

# 2007 Engineering, Pulping & Environmental Conference

PRACTICAL OPERATING INSIGHTS

## Innovations in Engineering, Pulping & Environmental

### Access to Networks

- Latest Technology Applications
  - Hot Topic Breakfasts
  - Trade Fair Exhibits
  - New Technology Showcase
- Keynote by Miles Drake, CTO/Sr. VP of Technology, Weyerhaeuser
- Tutorials Including Bleach Plant Workshop
  - Roundtable Discussions
- Attend a Committee Meeting and be on the Ground Floor of the Proposed New Bioenergy Committee

### Access to Knowledge

- Learn how to deal with bleach chemical safety from a panel of experts
- Attend a track on preventing corrosion of pulp and paper equipment
- Learn about the benefits of generating green power
- Attend a special pre-conference course on the basics of bleach plant technologies
- Learn the basics of the biorefinery concept and hear about the latest developments
  - Learn about the latest developments in non-wood processes
  - Learn how to improve pulping and bleaching processing
  - Attend workshops on boiler water treatment and process simulation
  - Participate in a special sustainability panel session

For detailed conference program information go to

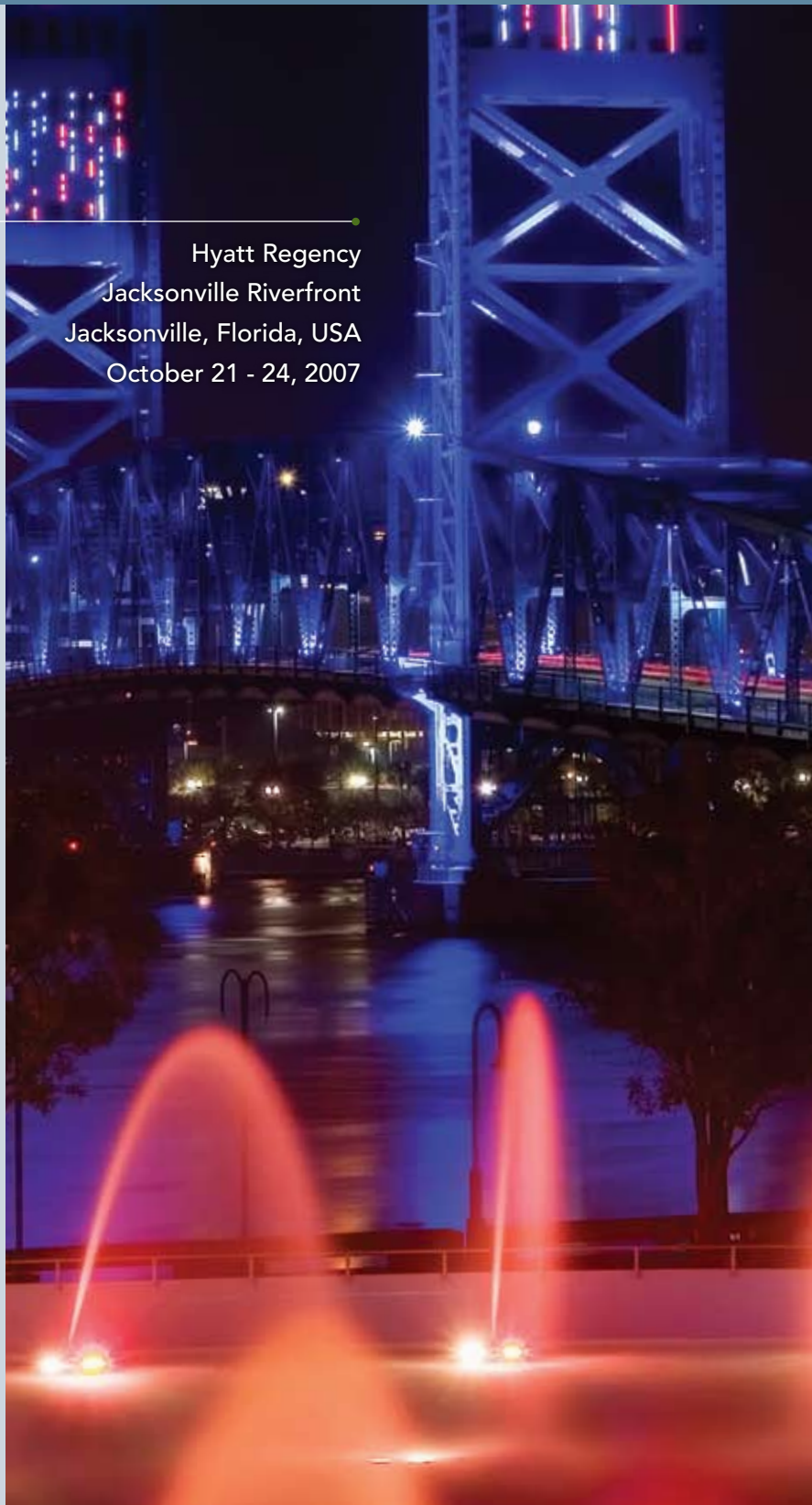
[www.tappi.org/07epe](http://www.tappi.org/07epe)



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Hyatt Regency  
Jacksonville Riverfront  
Jacksonville, Florida, USA  
October 21 - 24, 2007

## New Technology Showcase

**Monday, October 22, 10:30 am to Noon**

Learn about new and developing technologies in the pulp and paper industry and meet face-to-face with representatives involved in implementing them at the mill production level. Catch up on the latest products and services now entering the marketplace, and explore how they can help you and your company meet goals and solve problems. If you're interested in presenting a topic in the New Technology Showcase, please contact Tammi Campbell of TAPPI at +1.770.209.7405. There are a limited number of 8-minute sales presentation slots available only to contracted trade fair exhibitors on a first-come, first-served basis.

## TechQuest Seminar

**Monday, October 22, 2007 – 6:30 to 8:00am**

*Separate Registration required – go to [www.metsopaper.com/techquest](http://www.metsopaper.com/techquest) to register*

Designed to keep you current on the latest Metso technology, TechQuest is an in-depth problem solving seminar focusing on your most difficult fiber and papermaking challenges. To register, go to [www.metsopaper.com/techquest](http://www.metsopaper.com/techquest).

