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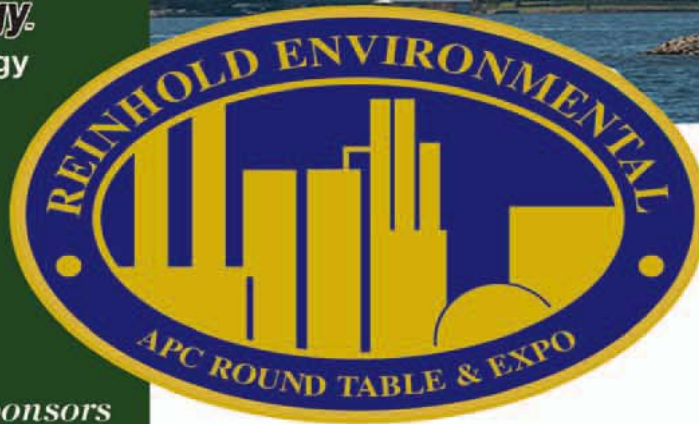


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July 18-20, 2010
Marshall Plant

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ALSTOM POWER



SOUTHERN ENVIRONMENTAL



POLLUTION CONTROL
USERS GROUP

17th Annual
APC
Round Table
& Expo

*ESP, Fabric Filters, Scrubbers, SO₃ Mitigation,
Mercury Control and Biomass*

Show Guide

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APC Round Table & Expo



The 17th Annual APC/PCUG Conference is presented by
 Reinhold Environmental
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 Specialist



2010 APC Round Table Agenda

APC Round Table Conference Event / Charlotte's Motor Speedway - July 18, 2010

July 19, 2010 - Monday - APC Round Table

Registration / Expo opens at 8:30

Technical Training Classes 8:00-11:30

8:00 - 9:30	Training Class 1 (Kannapolis A Ballroom) Fabric Filter Fundamentals by Rich Miller, ADA-ES	Training Class 2 (Concord G-H Ballroom) Basic ESP Fundamentals by Gerry Klenn, Southern Company	Training Class 3 (Carolina Ballroom) Biomass 100% and Co-Firing Basics by Kevin Davis, REI	Training Class 4 (Kannapolis B Ballroom) Wet Scrubber Fundamentals by Mike Walsh and Mike Hammer, MET
9:30 - 10:00	FF O&M Training - Start-up practices, troubleshooting, bad bag detection by Paul Foster, Alstom	ESP Advanced Fundamentals by Russ Ridgeway, Shel-B-E-E, Consulting	Biomass 100% and Co-Firing Actual Experience by Orest Walchuk, Nalco Mobtec	Wet Scrubber Lessons Learned Discussion moderated by Steve Wolskiffer, RE Consulting / Gordon Maller, URS; Tony Licata, BP; Bob Nicolo, Hitachi

Break in Exhibition Hall

Lunch in Exhibition Hall

General Session (Concord I-J Ballroom)
Presentation of Round Table Lifetime Award by Susan Reinhold.....Safety Note by Hotel..... Keynote Speech: Cliffside 6- A Modern Coal Unit by Harry Lancaster, Project Director Cliffside 6, Duke Energy

Break in Exhibition Hall

Workshop 1 (Kannapolis A Ballroom)
What are the Sulfur Limits for a Fabric Filter?"
by Bob Taylor, GE Energy

Workshop 2 (Concord G-H Ballroom)
Combustion and SCR Effects on ESPs & FFs by Bob Crynack, Crynack Consulting

Workshop 3 (Concord I-J Ballroom)
Managing Coal Combustion Products - Review of recent projects and proposed regs. by Mark Roboff, URS

Workshop 4 (Carolina Ballroom)
CO₂ Experience
by Sean Black, Doosan

Workshop 5 (Kannapolis B Ballroom)
Dual Loop Scrubber Improvement at Muscatine P&W - using nozzle technology
by Robert Van Durne, Lechler

Workshop 6 (Kannapolis A Ballroom)
How to Get the Most Out of your Filter Media
by John Darrow, W.L. Gore

Workshop 7 (Concord G-H Ballroom)
ESPs and Mercury Removal?
by Mick Chambers, SEI

Workshop 8 (Concord I-J Ballroom)
Airheater Pluggage - How do we stop it?
John Guffre, Paragon Athleteer

Workshop 9 (Carolina Ballroom)
Recent SO₂ Mitigation Experience
by Mark Thomas, Duke Energy

Workshop 10 (Kannapolis B Ballroom)
Considerations When Welding FGD Alloys
by Ron Richard, RE Consulting

Workshop 11 (Concord I Ballroom)
Converting an ESP to a Fabric Filter
by Tom Lugar, Buel Division of F-K

