

Engineering, Pulping, Environmental Conference

8/28/2005 - 8/31/2005

Philadelphia Marriott

Philadelphia, PA

8/28/2005		8:30:a.m. - 4:00:p.m.
Session: 1		Biological Wastewater Treatment Workshop
		<u>Session Chair</u>
		Michael H. Foster, Env. Bus. Specialists L.L.C.
1 - 1	8:30 am	ASB Optimization and Troubleshooting Michael H. Foster, Env. Bus. Specialists L.L.C., Speaker
1 - 2	12:30 pm	Activated Sludge Troubleshooting W. Wesley Eckenfelder, Jr., AquAe Ter Inc., Speaker
8/28/2005		8:00:a.m. - 4:00:p.m.
Session: 2		Bleach Plant Workshop
		<u>Session Chair</u>
		Thomas J. McDonough, Consultant
2 - 1	8:00 am	Welcome and Introductions Thomas J. McDonough, Consultant, Speaker
2 - 2	8:15 am	Principles, Chemicals, Stages and Sequences Thomas J. McDonough, Consultant, Speaker
2 - 3	9:00 am	Environmental Aspects of Bleaching Thomas J. McDonough, Consultant, Speaker
2 - 4	9:45 am	Oxygen Delignification Thomas J. McDonough, Consultant, Speaker
2 - 5	10:15 am	Chlorine Dioxide Delignification Douglas C. Pryke, Consultant, Speaker
2 - 6	10:45 am	Oxidation Alkaline Extraction Richard M. Berry, PAPRICAN, Speaker
2 - 7	11:45 am	Chlorine Dioxide Brightening Douglas C. Pryke, Consultant, Speaker
2 - 8	12:15 pm	Peroxide Delignification and Brightening Richard M. Berry, PAPRICAN, Speaker
2 - 9	12:45 pm	Optimization of ECF Bleaching Douglas C. Pryke, Consultant, Speaker
2 - 10	1:15 pm	Ozone, Enzymes and TCF Thomas J. McDonough, Consultant, Speaker
2 - 11	2:00 pm	Hexenuronic Acids and Prehydrolysis Richard M. Berry, PAPRICAN, Speaker
2 - 12	2:30 pm	Mixing, Retention and Washing Thomas J. McDonough, Consultant, Speaker
2 - 13	3:00 pm	Bleach Plant Materials Andrew Garner, , Speaker
2 - 14	3:30 pm	Process Control Douglas C. Pryke, Consultant, Speaker

8/28/2005	2:30:p.m. - 4:00:p.m.	
Session: 3	Enzymes at Work: An Introduction of Enzyme Technologies for Forest Product Industry	
	<u>Session Chair</u>	
	Philip M. Hoekstra, Buckman Laboratories Inc.	
8/28/2005	4:00:p.m. - 6:00:p.m.	
Session: 4	Global Paper Recycling Research Trends and Needs	
	<u>Panel Moderator</u>	
	Junyong Zhu, USDA Forest Products Lab	
	Mahendra R. Doshi, Progress in Paper Recycling	
4 - 1	4:00 pm	Panelists
		Zhan Huaiyu, South China Univ. of Technology
		Gerard Galland, Centre Technique Du Papier
		Loreen D. Ferguson, SCA North America Tissue Division
8/29/2005	8:30:a.m. - 10:00:a.m.	
Session: 5	Opening Session and Awards Ceremony	
8/29/2005	10:30:a.m. - 12:00:p.m.	
Session: 6	State of the American Pulp And Paper Industry	
	<u>Session Chair</u>	
	Thomas J. McDonough, Consultant	
	<u>Speaker</u>	
	James McNutt, Ctr. Paper Bus. & Ind Studies	
8/29/2005	10:30:a.m. - 12:00:p.m.	
Session: 7	Pulp & Paper Nutrient (Panel)	
	<u>Panel Moderator</u>	
	Robert M. Stein, Aware Environmental Inc.	
7 - 1	10:30 am	Nutrient Regulations
		John Kennedy, State of Virginia, Panelist
7 - 2	10:30 am	Nitrogen Control in Pulp and Paper
		W. Wesley Eckenfelder, Jr., AquAe Ter Inc., Panelist
7 - 3	10:30 am	Phosphorus Control in Pulp and Paper
		Robert M. Stein, Aware Environmental Inc., Panelist
7 - 4	10:30 am	Case Histories
		Michael H. Foster, Env. Bus. Specialists L.L.C., Panelist
8/29/2005	10:30:a.m. - 12:00:p.m.	
Session: 8	Recycle Fiber Supply Issues Panel	
	<u>Panel Moderator</u>	
	Joseph R. Cable, Buckman Laboratories Inc.	