## Networking Receptions

Cap off your day at the conference on Sunday and Monday at a reception, see old friends and meet new ones as you browse the Trade Fair area and enjoy drinks and refreshments.

## Trade Fair Area – new for EPE!

Throughout the conference, the Trade Fair will be the place to learn about our industry's latest products and services and meet face-to-face with key technology suppliers. This is a great opportunity to compare products and technologies side-by-side, ask questions and learn how these innovations can help you be more efficient, productive and cost-effective.

## Hot Topics Breakfasts

**Tuesday, October 23 and Wednesday, October 24, 6:45 to 8:30am**

Join fellow conference attendees for a complimentary continental breakfast and stimulating discussion in a roundtable format. Both Hot Topic breakfasts will focus on current operating issues and are open to all registered attendees. In early September, a list of hot topics will be e-mailed to all pre-registrants, allowing you to sign-up ahead of time for topics of your choice. In addition sign-up boards will be posted on-site for late registrants. Each topic will be hosted by a facilitator who is a leading expert in the subject matter.

## Keynote Address: Innovation and Sustainability for the Forest Based Industries

**Monday, October 22, 8:30 to 10:00am**

**Miles Drake, CTO / Sr. VP of Technology, Weyerhaeuser**

We face major global challenges to meet the needs of today with renewable energy and materials. The forest based industries have the potential to bring unique

resources and competencies to meet these challenges through profitable business solutions. Major innovation across industries, value chain, government, and academia will be required to bring the solutions to life.

## Bleach Plant Workshop

**Sunday, October 21, 2007, 8:00 am to 4:00 pm**

This one-day workshop will provide participants with a broad, basic understanding of kraft pulp bleaching technology as well as prepare them to derive maximum benefit from the bleaching panels and papers to be presented during the Engineering, Pulping, and Environmental Conference. This workshop is designed for bleach plant operators or engineers, paper company environmental engineers, research, technical sales, and service personnel from paper companies, and chemical or equipment suppliers. It will give attendees a basic understanding of pulp bleaching technology and its implications for pulp properties and environmental management. Enjoy the opportunity to discuss bleach plant operating problems with experts in the field, and walk away from the workshop with information and materials to help you on your job immediately. Please note: A supplemental fee is required (lunch is included). To attend this workshop, you must be registered for the 2007 EPE Conference. See the registration form for more information.

## Lunch is Included!

BY POPULAR DEMAND, lunch on Monday and Tuesday in the Trade Fair area is complimentary to registered conference participants. Enjoy a delicious lunch, visit with old friends and meet new ones – and browse through the Trade Fair.

## Spouse / Guest Events

During the conference, your spouse or guest can participate in this special program, meet new friends, enjoy entrance into conference receptions, continental breakfasts and optional shopping and sight-seeing. For more information, see page 10 or go online to [www.tappi.org/07epe](http://www.tappi.org/07epe)

## The 25th Annual Paper Chase 5k Run

Enjoy a little exercise during the conference at the PaperChase, a 5k run / 1.5 mile walk, organized by BE&K. For more information, see page 10.

## Sponsorship and Tabletop Opportunities Still Available

Participants at the EPE conference will be looking for the latest technology and new product introductions – make sure your company is there to help them. Put your company front and center to reach the top experts in the field, network with colleagues, peers and customers and create awareness for your latest products and services. But act fast, as trade fair booths and sponsorships are available on a first-come, first-served basis. For more information about booths or sponsorship, please contact Tammi Campbell at +1.770.209.7405 or [tcampbell@tappi.org](mailto:tcampbell@tappi.org) or visit [www.tappi.org/07epe](http://www.tappi.org/07epe)

## SCHEDULE AT A GLANCE

**Sunday, October 21, 2007**

8:00 am – 4:00 pm	Bleach Plant Workshop*
6:00 pm – 7:30 pm	Welcome Reception in Trade Fair Area
7:00 pm – 9:30 pm	Engineering, Pulping, and Environmental Awards Dinners**

**Monday, October 22, 2007**

6:30 am – 8:00 am	Metso TechQuest Seminar (separate registration required)
7:30 am – 8:15 am	Monday Session Speakers Breakfast
7:30 am – 8:30 am	Coffee Break
8:00 am – 10:30am	Spouse/Guest Breakfast
8:30 am – 10:00 am	Opening Awards and Keynote Address
10:00 am – 10:30 am	Coffee Break in Trade Fair Area
10:30 – Noon	Sessions
Noon – 1:00 pm	Student Lunch
Noon – 1:30 pm	Hosted Lunch in Trade Fair Area
1:30 pm – 3:00 pm	Sessions
3:00 – 3:30 pm	Coffee Break in Trade Fair Area
3:30 pm – 5:00 pm	Sessions
5:00 pm – 7:00 pm	Reception in Trade Fair Area

**Tuesday, October 23, 2007**

6:00 am	Fun Run (organized by BE&K)
6:45 am – 8:30 am	Hot Topics Breakfast
7:30 am – 8:15 am	Tuesday Session Speakers Breakfast
8:00 am – 10:30 am	Spouse/Guest Breakfast
8:30 am – 10:00 am	Sessions
10:00 am – 10:30 am	Coffee Break in Trade Fair Area
10:30 – Noon	Sessions
Noon – 1:30 pm	Hosted Lunch in Trade Fair Area
1:30 pm – 3:00 pm	Sessions
3:00 – 3:30 pm	Coffee Break
3:30 pm – 5:00 pm	Sessions

**Wednesday, October 24, 2007**

6:45 am – 8:30 am	Hot Topics Breakfast
7:30 am – 8:15 am	Wednesday Session Speakers Breakfast
8:30 am – 10:00 am	Sessions
8:00 am – 11:30 am	Spouse/Guest Breakfast and Event
10:00 am – 10:30 am	Coffee Break
10:30 – Noon	Sessions
Noon – 1:30 pm	Lunch on you own
1:30 pm – 3:30 pm	Sessions

\*additional registration fee required \*\* by invitation only

For complete Technical Program information, go to [www.tappi.org/07epe](http://www.tappi.org/07epe)

**There is nothing else like it. Only TAPPI's EPE Conference brings the industry's best selling books right to you. As a conference participant, you can also qualify for a special conference-only discount on the following titles – but only if you pre-order them when you register.**

**Kraft Recovery Boilers** - This comprehensive textbook covers recovery boilers in great depth and pulls together information on combustion, safety, emissions, plugging, and corrosion. Written by a team of industry experts, the text includes a great deal of practical information such as simple tests to pinpoint problems, important observations to help understand issues for particular operations, and "rules-of-thumb" that are generally used in the industry.