Workshop 12 (Concord G-H Ballroom)
ESP Operating with High Sulfur Coals - What is the max sulfur content we can tolerate?
by Ron Tricori, RE Consulting

Workshop 13 (Concord J Ballroom)
Converting from a Wet Ash to Dry Ash System - Boiler ash and flyash
by Gary Mooney, Clyde Berg, Delta/Ducon

Workshop 14 (Carolina Ballroom)
FGD Waste Water Treatment Options
by Brian Heimbigner, Siemens

Workshop 15 (Kannapolis Ballroom)
Improving Existing Scrubber Performance
by Mike Hammer, MET

Workshop 16 (Concord I Ballroom)
FF Baglife Assessment
by John McKenna, ETS

Workshop 17 (Concord G-H Ballroom)
Boiler Combustion/Boiler Tuning to improve Emission Controls
by Tom Weir, Duke

Workshop 18 (Concord J Ballroom)
Mercury ACI Systems
by Kevin Fisher, Apogee Scientific

Workshop 19 (Carolina Ballroom)
Dry FGD Basics Operations and Maintenance
by Travis Reynolds, Alstom

Workshop 20 (Kannapolis Ballroom)
Corrosion/Erosion of FGD Components
by Gordon Maller, URS

Workshop 21 (Concord I Ballroom)
Why is Gas Flow Important in FF Design?
by Stephen Bowen, Nels Consulting

Workshop 22 (Concord G-H Ballroom)
Mid-Frequency TUR Technology
by Roland Metz and Dr. Michael Steingraber, Siemens

Workshop 23 (Concord J Ballroom)
Metals Beyond Mercury: Measurement and Control of Other Haps
by Connie Senior, REI

Workshop 24 (Carolina Ballroom)
Effects of Biomass on Particulate Equipment O&M
by Tom Lugar, Buel Division of F-K

Workshop 25 (Kannapolis Ballroom)
Hydrated Lime Handling from a Lime Supplier's Perspective
by Curt Biehn, Mississippi Lime

Workshop 26 (Concord I Ballroom)
How Condition Monitoring Can Reduce FF Operating Costs
by Rod Hansen, RE Consulting

Workshop 27 (Concord G-H Ballroom)
TR Set Life Extension
by Mary Watson, CE Power Solutions

Workshop 28 (Concord J Ballroom)
Concrete Friendly Mercury Sorbents
by Daryl Lipscomb, Albenarle

Workshop 29 (Carolina Ballroom)
What is Needed to Change from Coal to Biomass?
by Kevin Toupin, Riley Power

Workshop 30 (Kannapolis Ballroom)
Low Cost FGD Technology Designed for Small (<250MW) Utility Boilers
by Jonas Klingspor, URS

Workshop 31 (Concord I Ballroom)
COHPAC/TOXECON/ESP/FF Combination
by Ken Cushing, SRI

Workshop 32 (Concord G-H Ballroom)
ESP TUR Diagnostic Evaluation Program
by Karl Jakob, Weidmann Diagnostic

Workshop 33 (Concord J Ballroom)
Higher Mercury Capture Efficiency Through Control of Hg Speciation
by John Meier, Nalco/Mobtec

Workshop 34 (Carolina Ballroom)
Biomass Handling
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Workshop 35 (Kannapolis Ballroom)
CDS Scrubber Technology
by Tony Licata, Babcock Power

Workshop 36 (Concord G-H Ballroom)
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Panel II (Concord G-H Ballroom)

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Panel II (Concord G-H Ballroom)

