. Cera-Corr™ Systems represent the latest design, construction and materials science technology in:

- Tile lined reinforced concrete and steel FGD Absorbers and Tanks
- Retrofit Tile Linings for Alloy Absorbers
- Over 1000 tile lined concrete vessels in service
- Over 200 coal fired power plant corrosion control solutions

## URS Corporation.....22

P.O. Box 201088  
Austin, TX 78720-1088  
Gordon Maller, Manager of Air Pollution Control  
gordon\_maller@urscorp.com  
Business: 512-419-5045 / www.urscorp.com



URS is a full-service engineering company and technology provider for air pollution control, water and wastewater management and zero liquid discharge. For nearly 30 years, URS, operating as Radian Corporation, has been recognized as a world leader in air pollution and FGD control technology. Today, we are applying our expertise and know-how to develop sound technical solutions for the power industry to upgrade existing FGD systems, control mercury emissions, manage and control pollutant levels in water and wastewater, and control other pollutants such as SO<sub>3</sub> and particulate.

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*Kirk Key Interlock.....Booth 51&52*  
*Mississippi Lime.....Booth 42&43*  
*Novinda.....Booth 64*  
*Paragon Airheater.....Booth 62*  
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Hitachi Air Quality Control Systems will significantly reduce emissions to comply with the recent MATS regulations and minimize capital investment and operating costs while increasing reliability and turndown.

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\*\* Jointly developed with Solios Environment, Inc.

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power.info@hal.hitachi.com Tel: 908-605-2800  
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