List price: \$140, TAPPI Member Price: \$93,  
Special Conference-only price: \$79 Order code: 0102B064

**Industrial Environmental Control - Pulp and Paper Industry, Third Edition** - Edited by Allan M. Springer, this totally-revised, comprehensive volume encompasses all of the environmental issues affecting the pulp and paper industry and features 35 chapters with discussion items. Suited for senior-level or graduate courses as well as industrial training programs, experienced industry personnel will find this text useful as a reference for today's industry practices as well as a resource for planning future operations.

List Price: \$93, TAPPI member price: \$62,  
Special Conference-only price: \$52 Order code: 0101R296

**Paper Machine Steam and Condensate Systems, Fifth Edition** - Edited by R. Krumenacker and P. Deutsch, this book covers the basic design, operation, and control of equipment necessary for the proper operation of efficient steam control and condensate removal systems and includes dozens of figures and helpful tables and charts plus a glossary to aid understanding.

List Price: \$50, TAPPI member price: \$31,  
Special Conference-only price: \$26 Order code: 0101R096

**The Pulp and Paper Technology Advanced Workforce Training and Education Series: Volume 1: Pulp Manufacturing**

This Pulp and Paper Technology book series is a new industry resource for improving the knowledge base of new and incumbent hourly workers. It is the first in a series of resources developed jointly with TAPPI and the community college network (npt)2. Volume 1- Pulp Manufacturing tackles the "how" and "why" of pulp making. Topics include wood fiber fundamentals, overviews of the pulp mill, wood prep, kraft pulping, mechanical pulping, chemical recovery, bleaching and more! This series complements the two-year associate curriculum at (npt)2 community colleges.

List Price: \$60, TAPPI member price: \$45,  
Special Conference-only price: \$38 Order code: 0101R317

**The World of Market Pulp (soft cover)** is now available in print and contains more than 460 photos, graphs, and high resolutions SEMs are reproduced. The book highlights 60 global Market Pulps-pulps selected for their distinctive properties, outstanding attributes and ability to represent the wide-range of Market Pulps available in the world. It includes background material about global market pulps: their forest and fiber sources, pulp qualities and how to select market pulps.

List Price: \$160, TAPPI member price: \$160,  
Special Conference-only price: \$145  
Order code: 08WOMPB

Sunday	8:00 AM	8:30 AM	9:00 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM
October 21, 2007	Session 1: Bleach Plant Workshop (8:00 AM - 4:00 PM) \$50 Supplemental Fee									

Monday	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM
October 22, 2007	<b>Session 2:</b> Opening Awards and Keynote Address Miles Drake, CTO, Weyerhaeuser			<b>B R E A K</b>  in Trade Fair area	<b>Session 3:</b> State of the Industry Report		12-1:30  <b>L U N C H</b>  Hosted in the Trade Fair area			
Speakers Breakfast 7:30-8:15 AM					<b>Session 4:</b> Advances in Chemical Pulping					
	<b>Session 5:</b> Mill Engineering Panel Session		<b>Student Lunch</b>							
	<b>Session 6:</b> Improvements in Mechanical Pulping									
	<b>Session 7:</b> New Technology Showcase									

Tuesday	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM
October 23, 2007	<b>Session 17:</b> Advances in ECF Bleaching			<b>B R E A K</b>  in Trade Fair area	<b>Session 22:</b> Pretreatments to Enhance Bleaching		12-1:30  <b>L U N C H</b>  Hosted in the Trade Fair area Trade Fair ends at 1:30 PM			
<b>Session 16:</b> Hot Topics Breakfast 6:45-8:30 AM					<b>Session 18:</b> Sustainability Update					
<b>Speakers Breakfast</b> 7:30-8:15 AM	<b>Session 19:</b> Measuring the Paper Business		<b>Session 24:</b> Workshop on Lower Furnace Corrosion - II		<b>Student Lunch</b>					
	<b>Session 20:</b> Optimizing Chemical Recovery		<b>Session 25:</b> Chemical Recovery/Bio Energy Opportunities							
	<b>Session 21:</b> Workshop on Lower Furnace Corrosion		<b>Session 26:</b> Environmental Mgt. - Sustainability Panel Session							

Wednesday	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM
November 24, 2007	<b>Session 38:</b> Advances in Eucalyptus Pulping			<b>B R E A K</b>  in Trade Fair area	<b>Session 43:</b> Advances in Non-Wood Processing - II		12-1:30  <b>L U N C H</b>  on your own			
<b>Session 37:</b> Hot Topics Breakfast 6:45-8:30 AM					<b>Session 39:</b> Advances in Non-Wood Processing - I					
<b>Speakers Breakfast</b> 7:30-8:15 AM	<b>Session 40:</b> Advances in Chemical Recovery		<b>Session 45:</b> Green Power Panel Session		<b>Student Lunch</b>					
	<b>Session 41:</b> Detail, Details, Details Specifying Quality into Your Process Plant		<b>Session 46:</b> Data Reconciliation							
	<b>Session 42:</b> Water Issues		<b>Session 47:</b> BART Modeling							

# 2007 Engineering, Pulping & Environmental Conference

## PROGRAM GRID

1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	5:00 PM	6:00 PM	7:30 PM	8:00 PM	9:30 PM
							Welcome Reception in Trade Fair Area			

1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM	6:30 PM	7:00 PM	7:30 PM
<b>Session 8:</b> Effect of Raw Materials Pulping Processes			3-3:30 <b>B R E A K</b> in Trade Fair area	<b>Session 13:</b> Bleaching with Oxygen and Peroxide			5:00-7:00 Reception Trade Fair Open					
<b>Session 9:</b> Bleach Plant Safety				<b>Session 14:</b> Sulfur Emissions from Wastewater Treatment								
<b>Session 10:</b> Wastewater Treatment Analysis				<b>Session 15:</b> <i>Bill Babbington</i> Maintenance Roundtable								
<b>Session 11:</b> New Asset Management Approaches												
<b>Session 12:</b> Process Simulation Workshop				Continuation of Process Simulation Workshop								