Break in Exhibition Hall

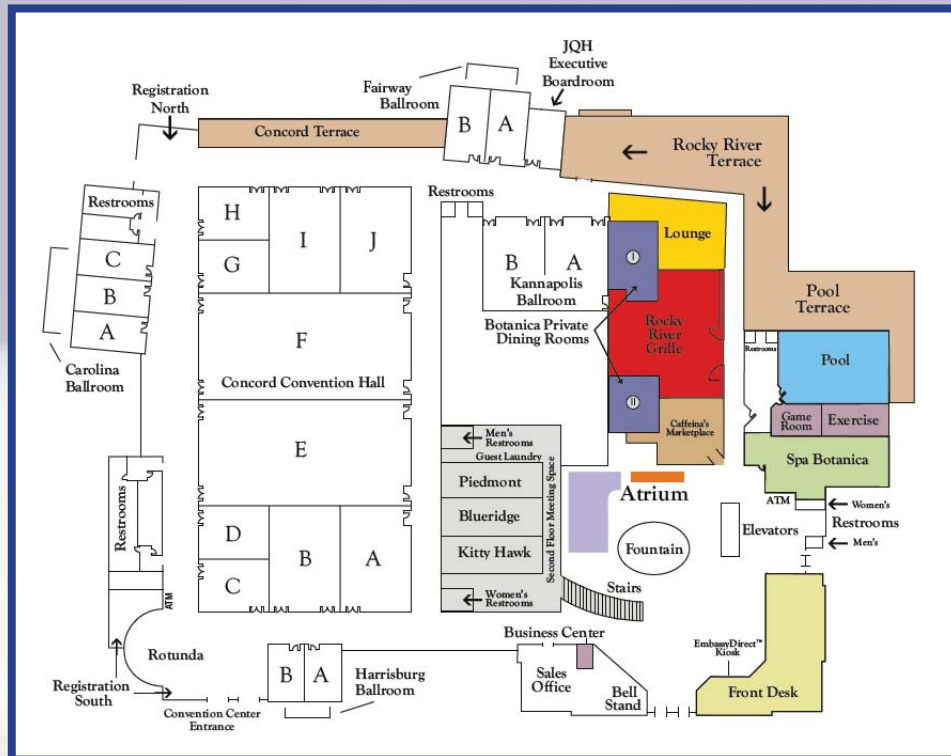
Break in Exhibition Hall

Workshop 29 (Concord J Ballroom)
Treasure Hunt Winners

Workshop 30 (Kannapolis Ballroom)
Concrete Friendly Mercury Sorbents
by Daryl Lipscomb, Albenarle

Workshop 31 (Concord I Ballroom)
COHPAC/TO

Hotel Floor Plan



Workshops and Panels

Monday, July 19, 2010
8:00 to 9:30 am

Training Class 1 (A): “Fabric Filter Fundamentals” by *Richard L. Miller, ADA-ES* (Kannapolis A Ballroom)

- Basic introduction on fabric filter technology including reverse gas and pulse jet technologies.
- Emphasis on the current trend to utilize pulse jet design and the various forms of pulse jet technologies including:
 - Stand alone pulse jets
 - ESP to Fabric Filter conversions
 - TOXECON/COHPAC designs
- Precautions needed while using TOXECON type pulse jets and potential impact of using activated carbon for mercury control and higher sensitivity to self heating of the carbon.
- Potential changes needed with upcoming boiler MACT rules for tighter emission limits.

Training Class 2 (A): “Basic ESP Fundamentals” by *Gerry Klemm, Southern Company* (Concord G-H Ballroom)

This training class will be just an introduction. It will cover electrostatic precipitator general design and the aspects of the American and the European configurations. It will also cover a description of the major components and their functions.

Training Class 3 (A): “Biomass 100% and Co-Firing Basics” by *Kevin Davis, REI* (Carolina Ballroom)

Experimental, theoretical and computational descriptions of biomass combustion have been under development for many years. However, the descriptions necessary for use in modern practical analyses create inherent challenges and are typically not as well developed as those used for coal combustion. Key fundamental issues that have been addressed and their application to modern engineering analyses for direct- and co- firing scenarios will be discussed

Training Class 4 (A): “Wet Scrubber Fundamentals” by *Mike Walsh & Mike Hammer, MET* (Kannapolis B Ballroom)

This training class provides an overview of the WFGD process, types of systems, basic chemistry, materials of construction, major components, and operational considerations.

Workshops and Panels

Monday, July 19, 2010

10:00 to 11:30 am

Training Class 1 (B): “FF O&M Training – Start-up Practices, Troubleshooting, Bad Bag Detection” by Paul Foster, Alstom (Kannapolis A Ballroom) This training class will be detailing the following topics during the presentation:

- Proper and improper routine maintenance activities; The effects of improper pulse pressures and pulse pressure recovery
- Troubleshooting fabric filter operational issues - Tell-Tail signs for bag issues
- Pre-coating procedures, methods for pre-coating to minimize fallout and recommended pre-coat materials
- Instrument air supply and moisture related problems; Compartment cover sealing
- Hopper vibrators operation; Commissioning techniques

Training Class 2 (B): “ESP Advanced Fundamentals” by Russ Ridgeway, Shel-B Consulting (Concord G-H Ballroom)

“Basic ESP Fundamentals” told you how your ESP is designed and should work. ESP Advanced Fundamentals will show you how to diagnose your ESP and how external factor can influence its operation.

Training Class 3 (B): “Biomass 100% and Co-Firing Actual Experience” by Orest Walchuk, Nalco Mobetec (Carolina Ballroom)

This training class will present feedback from operations experience at several installations in Europe that have converted from firing coal to either cofiring or firing 100% biomass. A number of these facilities have many years of operating experience, and their experiences and lessons learned may benefit others who are considering similar repowering activities. The focus of this session will be on what the relevant characteristics are that differentiate coal from biomass, and how these differences may affect operation of existing APC equipment originally designed for coal firing, and what issues must be addressed when switching to significant amounts of biomass-based fuels.