- 8 - 1 10:30 am **The Influence of Asian Imports on the US OCC Market**
William P. Moore, Moore & Associates, Panelist
- 8 - 2 11:00 am **Paper Recovery: Challenges and Opportunities**
Johnny Gold, The Newark Group, Panelist
Cathy Norris, AF & PA
- 8 - 3 11:30 am **TBA**

8/29/2005 10:30:a.m. - 12:00:p.m.
Session: 9 Improved Methods of Alkaline Pulping

Session Chair

Peter W. Hart, MeadWestvaco Corporation

- 9 - 1 10:30 am **Determining the Heat of Reaction of Kraft Pulping**
Charles E. Courchene, IPST at Georgia Tech, Speaker
Thomas J. McDonough, IPST at Georgia Tech
Blair R. Carter, IPST at Georgia Tech
Earl W. Malcolm,
Peter W. Hart, MeadWestvaco Corporation
- 9 - 2 11:00 am **A Quantitative Comparison of the Kinetic Features of Green Liquor-Modified Versus Conventional Kraft Pulping**
Lucian A. Lucia, North Carolina State University, Speaker
Weiping Ban, IPST at Georgia Tech
Dimitris S. Argyropoulos, North Carolina State University
- 9 - 3 11:30 am **Use of Borate in Semi-Chemical Pulping**
John H. Cameron, Western Michigan University, Speaker
Promodh K. Veguru, Western Michigan University

8/29/2005 10:30:a.m. - 12:30:p.m.
Session: 10 Process Engineering & Process Simulation

Session Chair

Loren E. Euhus, Pacific Simulation Metso

- 10 - 1 10:30 am **Dynamic Modeling Of Pressurized Peroxide Stages With Application To Full Bleach Plant Simulation Part II: Mill Applications**
Louis L. Edwards, University of Idaho, Speaker
Barry Malmberg, University of Idaho
- 10 - 2 11:00 am **Process Mapping; Fibers, Energy and Water Management**
Marco Pescantin, Comer SpA, Speaker
- 10 - 3 11:30 am **Multivariate Analysis for the Development of a TMP Simulation Model**
Yang Li, UQTR, Speaker
Luc Laperriere, UQTR
Robert Lanouette, UQTR
- 10 - 4 12:00 pm **Neural Network Model-Based Paper Machine Marginal Cost Curves**
Theodora Retsina, American Process Inc., Speaker
Steven R. Rutherford, American Process Inc.
Patrinos Panagiotis, National Tech. Univ. of Athens
Haralambos Sarimveis, National Tech. Univ. of Athens
Alex Alexandridis, American Process Inc.