1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM
<b>Session 27:</b> Evaporator Panel Session - I			3-3:30 <b>B R E A K</b>	<b>Session 32:</b> Evaporator Panel Session - II		
<b>Session 28:</b> Non-Metal Corrosion Issues - Cause and Effect				<b>Session 33:</b> Boiler Operations		
<b>Session 29:</b> Advancing the Biorefinery for Non-Woods				<b>Session 34:</b> Kraft Liquor Corrosion - Reports from the Front Line		
<b>Session 30:</b> Boiler Water Treatment Workshop				<b>Session 35:</b> Advancing the Biorefinery for Wood		
<b>Session 31:</b> Climate Change				<b>Session 36:</b> Current Issues in Air		

	Pulping-related Session
	Engineering-related Session
	Environmental-related Session

1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM
<b>Session 48:</b> Dealing with Black Liquor						
<b>Session 49:</b> Semicheical Processing						
<b>Session 50:</b> Improving Pulp Processing						
<b>Session 51:</b> Advances in Non-Wood Processing - III						
<b>Session 52:</b> Gains in Energy Efficiency						



**Sunday, October 21, 2007**

8:00 am - 4:00 pm

**Session 1: Bleach Plant Workshop**

Speaker: **Tom McDonough**, IPST

**Monday, October 22, 2007**

6:30 am - 8:00 am

**Metso TechQuest Seminar**

8:30 am - 10:00 am

**Session 2: Opening Awards**

Keynote Address: Innovation and Sustainability for the Forest Based Industries, **Miles Drake**, CTO / Sr. VP of Technology, Weyerhaeuser

10:30 am - Noon

**Session 3: State of the Industry Report**

10:30 am - Noon

**Session 4: Advances in Chemical Pulping**

Session Chair: **Cal Clark**, BE&K Engineering Co.

The Relative Effects of Sulfite, Sulfide, and Hydroxide Concentrations in Mini-Sulfite Sulfite AQ Pulping  
**Ved Naithani**, North Carolina State University

How Does Hydroxyethylidene Diphosphonate (HEDP) Accelerate Kraft Pulping?, **Richard Berry**, **Yujun Sun**, and **Corrine Luthe**, FP Innovations, Paprican

10:30 am - Noon

**Session 5: Mill Engineering Panel Session: Challenges Mill Engineers Face Today**

Session Chair: **Steve Dowe**, Jacobs Engineering Group

Panelists:

- **Byron Alvey**, Weyerhaeuser
- **Andy Norris**, Georgia-Pacific
- **Charlie Gustafso**, Jacobs Engineering Group

10:30 am - Noon

**Session 6: Improvements in Mechanical Pulping**

Session Chair: **Steve Robinson**, Premier Chemicals

Shive Content Modeling and Simulation in Chemi-Thermo-Mechanical Pulping, **Manne Tervaskanto**, University of Oulu, Finland

Synergistic Effects Between Chemical Mechanical Pulps and Chemical Pulps From Hardwoods, **Eric Xu**, Andritz, Inc.

The Study on Contamination Characteristics and Decoloration of CTMP Effluent, **Hu Zhijun**, South China University of Technology

10:30 - Noon

**Session 7: New Technology Showcase**

Newest technologies and latest developments in pulping, bleaching, chemical recovery, and the engineering and environmental areas

1:30 pm - 3:00 pm

**Session 8: Effect of Fiber Raw Materials on Pulping Processes**

Session Chair: **Bill Fuller**, FRM Consulting

The Effect of Seasonal Variation in Wood Moisture Content on Chip Quality, **William Watson** and **Charles Stephenson**, Georgia-Pacific

Effect of Wood Properties on Pulp Yield, **David White**, IPST @ Georgia Institute of Technology

Evaluation of the SuperBatch Pulping Process for Pinus Taeda, **Francides Silva**, University of Sao Paulo, and Papel e Celulose Vasconcelos, Klabin Papel e Celulose, Brazil

1:30 pm - 3:00 pm

**Session 9: Bleach Plant Safety Panel Session**

Session Chair: **Tom McDonough**, IPST @ Georgia Institute of Technology

Hydrogen Peroxide - An Environmentally Friendly but Dangerous Bleaching Chemical, **Alan Rudie**, and **Peter Hart**, MeadWestvaco

Safety Considerations in the use of Chlorate and Chlorine Dioxide in Pulp Bleaching Processes, **Jim Hopmans**, ERCO Technologies

Update on Work Being Done on Chlorate and Chlorine Dioxide by a Subcommittee of AET, **Douglas Pryke**, AET

Panel Discussion of Bleaching Chemical Safety Procedures and Practices, Panelists:

- **Alan Rudie**, USDA Forest Products Lab
- **Jim Hopmans**, ERCO Technologies
- **Douglas Pryke**, AET
- **Tom McDonough**, IPST @ Georgia

1:30 pm - 3:00 pm

**Session 10: Wastewater Treatment and Analysis**

Session Chair: **Michael Foster**, EBS Environmental

Changes in Wastewater Pollutant Loading, **Diane Hardison**, Weyerhaeuser

Nutrient Balances For an Activated Sludge Wastewater Treatment Plant, **Lucy Cotter**, Ecole Polytechnique De Montreal

Color Removal and Biodegradability Enhancement of Eucalyptus CTMP Effluent by Zero-Valent Iron Method  
**Yuming Li**, National Engineering Research Center of Papermaking & Pollution

1:30 pm - 3:00 pm

**Session 11: New Asset Management Approaches**

Session Chair: **Jerry Kahn**, JK Consulting

The Partnership Organization, **Christer Idhammer**, IDCON

Managing Assets Using Performance Supervision, **Michel Ruel**, TOP Control

Machine Cleanliness versus Paper Quality and Uptime, **Wade Parke**, WP Associates

1:30 pm - 5:00 pm

**Session 12: Simulation Software Workshop**

The apiMAX System, American Process Inc.

3:30 pm - 5:00 pm

**Session 13: Bleaching with Oxygen and Peroxide**

Session Chair: **Richard Berry**, FP Innovations, Paprican

Modern Approaches to Design of Environmentally Benign Stabilizers of Peroxy Compounds in Pulp Bleaching, **Reijo Aksela**, Kemira Oyj

Effect of Pulp Delignification Degree on Fiber Line Performance and Bleaching Effluent Load, **Jorge Colodette**, Federal University of Vicosa, Brazil

TAED Activator for Peroxide Bleaching of Recycled Pulp, **Jeffery Hsieh**, Georgia Institute of Technology

3:30 pm – 5:00 pm

### **Session 14: Sulfur Emissions from Wastewater Treatment**

Session Chair: **Robert Stein**, Aware Environmental Inc.