Training Class 4 (B): “Wet Scrubber Lessons Learned Discussion” moderated by Steve Wolsiffer, RE Consulting / Discussion participants: Gordon Maller, URS, Tony Licata, Babcock Power, Bob Nicolo, Hitachi (Kannapolis B Ballroom)

This training class is a discussion format targeting improvements to FGD materials, maintenance features, instrumentation, process control and critical issues relative to FGD system reliability. A panel of vendor and utility operations/maintenance personnel will be available to offer design features and operational issues that have improved recent FGD installations. Audience participation and questions are encouraged.

Training Class 5 (B): “Proposed Boiler MACT, Boiler GACT, CISWI Regulations and Concerns” by Robert W. Tisone, Kuttner NA/Luehr (Concord I-J Ballroom)

Training will air pollution requirements proposed by the new MACT, Boiler GACT and CISWI regulations. How to achieve these values with APC equipment and concerns of how these regulations will change startup and monitoring procedures. Analyze of what is or is not achievable with today’s technology and European experience in meeting these similar conditions.

LUNCH (11:30 to 1:00)

1:00 to 2:30 pm

Welcome: “Presentation of Round Table Lifetime Awards” by Susan Reinhold, Reinhold Environmental (Concord I-J Ballroom) The Round Table Awards will be given to Michael Nelson, Southern Company and Jean Bustard, ADA-ES.

Keynote Speech: “Cliffside 6 – A Modern Coal Unit” by Harry Lancaster, Project Director Cliffside 6, Duke Energy (Concord I-J Ballroom)

The Keynote Address will discuss the emission limits and pollution control equipment installed at the new Duke Energy coal unit at Cliffside Unit 6.

3:00 to 4:00 pm

Workshop 1: “What Are the Sulfur Limits For A Fabric Filter” by Bob Taylor, GE Energy Environmental Services (Kannapolis A Ballroom)

This workshop will be a discussion of the impact of fuel sulfur content on fabric filter operation including; potential casing corrosion, filter media impacts, and bag cleaning effectiveness.

Workshops and Panels

Monday, July 19, 2010
3:00 to 4:00 pm (continued)

Workshop 2: “Combustion and SCR Effects on ESPs and FFs” by *Bob Crynack, Crynack Consulting* (Concord G-H Ballroom)

The primary focus of this workshop is the impact of coal type and its combustion on the operation and performance of the down stream particulate control equipment. The impact of SCR's and their byproducts on particulate control equipment is also discussed in this workshop.

Workshop 3: “Managing Coal Combustion Products – Review of Recent Projects and Proposed Regulations” by *Mark D. Rokoff, URS* (Concord I-J Ballroom)

Although this is not the first time CCP materials have caught the attention of the U.S. EPA, it is certainly the most likely to lead to a dramatic change to the industry. This presentation will focus initially on the events prior to the recent issuance of the draft proposed rules on May 4, 2010 summarizing the significant actions by government, organizations, and the U.S. EPA throughout the years. The direction will then shift to explain and summarize the outcome of the draft proposed rules and their likely implications (i.e. the effects of a hazardous designation, etc.). Before closing, the presentation will suggest actions to be taken by utilities and discuss what can be expected in the near and long term futures for CCP management as well as address some related projects successes. However, simply stated, business as usual will no longer be business as usual!

Workshop 4: “CO₂ Experience” by *Sean Black, Doosan* (Carolina Ballroom)

This workshop will provide a review of the three predominant technologies being developed to capture CO₂: pre-combustion, oxy-combustion, and post-combustion. Particular focus will be given towards oxy and post-combustion, as these technologies can be retrofitted to the existing fleet of coal-fired power plants. This workshop will also summarize a program to develop oxy and post-combustion technologies for power generation.

Workshop 5: “Dual Loop Scrubber Improvement at Muscatine Power & Water Using Nozzle Technology” by *Rob Van Durme, Lechler* (Kannapolis B Ballroom)

This workshop will go over the retrofit of Muscatine Power & Water's Unit 9 Research-Cottrell scrubber. We will discuss the goals the plant wanted to achieve, what was performed to achieve them, and the results of the changes. In addition, the workshop will go over the different types of nozzle technology that are being used in today's scrubbers, their designs and features, and give an overview of some recent installations.