8/29/2005	1:30:p.m. - 3:00:p.m.
Session: 11	Pulp & Paper Business Issues
	<u>Session Chair</u>
	Colleen C. Walker, Center for Paper Business
11 - 1 1:30 pm	The Myth of Commodity Pulps Alan F. Button, Buttonwood Consulting LLC, Speaker Hiroki Nanko, IPST @ Georgia Tech David C. Hillman, Dave Hillman Consultants
11 - 2 2:00 pm	Adaptable Biorefinery: Some Basic Economic Concepts to Guide Research Selection Michael Farmer, CPBIS, Speaker
11 - 3 2:30 pm	Global Competitiveness of the U.S. South's Linerboard Sector Thomas G. Harris, Jr., University of Georgia, Speaker Jacek M. Siry, University of Georgia Sara Baldwin, University of Georgia David E Null, Jaakko Poyry Consulting Jose Gonzalez, Jaakko Poyry Consulting
8/29/2005	1:30:p.m. - 2:30:p.m.
Session: 12	Developments in Nonwood Fiber Pulping
	<u>Session Chair</u>
	Robert W. Hurter, HurterConsult Incorporated
12 - 1 1:30 pm	A Simplified Pulping & Bleaching Process for Pith-Containing Nonwoods: Trials on Whole Corn Stalks Medwick V. Byrd, Jr., North Carolina State University, Speaker Robert W. Hurter, HurterConsult Incorporated
12 - 2 2:00 pm	An Improved Environmentally Benign Process for Manufacturing of High Quality Chemical Bagasse Pulp Rakesh K. Jain, Central Pulp & Paper Research Inst., Speaker Arvind G. Kulkarni, Central Pulp & Paper Research Inst. Ashwini Dixit, Central Pulp & Paper Research Inst. Kawaljeet Singh, Central Pulp & Paper Research Inst. R. M. Mathur, Central Pulp & Paper Research Inst.
8/29/2005	1:30:p.m. - 3:00:p.m.
Session: 13	Performance -based Specifications for Government Paper (joint Environmental/Bleaching) Panel
	<u>Panel Moderator</u>
	Carl J. Houtman, USDA Forest Products Lab
8/29/2005	1:30:p.m. - 3:00:p.m.
Session: 14	Recycled Fiber Properties
	<u>Session Chair</u>
	John H. Cameron, Western Michigan University
14 - 1 1:30 pm	Measurement of Fiber Hornification Using High Resolution Thermogravimetric Analysis Sunkyu Park, North Carolina State University, Speaker Richard A. Venditti, Jr., North Carolina State Univ. Hasan Jameel, North Carolina State Univ. Joel J. Pawlak, North Carolina State University

- 14 - 2 2:00 pm **Upgrading OCC and Recycled Liner Pulps by Medium-consistency Ozone Treatment**
Tom McDonough, IPST@ Georgia Tech, Speaker
Miguel Zanuttini, Facultad De Ingenieria Quimica (FIQ-UNL)
Charles E. Courchene, IPST @ Georgia Tech
- 14 - 3 2:30 pm **The Impact of Changing ONP Quality on a Newsprint Mill**
William K. Sacia, Weyerhaeuser Company, Speaker
Jay Simmons, Weyerhaeuser Company

8/29/2005 1:30:p.m. - 3:00:p.m.
Session: 15 New Regulatory Initiatives

Session Chair

Amy M. Marshall, URS Corporation

- 15 - 1 1:30 pm **Regulatory Update**
Robert C. Kaufmann, Georgia-Pacific Corporation, Speaker
- 15 - 2 2:00 pm **Challenges Facing Facilities in 8-Hour Ozone and/or PM2.5 Nonattainment Areas**
Deanna L. Duram, Trinity Consultants, Speaker
- 15 - 3 2:30 pm **Source-Specific Regional Haze BART Assessments (for Regional Haze BART Topic)**
Robert J. Paine, ENSR Corporation, Speaker
David Heinold, ENSR Corporation
Robert M. Iwanchuk, ENSR Corporation

8/29/2005 1:30:p.m. - 3:00:p.m.
Session: 16 Millwide Tanks and Pressure Vessel Inspection Protocols Panel

Session Chair

Joseph R. Kish, PAPRICAN

8/29/2005 3:30:p.m. - 5:00:p.m.
Session: 17 Alternative Caustic Source Roundtable

Session Chair

Peter L. Gleadow, Procylic Consulting Ltd.