*Reduced Sulfur Compound Emissions from Wastewater Treatment Systems, **Ashok Jain**, NCASI*

*Simple Yet Effective Solution to H<sub>2</sub>S Problem in Waste Streams, **Vince Hartley**, Air Liquide Industrial*

*TRS Emissions from ASBs*

3:30 pm - 5:00 pm

### **Session 15: Bill Babbington Maintenance Roundtable**

Session Chair: **Jerry Kahn**, JK Consulting

## Tuesday, October 23, 2007

6:45 am – 8:30 am

### **Session 16: Hot Topics Breakfast**

*Group discussions of latest technical/production developments and operating problems*

8:30 am – 10:00 am

### **Session 17: Advances in ECF Bleaching**

Session Chair: **Jorge Colodette**, Federal University of Vicosa, Brazil

*Comparison of Various Hardwood Kraft Pulp Pre-Bleaching Techniques, **Dale Nutter**, MeadWestvaco*

*The Chemistry of Aldehyde-Enhanced Bleaching (AEB), **Waleed Wafa Al-Dajani, Zhi-Hua Jiang, Richard Berry, and Barbara van Lierop**, FP Innovations, Parican*

*16-3 - 9:30 am: Optimization of ECF Bleaching of Kraft Pulp—II: Effects of Acid Prehydrolysis on Hardwood Pulp Bleachability, **Tom McDonough**, IPST*

8:30 – 10:00 am

### **Session 18: Sustainability**

Session Chair: **Colleen Walker**, CPBIS

**Jim Frederick**, Georgia Institute of Technology

8:30 – 10:00 am

### **Session 19: Measuring the Paper Business**

Session Chair: **Colleen Walker**, CPBIS

*Financial and Value Metrics Based Performance Evaluation of North American Pulp and Paper Companies and Identification and Adjustment of Deficiencies to Compete in the Global Market Place, **Venketa Parthasarathy**, Weyerhaeuser*

*Equity Carve-out as a Financial Instrument for Corporate Restructuring: Will it Work for the Paper Industry?, **Venketa Parthasarathy**, Weyerhaeuser*

*18-3 - 9:30 am: Sustainability Tool for the Paper Production Value Chain, **Tiina Pajula**, KCL*

8:30 am – 10:00 am

### **Session 20: Optimizing Chemical Recovery**

Session Chair: **Christopher Dietel**, DTE Energy Services / DTE Petcoke, LLC

*Effects of Chloride, Potassium and Sulfate on the Causticizing Reaction in the Kraft Recovery Process, **Sona Sacidi**, University of Toronto, Pulp & Paper Centre*  
*Combustion by Design - Practical Kiln Optimization, **Richard Manning**, Kiln Flame Systems Ltd.*

8:30 am – 10 am

### **Session 21: Workshop on Lower Furnace Corrosion—Part I**

Session Chair: **Doug Singbeil**, PAPRICAN

10:30 am – Noon

### **Session 22: Pretreatments to Enhance Bleaching**

Session Chair: **Brian Brogdon**

*The Effect of Mechanical Pre-Treatment on Strength During Oxygen Delignification of Acacia Kraft Pulp, **Jeffery Hsieh**, Georgia Institute of Technology*

*New Technology Tools Discover Enzyme Products to Enhance Pulp Bleaching, **Charles Hancock**, Diversa Corp.*

*The Effect of Pretreatment on Extractive Removal During Oxygen Delignification, **Jeffery Hsieh**, Georgia Institute of Technology*

10:30 am – Noon

### **Session 23: Determining the Effects of Wood Pretreatments**

Session Chair: **Dwight Husband**, FutureBridge Consulting

*Acid Prehydrolysis of Wood, **Alan Rudie**, USDA Forest Products Lab*

*Extraction of Hemicelluloses from Aspen Chips and Impact on Subsequent Kraft Pulping, **Waleed Wafa Al-Dajani**, University of Minnesota*

*A Kinetic Study on Kraft Pulping of Hot-Water Extracted Eucalyptus Wood Chips, **Liu Shijie**, SUNY ESF*

10:30 am – Noon

### **Session 24: Workshop on Lower Furnace Corrosion-Part II**

Session Chair: **Doug Singbeil**, PAPRICAN

10:30 am – Noon

### **Session 25: Chemical Recovery/Bio-Energy Opportunities**

Session Chair: **Tom Grace**, T.M. Grace Co.

*New Black Liquor Gasification Process - Report on Industrial Scale Trial in the UK, **Sue Riddlestone**, BioRegional MiniMills UK Ltd.*

*The ThermoChemical Biorefinery and the Range of Product Possibilities, **Eric Connor**, Thermochem Recovery Intl.*

*Short-Column Ion-Exchange Technologies for Kraft Pulp Mill Chemical Cost Reduction, **Jon Foan**, NORAM Engineering*

10:30 am – Noon

### **Session 26: Environmental Management - Sustainability Panel**

Session Chair: **Dale Phenicie**, Environmental Affairs Consultant

1:30 pm – 3:00 pm

### **Session 27: Evaporator Panel Session – Part I**

*Bandwidth Follow-up (from 2006 Study): Black Liquor Evaporation, **Chris Verrill**, IP*

1:30 pm -3:00 pm

### **Session 28: Non-Metal Corrosion Issues – Cause and Effect**

Session Chair: **Randy Nixon**, Corrosion Probe

*Bleach Plant Corrosion of Non-Metallic Equipment, **Ken Fusee**, Corotech*

*Peroxide Attack on Forming Fabrics, **Andrew Garner**, Andrew Garner & Assoc.*

*Best Practices for Inspecting Fiberglass Reinforced Plastic (FRP) Equipment, **Dave Bennett**, Corrosion Probe Inc.*

1:30 pm – 3:00 pm

### **Session 29: Advancing the Biorefinery for Non-Woods**

Session Chair: **Kristiina Iisa**, IPST @ Georgia Institute of Technology

*Potential Synergies and Challenges in Refining*

Cellulosic Biomass to Fuels, Chemicals, and Power,  
**Charles Wyman**, University of California

A Biorefinery Process Suitable for Non-Wood Fibers,  
**E. Kendall Pye**, Lignol Innovations Corp.