4:30 to 5:30 pm

Workshop 6: “How to Get the Most Out of your Filter Media” by *John Darrow, W.L. Gore & Associates, Inc.* (Kannapolis A Ballroom)

Pending changes in emissions regulations and fuel switching are creating more demanding conditions for fabric filter systems. Upgrading to a high performance filter media can be a significant investment. To get a good return this investment requires (1) system evaluation, (2) system optimization and (3) preventive maintenance practices. Cases from utilities and independent power producers are used to illustrate these points.

Workshop 7: “ESP's And Mercury Removal?” by *Mick Chambers, SEI* (Concord G-H Ballroom)

This workshop will present data that suggests that ESP's may be a cost-effective alternate to baghouses for particulate and mercury removal in utility power plants. Improvements plus new sorbent technologies may yield lower cost for mercury compliance

Workshop 8: “Airheater Pluggage – How Do We Stop It?” by *John Guffre, Paragon Airheater* (Concord I-J Ballroom)

This workshop will address the issue of Airheater fouling and other related air heater problems stemming from Ammonium Bisulfate deposits in the air heater resulting from the addition of SCR's to control NOx emissions. A variety of practical solutions will be presented, as well as some new developments that hold promise for the near future.

Workshop 9: “Recent SO₃ Mitigation Experience” by *Mark A Thomas, Duke Energy* (Carolina Ballroom)

This workshop will include a summary of recent SO₃ mitigation experience from industry professionals. A discussion of lessons learned and SO₃ mitigation co-benefits will also be included. Active audience participation is encouraged.

Workshops and Panels

Monday, July 19, 2010

4:30 to 5:30 pm continued

Workshop 10: “Considerations When Welding FGD Alloys” by *Ron Richard, RE Consulting* (Kannapolis B Ballroom)

When welding stainless steel, duplex stainless steel and nickel alloys that will be used in a FGD system, there are a few basic principals and practices that must be understood if one is to obtain welds that will provide trouble free service.

******RECEPTION (5:30 to 6:30)******

Tuesday, July 20, 2010

8:00 to 9:00 am

Workshop 11: “Converting an ESP to a Fabric Filter” by *Tom Lugar, Buell Division of Fisher-Klosterman* (Concord I Ballroom)

New emission regulations for hazardous air pollutants (HAPs) that include mercury, and for fine particulate, PM_{2.5}, may require re-evaluating compliance strategies if an ESP is currently installed. A lower cost option to consider if the ESP must be replaced is conversion of the existing casing to a pulse-jet fabric filter. This Workshop will present guidelines/criteria to determine if an ESP is a candidate for conversion and present details of recent conversions.

Workshop 12: “ESP Operating With High Sulfur Coals – What Is the Maximum Sulfur Content We Can Tolerate?” by *Ron Triscori, RE Consulting* (Concord G-H Ballroom)

So you think that precipitators are a commodity! The days of high resistivity fly ash performance problems are being quickly replaced with a whole new list of low resistivity problems. This workshop covers key dry ESP performance and operational issues which may result from switching to high sulfur coal after installing a scrubber or from implementing NO_x control systems on a unit with a previously well performing dry ESP. Also covered are mitigation technologies and injection locations for units where opacity problems have occurred unexpectedly.

Workshop 13: “Converting From a Wet Ash to Dry Ash System – Boiler Ash and Flyash” by *Gary Mooney, Clyde Bergemann Delta Ducon* (Concord J Ballroom)

With current issues related to wet ash storage and conveying, many plants are exploring ways to convert their existing wet ash handling systems to state-of-art dry systems. This topic will discuss what options are available for wet to dry conversions of both fly ash and bottom ash systems. The goal of the presentation will be to provide insight on wet to dry ash conversion systems, how they operate and what obstacles exist when designing and selecting the system.

Workshop 14: “FGD Waste Water Treatment Options” by *Brian Heimbigner, Siemens* (Carolina Ballroom)

This workshop will describe the characteristics of flue gas desulfurization wastewater (FGD WW), the desired characteristics of treated water, and the considerations that must go into the design and supply of an appropriate system. The system design must take into account the utility’s objectives, regulatory requirements, normal building standards and codes, and the operators’ needs. A standard physical treatment system for treat and release will be described and depicted. That will be followed by additions/modifications to the system for special treatment for selenium, total nitrogen, arsenic, and other trace or heavy metals, and very low levels of mercury. Treatment processes will include physical/chemical, biological, membrane, and thermal.

Workshop 15: “Improving Existing Scrubber Performance” by *Mike Hammer, MET* (Kannapolis Ballroom)

This workshop will discuss the types of enhancements and drivers of upgrades, case studies and value considerations. The evaluation of existing FGD systems for their potential performance and the integration of the evaluation as an upgrade has become more prevalent in the present market place. Existing Wet FGD systems are being required to meet ever changing regulations, these improvements can be rather limited in nature or involve major retrofit or rebuild work. Upgrades for absorbers, reagent preparation islands and gypsum dewatering systems can be motivated by both environmental regulations and plant economics. Some insight into the thought process and the potential of what can be done with existing systems is to be reviewed.