- 17 - 1 3:30 pm **Alkaline Extraction in Elemental Chlorine-Free Bleaching Sequences: A Fundamental Review of Physiochemical and Chemical Reactions, and Their Impact on Bleach Plant Operations**
Brian N. Brogdon, Kemira Chemicals Inc., Speaker
Lucian A. Lucia, North Carolina State University
- 17 - 2 4:00 pm **Use of Magnesium Compounds in Place of NaOH**
Aileen R. Gibson, Martin Marietta Magnesia Spec., Panelist
- 17 - 3 4:20 pm **Alternative Caustic Source (or Save Caustic?)**
Richard M. Berry, PAPRICAN, Panelist

8/29/2005 3:30:p.m. - 4:30:p.m.
Session: 18 Developments in Nonwood Fiber Black Liquor Recovery

Session Chair

Medwick V. Byrd, Jr., North Carolina State University

- 18 - 1 3:30 pm **Lowering Cost of Bio-Ethanol Production Using Electrolytic Process**
Ricardo F. Caro, Electrosep Inc., Speaker
Robert W. Hurter, HurterConsult Incorporated

18 - 2 4:00 pm **Treatment of Non-Wood Black Liquors by Electrolysis and Lignin Precipitation**

Jairo H. Lora, Granit S.A., Speaker

Jean-Noel Cloutier, PAPRICAN

Ricardo F. Caro, Electrosep Inc.

8/29/2005

3:30:p.m. - 5:00:p.m.

Session: 19

Climate Change and the Forest Products Industry-The Importance of the Big Picture (Panel)

Panel Moderator

Dale K. Phenicie, Env. Affairs Consulting

Panelist

Dee Gavora, AF&PA

Tom Rosser, FPAC

Reid A. Miner, NCASI

8/29/2005

3:30:p.m. - 5:00:p.m.

Session: 20

Mechanical Pulping

Session Chair

Raymond C. Francis, Empire State Paper Res. Inst.

20 - 1 3:30 pm

The Relationship between Refiner Speed and Energy Consumption in TMP and CTMP

Jeffery S. Hsieh, Georgia Inst. of Technology, Speaker

Tim Wang, Georgia Inst. of Technology

20 - 2 4:00 pm

High-Quality Wood Handling a Prerequisite for High-Quality Mechanical Pulp

Tom Lind, Jaakko Poyry Inc., Speaker

Oksanen Nicholas, Jaakko Poyry Inc.

20 - 3 4:30 pm

Evaluation of Forest Thinning Materials for TMP Production

Junyong Zhu, USDA Forest Products Lab, Speaker

John H. Klunness, USDA Forest Products Lab

Roland L. Gleisner, USDA Forest Products Lab

Doreen Mann, USDA Forest Products Lab

Karen Scallon, USDA Forest Prod. Labs

Eric Horn, BioPulping International

Louis L. Edwards, University of Idaho

8/29/2005

3:30:p.m. - 5:00:p.m.

Session: 21

Residuals Management (Panel)

Session Chair

William E. Thacker, NCASI

21 - 1 3:30 pm

Composting of By-product Solids from the Pulp and Paper Industry

William E. Thacker, NCASI, Speaker

21 - 2 3:30 pm

Fiber Clay from Byproduct to Product

Peter Coleman, Eresco, Inc., Speaker

21 - 3 3:30 pm

Manufactured Topsoil Using Papermill Residuals: Refining the Recipe to Maximize Long-term Soil Fertility