Non-Wood Biorefinery Developments Outside of North America,  
**Jairo Lora**, GreenValue SA

1:30 pm – 3:00 pm

**Session 30: Boiler Water Treatment Workshop**

Session Chair: **Mark Sergent**, IP

Condensate Treatment and System Monitoring and Control,  
**Virginia Durham**, Hercules

Recovery Boiler Waterside Inspections, **Jim Graham**,  
Buckman Laboratories

Boiler Chemical Cleaning Frequency, **Norris Johnson**, Hercules

1:30 pm – 3:00 pm

**Session 31: Climate Change**

Session Chair: **Reid Miner**, NCASI

Climate Change Policy and Regulatory Developments  
Rhea Hale, AF&PA, **James Rosser**, Forest Products Assn of  
Canada, and **Pertti Laine**, Finnish Forest Industries Federation

3:30 pm – 5:00 pm

**Session 32: Evaporator Panel Session – Part II**

Continuation of Bandwidth Follow-up (from 2006  
Study): Black Liquor Evaporation, **Tim Patterson**,  
IPST @ Georgia Institute of Technology

3:30 pm – 5:00 pm

**Session 33: Boiler Operations**

Session Chair: **Chris Suggs**, Sonoco

Automatic Spout Cleaning, **Phil McAllister**, Diamond  
Power International

Control of NOx Emissions from Hog Fuel Boilers,  
**Allan Walsh**, Jansen Combustion & Boiler Technology

Induction Heat Tube Extraction, **Wade Blaser**, Babcock  
& Wilcox

3:30 pm – 5:00 pm

**Session 34: Kraft Liquor Corrosion—Reports from the Front Line**

Session Chair: **Steve Lukezich**, Diamond Power Int.

Corrosion and Stress Corrosion Cracking of Different Duplex  
Stainless Steels in Pulping Liquors, **Ananya Bhattacharya**,  
Graduate Student, Georgia Institute of Technology

Corrosion of Stainless Steel in High Solids Black Liquor,  
**Margaret Gorog**, Weyerhaeuser

Cracking of Pin-Studded Carbon Steel Waterwall Boiler  
Tubes, **Joey Kish**, FP Innovations, Paprican

3:30 pm – 5:00 pm

**Session 35: Advancing the Biorefinery for Wood**

Session Chair: **Lucian Lucia**, NCSU

A Biorefinery Approach: Non-Sulfur Pulping with Partial  
Lignin Recovery and Conversion, **Todd Bolton**, SUNY

Evaluation of Wood-Based Biorefinery Options for Pulp  
and Paper Mills, **Theodora Retsina**, American Process Inc.

34-3 - 4:30 pm: Biorefinery Discussion

3:30 pm – 5:00 pm

**Session 36: Current Issues in Air**

Session Chair: **Tammy Wyles**, Georgia-Pacific

New Source Review Reform—The Challenges Ahead,  
**Tammy Wyles**, Georgia-Pacific

Case Study: PSD Permitting for Petcoke Fuel in a Lime Kiln,  
**Phil Cobb**, Golder Assoc.

**Wednesday, October 24, 2007**

6:45 am – 8:30 am

**Session 37: Hot Topics Breakfast**

Group discussions of latest technical/production  
developments and operating problems

8:30 am – 10:00 am

**Session 38: Advances in Eucalyptus Pulping**

Session Chair: **Gail Sherson**, FP Innovations, Paprican

Mixtures of Eucalyptus Grandis x Eucalyptus Urophylla and  
Pinus Taeda Wood Chips for the Production of Kraft Pulp  
using the Lo-Solids Process, **Francides Silva**, University of  
Sao Paulo, and **Ana Gabriela Monnerat Vota**, Carvalho, **Vera  
Sacon**, and **Eduardo Patelli**, Votorantim Celulose e Papel, Brazil

Lo-Solids Kraft Pulping off Eucalyptus Wood  
**Jose Gomide**, Universidade Federal Vicosa, Brazil

Kraft Pulping of Eucalyptus with Anthraquinone,  
Polysulfide, and Surfactant, **Francides Silva**, University  
of Sao Paulo, Brazil

8:30 am – 10:00 am

**Session 39: Advances in Non-Wood Processing – Part I**

Session Chair: **Jairo Lora**, Green Value SA

Nonwood Fiber Raw Materials and the Biorefinery,  
**Robert Hurter**, HurterConsult Inc.

Complete Hydrolysis of Bamboo Fibers in Formic Acid,  
**Shijie Liu**, SUNY ESF

Steam Explosion Pre-treatment on Alkali-Oxygen Pulping  
of Bamboo, **Wikhan Anapanurak**, Kasetsart University

8:30 am – 10:00 am

**Session 40: Advances in Chemical Recovery**

Session Chair: **Jim Dickinson**, The Babcock & Wilcox Co.

The Solubility of Recovery Boiler Precipitator Ash,  
**Daniel Saturnino**, University of Toronto

Process and Economic Impact of Dead Load Chemicals  
in the Kraft Pulping and Recovery System, **Thomas  
Grace**, T.M. Grace Co.

AF&PA Recovery Boiler Program Update. **Tom Grant**, AF&PA

8:30 am – 10:00 am

**Session 41: Details, Details, Details – Specifying Quality into Your Process Plant**

Session Chair: **Alex Nadezhdin**, Norbord

Post-Fabrication Cleaning in the Pulp and Paper Industry,  
**Elisabeth Torsner** and **Chris Baxter**, Outokumpu Stainless Inc.