9:30 to 10:30 am

Workshop 16: “Fabric Filter Bag Life Assessment” by *John McKenna, ETS Inc.* (Concord I Ballroom)

This workshop will cover the purpose of and approach to bag life assessment by considering the following: available fabric test methods, fabric & bag specification, typical Quality Assurance/Quality Control programs, bag monitoring programs, and identification of the point at which a bag change out is required.

Workshops and Panels

Tuesday, July 20, 2010

9:30 to 10:30 am

Workshop 17: “Boiler Combustion/Boiler Tuning To Improve Emission Controls” by *Tom Weir, Duke Energy* (Concord G-H Ballroom)

Focusing on the fundamentals of boiler combustion / NO_x control can be key to achieving a station’s operational goals – emissions as well as performance. Typical station goals include minimizing NO_x, opacity, CO and LOI while maximizing steam temperatures and boiler efficiency. This session will provide a utility’s perspective on evaluating a boiler combustion setup with a particular focus on secondary air management to create the desired balance of station goals.

Workshop 18: “Mercury ACI Systems” by *Kevin Fisher, Apogee Scientific* (Concord J Ballroom)

This workshop will cover experience based techniques that help in problem solving regarding deploying and optimizing dry sorbent injection systems. The presentation will also attempt to cover some of the lessons learned, both by Apogee and the rest of the industry, with regards to employing dry sorbent injection at utility plants for continuous operation.

Workshop 19: “Dry FGD Basics Operations and Maintenance” by *Travis Reynolds, Alstom* (Carolina Ballroom)

This workshop will highlight experience in the dry flue gas desulphurization business, including an overview of both spray dryer absorbers (SDA) and NID technologies. The two technologies will be compared to show their differences, and the list of strengths and weaknesses of each will be presented. Finally, the operation and maintenance of primary equipment will be discussed, incorporating lessons learned from previous projects as well as feedback from various plant personnel.

Workshop 20: “Corrosion/Erosion of FGD Components” by *Gordon Maller, URS* (Kannapolis Ballroom)

This workshop will present background information concerning the fundamentals of corrosion, will provide a history of how corrosion issues in scrubbers have been dealt with in the past, and will conclude with guidelines for material selection and for preventing corrosion problems.

11:00 to 12:00 am

Workshop 21: “Why Is Gas Flow Important In FF Design” by *Stephen Bowen, Nels Consulting* (Concord I Ballroom)

This workshop will consist of the discussion of the requirements for optimized gas flow within a fabric filter, various issues resulting from problematic gas flows and various modeling techniques utilized to correct gas flow problems. Also, the workshop will discuss the methodology behind different modeling techniques and how they are conducted and utilized to optimize fabric filter design.

Workshop 22: “Mid-Frequency T/R Technology” by *Roland Metz and Dr. Michael Steingraeber, Siemens Industry Inc.* (Concord G-H Ballroom)

This workshop will discuss the performance increase and the benefits of the 500 Hz application as well as the 60Hz application with the reuse of existing T/R sets. We will explore the merits of operating at mid-frequency compared to 60 Hz and high frequency and finally discuss an upgrade path that can provide proof of performance increase before the actual investment.

Workshop 23: “Metals Beyond Mercury: Measurement and Control of Other HAPs” by *Connie Senior, Reaction Engineering International* (Concord J Ballroom)

The 1990 Clean Air Act Amendments (CAAA) specify a list of 187 hazardous air pollutants (HAPs) that cause or may cause cancer or other serious health effects. The U.S. EPA must decide how to regulate air emissions from coal-fired power plants. The rulemaking process will include consideration of emissions and potential regulation of other HAPs besides mercury. Considerable effort has been expended over the last decade to develop technology for the control of Hg from coal-fired power plants. Much less is known about the control of other HAPs. Data on HAPs emissions (As, Se, etc.) will be reviewed and the prospects for future controls will be discussed.

Workshop 24: “Effects of Biomass on Particulate Equipment O&M” by *Tom Lugar, Buell Division of F-K* (Carolina Ballroom)

In this workshop topics to be presented include: types of boiler retrofits for biomass firing, differences in ash characteristics with the types of boiler retrofits, ESP performance considerations with biomass, applicability of baghouses, demonstrated performance of biomass-fired ESPs, concerns with wood firing and ESP hopper fires, and case studies.

Workshops and Panels

Tuesday, July 20, 2010
11:00 to 12:00 am continued

Workshop 25: “Hydrated Lime Handling from a Lime Supplier’s Perspective” by *Curtiss Biehn, Mississippi Lime* (Kannapolis Ballroom)

The use of hydrated lime for mitigation of SO_3 is an accepted practice in the Utility industry. As this market developed, issues with conveying hydrated lime have occurred. Some of these issues are inherent with dilute-dilute phase conveying that is required for flue injection of hydrate. Many of the problems can be minimized through awareness of potential design problem areas. For the most stringent applications, some degree of carbon dioxide scrubbing should occur to maximize system on-stream time. This presentation will review general considerations for dilute phase conveying hydrated lime. Results of a test system will also be presented along with recommendations for best practices.

LUNCH (12:00 to 1:30)

1:30 to 3:00 pm

Panel I: “A Review Of Mercury Removal Injection Technologies With A Cost Comparison” *Chairman: Jean Bustard, ADA-ES / Panelists: Brandon Looney, Southern Company; Sid Nelson, Albemarle; Rob Nebergall, Norit; Randy Fields, Dynegy; Philip Elliott, Evonik* (Concord J Ballroom) Panelists will provide an overview of commercial injection technologies that are best suited to achieve 90% or greater mercury removal on different configurations. Overviews will include examples of test results and estimated capital and O&M costs.

Panel II: “Biomass, Co-Firing and Alternative Fuels” *Chairman, Jeff Wilson, Southern Company / Panelists: Kevin Toupin, Riley Power; Dave O’Connor, EPRI; Matt McArdle, Mesa Engineering; Kevin Davis, REI; Andrew Grant, Biomass Energy Holdings; Orest Walchuk, Nalco Mobetec; Claudia Banner, AEP* (Concord G-H Ballroom) This panel will address utility concerns and questions associated with Biomass. Topics may include, but are not limited to: biomass combustion concerns, the economics of repowering, co-firing, and greenfield/brownfield sites, handling and pre treatment improvements, and the future of legislation and regulations as they pertain to biomass. The panel will be bringing a wealth of experience and knowledge from a variety of backgrounds associated with biomass.

3:30 to 4:30 pm

Workshop 26: “How Condition Monitoring Can Reduce Fabric Filter Operating Costs” by *Rod Hansen, RE Consulting* (Concord I Ballroom)

This workshop deals with research into condition monitoring of installed fabrics plus evaluation of various trial fabric blends, treatment and fabric constructions. The prime objective is to identify longer lasting and less costly materials customized for specific environments.

Workshop 27: “TR Set Life Extension” by *Marty Watson, CE Power Solutions* (Concord G-H Ballroom)

This workshop will discuss the options available to the users for extending the life of the TR sets. Simple troubleshooting techniques, step by step guidelines of what to look for, and how to verify your system is running correctly without the sophisticated equipment that can be technically challenging to operate while troubleshooting the TR sets and controls. We’ll also explain and define oil diagnostics to extend the life of the TR set.

Workshop 28: “Concrete Friendly Mercury Sorbents” by *Daryl Lipscomb, Albemarle* (Concord J Ballroom)

Approximately 20% of power plant flyash is profitably sold for use as a substitute for cement in concrete. If traditional powdered activated carbons are used by these plants for mercury emission reductions, the resulting flyash can no longer be sold for this high-value use. This presentation will cover the results of two full-scale commercial utilities currently using carbon-based concrete-friendly mercury sorbents. It focuses on the mercury removal achieved (> 80%), while continuing to maintain the marketability of the flyash as a replacement for cement in concrete. Additional techniques for preserving flyash will also be covered.

Workshop 29: “What Is Needed To Change from Coal to Biomass?” by *Kevin Toupin, Riley Power* (Carolina Ballroom)

The conversion of existing fossil fuel-fired power plants to 100% biomass is an increasingly appealing option. There is a need to understand the effect on boiler performance and the modifications required when investigating the feasibility of converting to biomass firing. This workshop reviews the evaluation criteria and limiting factors applicable to biomass conversions for both the boiler and environmental equipment.

Workshops and Panels

Tuesday, July 20, 2010
3:30 to 4:30 pm continued

Workshop 30: “Low Cost FGD Technology Designed For Small (<250MW) Utility Boilers” by *Jonas Klingspor, URS* (Kannapolis Ballroom)

This workshop will provide an overview of the new MACT rules for smaller industrial and utility boilers. An overview of the demographics of the smaller boiler population in terms of number of boilers, generating capacity, contribution to the overall power generation, and use of FGD systems will be discussed. A summary of low cost control technologies for SO₂ emissions from smaller boilers, such as furnace injection, duct injection, and the URS Co-Flo™ FGD system will be provided.