Welding of Duplex Stainless Steels, **Ralph Davison**,  
Technical Marketing Resources

Understanding How Changes in Pressure Vessel Codes  
May Impact Pressure Vessel Performance, **Patrick  
Sullivan**, Highlander Engineering Services

8:30 am – 10:00 am

**Session 42: Water Issues**

Session Chair: **Bill Jernigan**, Georgia-Pacific

Water Consumption in Pulp Mills, **Barry Malmberg**, NCASI

Sheldon Mill Environmental Site Assessment: A Case Study of the Texas Risk-Based Process, **Nicole Roy**, Abitibi-Consolidated

Identification and Reduction of Juvabione, a Main Constituent of Inhibitory Effects on Ceriodaphnia Dubia Reproduction, in a Pulp and Paper Mill Effluent Using Todomatsu, **Abies Sachalinesis**, Mast, **Hiroshi Araki**, Japan Pulp and Paper Research Institute

10:30 am – Noon

### Session 43: Advances in Non-Wood Processing –Part II

Session Chair: E. **Kendall Pye**, Lignol Innovations

Comparison of the Properties of Paper Produced from Empty Fruit Bunches (EFB) Using a Semichemical Process with an OCC Fluting Paper, **Alberto Gonzalo**, University of Zaragoza

BioRegional MiniMill Technology - Report on UK Industrial Scale Trials, **Sue Riddlestone**, BioRegional MiniMills UK Ltd

Wastewater Treatment of Papermaking Tobacco Leaf with Anaerobic Granular Sludge, **Yi Hou**, National Engineering Research Center of Papermaking & Pollution Control, South China University of Technology

Characterization and Evaluation of Dhaincha (*Sesbania aculeata*) as Papermaking Fiber, **M. Sarwar Jahan, D.A.**, **Nasima Chowdhury**, and **M. Khalidul Islam**

10:30 am – Noon

### Session 44: Measurement Techniques for Effective Pulping

Session Chair: **Mike Schofield**, Hercules

Improved Methods for Measuring Residual Effective Alkali in Kraft Black Liquors - Part 1: Absolute Measurement by Capillary Electrophoresis, **Joseph Sullivan**, FP Innovations, Paprican

Improved Methods for Measuring Residual Effective Alkali in Kraft Black Liquors - Part 2: Comparison of Titration Methods, **Theodore Radiotis**, FP Innovations, Paprican

Single Fiber Lignin Distributions Based on the Density Gradient Column Method, **Alan Rudie**, USDA Forest Products Lab

10:30 am – Noon

### Session 45: Green Power Panel Session

Session Chair: **Ed Smith**, SP Newsprint

A special panel comprised of a green power generator, marketer/purchaser, certifier, and user explore what green power is specifically, its sources, types, RECs, etc., and looks at how the markets for RECs work, what the buyer requires after the sale, what the potential value is, etc.

10:30 – Noon

### Session 46: Data Reconciliation

Data Reconciliation 101- Challenges and Benefits, **Luc Laperriere**, CIPP at UQTR

Mill Information System uses Dynamic Data Reconciliation to Get Accurate Energy Accounting, **Larry Wasik**, Aurel Systems, **Dave Tannar**, Catalyst Paper, and **Dave Alexander**, 3Sigma  
Process Business Data Reconciliation in the Pulp and Paper Industry, **Milan Korbek**, Ecole Polytechnique, **Laurent Garriques**, OSISoft Canada, **Paul Stuart**, Ecole Polytechnique

10:30 – Noon

### Session 47: BART Modeling

Session Chair: **Daniel Diehl**, Bowater

BART Exemption Modeling for the Pulp and Paper Industry, **Steve Marks**, Golder Assoc.

Possible Alternative BART Compliance Program, **Marc Cone**, Maine DEP

BART Control Determinations—Lessons Learned, **Sal Mohammad**, Golder Assoc.

1:30 pm – 3:00 pm

### Session 48: Dealing with Black Liquor

Session Chair: **Joe Wilson**, Star-North America

Influence of Kraft Black Liquor Components on the Performance of Silicone Foam Control Agents, **Sung-Hsuen Chao** and **Laurent Vermeire**, Dow Corning, and **Torolf Laxen**, SciTech-Service Oy

Improving Washing Efficiencies in the Kraft Pulp Mill with New Defoamer Technology, **Philip Hoekstra**, Buckman Laboratories

1:30 pm - 3:30 pm

### Session 49: Semichemical Processing

Session Chair: **Leon Livingstone**, Neill & Gunter Ltd.

Condensate Chemistry in NSSC Evaporators, **Wynn Douglas** and **Bett Antes**, Smurfit-Stone Container Corp.

1:30 pm – 3:30 pm

### Session 50: Improving Pulp Processing

Session Chair: **Deni Barton**, Hercules

Efficient Use of Low-Temp and Low-Pressure Steam for Heating Different Media by Dynamic Steam Blending, **Ludwig Michal**, Andritz AG

49-2 - 2:00 pm: No-Load Characterization of a Low-Consistency Disc Refiner for an Effective Application of Refining Theories, **Ruben Bordin**, Tembec R&D Kraft

1:30 pm – 3:30 pm

### Session 51: Advances in Non-Wood Processing - III

Session Chair: **Robert Hurter**, HurterConsult Inc.

Novel Feedstocks—Future Revolutions in Papermaking?, **Keijo Hytonen**, Chempolis Oy

Fines Study in Bleached Pulp from Sugar Cane Bagasse, **Juan Carlos Sadovnik**, PROPAL S.A

The Role of Nonwood Fines Constituents on Pulp and Paper Properties, **Paiva Rousu**, Lappeenranta University of Technology, Finland

Research on Cotton Bast Pulping Using Alkaline Peroxide BIVIS Pulp Method, **Hu Zhijun**, South China University of Technology

1:30 pm – 3:30 pm

### Session 52: Gains in Energy Efficiency

Session Chair: **Gregory Burns**, MeadWestvaco

A Tool for Simulating Energy Efficient Evaporation Using Excess Heat in Kraft Pulp Mills, **Marcus Olsson**, Chalmers University of Technology

Energy, Water, and Chemical Savings through Optimization and Improved Control of Existing Equipment, **Carol Pullen**, Hach Co.

Achieving High Efficiency Thermocompressor Operation, **Ken Hill**, **Jim Maggard**, and **Jerry Timm**, Kadant Johnson

Prevention of Elements Leaching from Coal Ash by Adding Fixation Chemicals, **Makoto Iwasaki**, **Kaori Inoue**, and **Kazuya Ikeshima**, Oji Paper Co.

## Discounted Air Travel



Delta is the official airline for all TAPPI events. For Special Rates, book your flight online at the conference web page: [www.tappi.org/07epe](http://www.tappi.org/07epe). Simply scroll to the bottom of the webpage and click on the Delta Logo.