4:30 to 5:30 pm

Workshop 31: “COHPAC/TOXECON/ESP/FF Combination” by *Ken Cushing, SRI* (Concord I Ballroom)

This workshop will review the COHPAC and TOXECON processes and how they can be used to enhance particulate collection in a small footprint (COHPAC) and minimize sorbent injection rates while maximizing sorbent utilization for toxic metals removal (TOXECON). Specific installations of these technologies will be reviewed.

Workshop 32: “ESP T/R Diagnostic Evaluation Program” by *Karl Jakob, Weidman Diagnostic* (Concord G-H Ballroom)

As the U.S. EPA enforces compliance with its Clean Air Act, the importance of ESP performance continues to rise. The failure of an ESP transformer/rectifier can limit the performance of the ESP system and, therefore, limit production. This presentation will discuss the use of fluid analytical tests and its interpretation to evaluate the current condition of your ESP transformer/rectifier.

Workshop 33: “Higher Mercury Capture Efficiency through Control of Hg Speciation” by *John Meier, Nalco/Mobetec* (Concord J Ballroom)

This workshop will be presenting demonstrations of halogen injection for promoting mercury oxidation as a precursor to a mercury control strategy for coal fired boilers. Also presented will be information regarding control of mercury concentrations in FGD Wastewater treatment streams in order to meet permitted discharge limitations.

Workshop 34: “Biomass Handling” by *Steve Engstrom, Stock Equipment* (Carolina Ballroom)

Once a decision has been made on fuel type, one must consider how the material will be transported, delivered, unloaded, stored, reclaimed, transferred to intermediate storage and fed into the boiler or process. We will discuss the many variables or factors that influence equipment selection for each of these areas of the material handling system. With the proper selection, unloading systems and handling systems are able to handle multiple fuels, reducing the supply pressure and allowing better management of market fluctuations of fuel cost.

Workshop 35: “CDS Scrubber Technology” by *Tony Licata, Babcock Power* (Kannapolis Ballroom)

The Circulating Dry Scrubbing Technology (CDS) has become a major technology option for utility coal fired plants over the past few years. The versatility of the technology and enhanced performance over spray dryers as a multi-pollutant control system has created opportunities to employ CDS on both retrofit and new boiler applications. With the forth coming Utility MACT rule there will be increased applications for CDS systems. This workshop will describe the basic fundamentals of CDS systems and how then can be used in the overall compliance strategy at coal-fired power plants.

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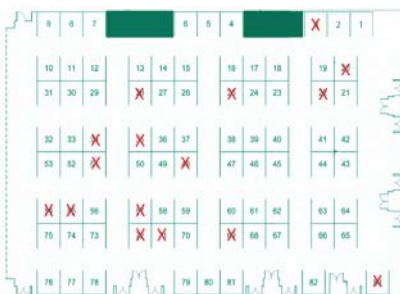
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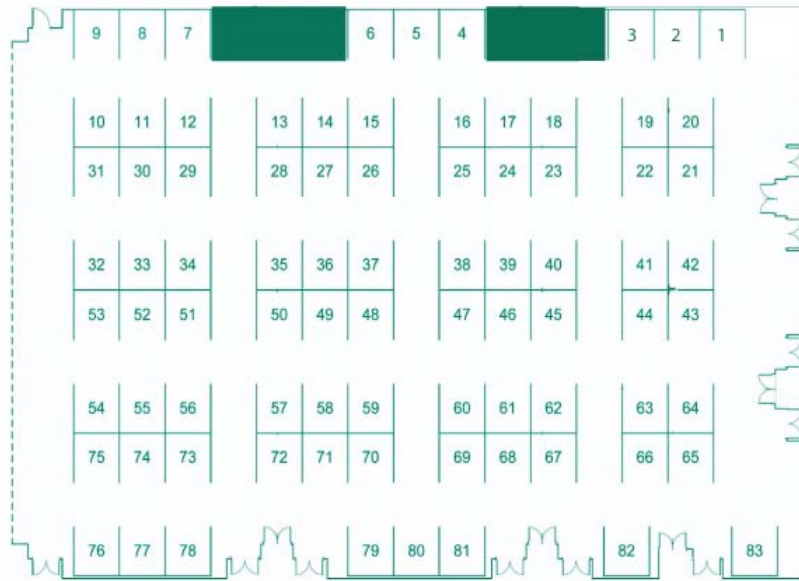
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Southern Research Institute.....37

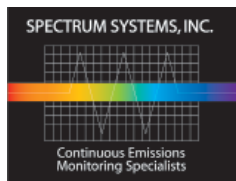
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