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## Hotel Information

A block of rooms at the Hyatt Regency Jacksonville Riverfront has been reserved at a discounted rate for TAPPI's 2007 EPE Conference participants.

Hyatt Regency Jacksonville Riverfront  
225 Coast Line Drive East  
Jacksonville, FL 32202 USA  
+1.904.588.1234 (International)  
1.800.223.1234 (US)

To reserve your room, call 800.233.1234 (in the US) or +1.904.588.1234 (International) and be sure to mention your attending the EPE Conference. You can also reserve your room online at:

<http://jacksonville.hyatt.com/groupbooking/jaxrjtapp2007>

Discounted rates are as follows: \$135 (single/double) plus applicable tax if your room is reserved no later than Friday, September 28, 2007. Please note: Due to the annual Georgia vs. Florida football game, room rates will start at \$379 per night on October 26 and October 27. Please plan your trip accordingly.

Be sure to reserve your room by Friday, September 28, 2007 and mention that you're attending TAPPI's 2007 EPE Conference.

## Spouse / Guest Program

Why should you register for the Spouse/Guest Program you ask? Because it's a great place to meet new friends, includes entrance with conference registrant for receptions, a continental breakfast Monday, Tuesday and Wednesday, a special "Welcome to Jacksonville Presentation" Monday morning, a self-guided tour of St. Augustine on Tuesday, the "Traditional My Home Town Gift Exchange" and a group activity on Wednesday. Spouse/Guest Program Registration Fees is \$50 if registered by September 21, or \$75 onsite. See registration form to sign-up.

## PaperChase Run

BE&K, Inc. is organizing the 25th Annual PaperChase at the 2007 TAPPI Engineering, Pulping, Environmental Conference. The PaperChase will feature a 5k run/1.5 mile walk. Prizes will be given for recognition of achievement for 1st, 2nd, and 3rd Place in both the 5k Run/Men and 5k Run/Women. Children may participate at no charge; however, for those who want a T-shirt, a donation is suggested. The entry fee is a minimum donation of \$20. Proceeds from the PaperChase are donated to endowed scholarships at regional schools. The PaperChase is scheduled for 7:00 am, Tuesday, October 23, 2007. Participants are to meet in the Hyatt Regency Jacksonville lobby. If your company would like to become one of those many companies who have joined in the tradition of sponsoring the PaperChase, please contact Bo Gilbert 205-972-6303 ([gilbertbo@bek.com](mailto:gilbertbo@bek.com)) or Elaine White at 205-972-6619.

**To register for the PaperChase, complete the form below and submit it by mail:**

Bo Gilbert  
BE&K, Inc.  
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Birmingham, AL 35243  
**E-mail:** [gilbertbo@bek.com](mailto:gilbertbo@bek.com) • **Fax:** 205-972-6807  
**In person:** Monday, October 22, 2007, at the conference.

Name: \_\_\_\_\_

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Yes, sign me up for the PaperChase, October 23, 2007:  
My Check for \$\_\_\_\_\_ (Minimum donation is \$20), payable to BE&K, Inc. is enclosed.

No, I cannot attend the PaperChase but I have enclosed my check for \$\_\_\_\_\_ (Minimum donation is \$20), payable to BE&K, Inc. In consideration of the acceptance of my entry, I do hereby waive and release any rights and claims for damage I may have against all sponsors of the PaperChase Fun Run.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

### I will participate in the:

5k Run/Men  5k Run/Women  1.5 mile Walk

### My T-Shirt size is:

Large  X-Large  XX-Large

# REGISTRATION FORM

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OCTOBER 21-24, 2007

TAPPI - 2333

**1. WHAT TYPE OF COMPANY DO YOU WORK FOR? (choose only one)**

- Pulp and Paper/Paperboard Manufacturing (1)
- Paperboard Packaging Integrated Converting Plant (4AD)
- Paperboard Packaging Independent Converting Plant (4AO)
- Paperboard Packaging Headquarters (4AH)
- Independent Consultant: Engineering, Technical Production or Research (2)
- Manufacturer of Machinery, Equipment, Chemicals or Supplies (7)
- Woodlands Operation (3)
- Flexible Packaging Converting Plant (4BO)
- Flexible Packaging Headquarters (4BH)
- Dealer or Distributor of Supplies (8)
- University Professor (9A)
- Full Time Student (9B)
- University Library (9C)
- Press (10A)
- Library (10B)
- Association (10C)
- Government (10D)
- Retired (13)
- Nonwovens (14)
- Printing/Graphic Arts (15)
- Industry Customer (End User) (16)
- Allied to the Industry (12)

**2. WHAT IS YOUR PRIMARY JOB FUNCTION? (check one)**

- Librarians – Corporate (A)
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**3. WHAT IS YOUR PRIMARY INDUSTRY? (check one)**

- Pulp Mill Only (P)
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- Paper/Paperboard Mill Only (R)
- Independent Operations or Converting Plant (O)
- Integrated Pulp/Paper/Paperboard Mill (D)

**4. HOW DID YOU HEAR ABOUT THE CONFERENCE?**

- Tappi.org website
- Email
- Brochure
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- Other: \_\_\_\_\_

**5. WHEN CHOOSING A CONFERENCE THE MOST IMPORTANT FACTOR TO ME IS:**

- Registration Fee
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Do you require special accommodations for handicapped access?  Yes  No

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- 3) Fax completed registration form by fax to +1.770.209.7206
- 4) Phone 1.800.332.8686 (US), 1.800.446.9431 (Canada) or +1.770.446.1400 (Worldwide)
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Please circle: Mr. Ms. Mrs. Dr. Sr. Jr.

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Registration Fee (circle only one) • All fees are in US Dollars.	On or Before Sept. 21 2007	After Sept. 21 2007
Member*	\$1,100	\$1,995
Non Member	\$1,650	\$2,995
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Single Day Registration – Non Member	\$910	\$1,695
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Speaker, Single Day Indicate day: _____	No charge	No charge
Group Discount – Member* (three or more attending from the same company, registrations must be received together)	\$825	\$1,495
Group Discount - Nonmember (three or more attending from the same company, registrations must be received together)	\$1,240	\$2,245
Retired Member	\$605	\$1,095
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Bleach Plant Operations Workshop (Sunday, October 21)	\$50	\$75

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