Andrew Carpenter, Northern Tilth, Speaker

8/29/2005	3:30:p.m. - 5:00:p.m.
Session: 22	Engineering/Pulping New Technology Showcase
	<u>Session Chair</u>
	Don R. Sorenson, AMEC
22 - 1	3:30 pm Reduction Of Damage In Blow Lin Dirk A. Lindenbeck, Stainless Valve Company, Speaker
22 - 2	3:37 pm Hydro Dynamics, Inc ShockWave Power TM Reactor Oxygen Delignification System Douglas Mancosky, Hydro Dynamics Inc., Speaker
22 - 3	3:44 pm Boiler Combustion Improvement and NOx Reduction Technology That Extends Boiler Component Lifecycle Al Kozusko, Synterprise Global Consulting, Speaker
22 - 4	3:51 pm Andritz New Technology Presentation: Environmentally Friendly Chip Pre-Steamng Allen Turner, Andritz Inc., Speaker
22 - 5	3:58 pm Process Improvement Using Intelligent Drainage Analysis Kenneth W. Corscadden, OPTest Equipment Inc, Speaker
22 - 6	4:05 pm Introducing Genesis Shuyu Wang, Buckman Laboratories Inc., Speaker
22 - 7	4:12 pm Simplifying the M&D Digester System W. Eric Wiley, Andritz, Speaker
22 - 8	4:19 pm New Steam Heater Revolutionizes Hot Water Market Bruce Cincotta, Hydro-Thermal Corporation, Speaker
22 - 9	4:26 pm Clyde Bergemann Dual Motor and Low Pressure Sootblower Danny S. Tandra, PhD, Clyde Bergemann Inc., Speaker
22 - 10	4:33 pm Novel Brown Stock Washer Defoamer Offers Improved Performance Price Stability for Pulp Producers Lyndon Lauzon, Hercules Inc., Speaker
22 - 11	4:40 pm Energy Monitor - A Neural Network Tool to Help Control Energy Costs on a Daily Basis Robert P. Belling, American Process Inc., Speaker
22 - 12	4:47 pm Automated Laboratory Kappa Number Testing: USE THIS TOOL TO IMPROVE YOUR TESTING CAPABILITIES Barbara Van Lierop, PAPRICAN, Speaker
8/29/2005	3:30:p.m. - 5:00:p.m.
Session: 23	New Source Review Reform Roundtable
	<u>Panelist</u>
	Corey A. Brandt, Glatfelter
	Tony D. Owens, MeadWestvaco Corporation
	John Flade, Pennsylvania DEP
	Kathleen Anderson, US EPA Region III
	Bart Cassidy, Manko, Gold, Katcher and Fox
	Dan Holland, ALL 4 Inc.
	<u>Roundtable Moderator</u>
	John P. Egan, ALL4 Inc.

8/30/2005	7:00:a.m. - 8:30:a.m.
Session: 24	Hot Topic Breakfast
	<u>Session Chair</u>
	Don R. Sorenson, AMEC
24 - 1 7:00 am	Odor Control WWT Stephen E. Huza, FOUR SOME PLUS TECHNOLOGIES, Roundtable Moderator
24 - 2 7:00 am	Environmental Incentive Programs Reid A. Miner, NCASI, Roundtable Moderator
24 - 3 7:00 am	ABS Solids Management Robert M. Stein, Aware Environmental Inc., Roundtable Moderator
24 - 4 7:00 am	Aeration Energy Efficiency Michael H. Foster, Env. Bus. Specialists L.L.C., Roundtable Moderator
24 - 5 7:00 am	Environmental Performance Reporting and Auditing Dale K. Phenicie, Env. Affairs Consulting, Roundtable Moderator
24 - 6 7:00 am	Calculating Yield in Recycled Fiber Systems Terry L. Bliss, Process Consultants Inc., Roundtable Moderator
24 - 7 7:00 am	The Role of Engineering and Maintenance in Assest Protection Martin M. Morris, Mopac Plant/Building Services, Roundtable Moderator
24 - 8 7:00 am	Preventing Injuries Due to Manual Port and Smelt Spout Rodding Simon Youssef, Diamond Power International, Roundtable Moderator
24 - 9 7:00 am	Effects of High Energy Costs on Chemical Recovery Systems Thomas M. Grace, T. M. Grace Company Inc., Roundtable Moderator
24 - 10 7:00 am	Chloride Control/Impacts from Using Cheap Caustic Richard M. Berry, PAPRICAN, Roundtable Moderator
24 - 11 7:00 am	Making O2 Delignification More Effective Thomas J. McDonough, Consultant, Roundtable Moderator
24 - 12 7:00 am	Improving Environmental Performance Through In-Plant Measures Peter L. Gleadow, Procylic Consulting Ltd., Roundtable Moderator
24 - 13 7:00 am	Recovery Boiler Air System Optimization Joseph A. Barsin, Technocrats Inc., Roundtable Moderator
24 - 14 7:00 am	Recausticizing and Lime Kiln Operational Issues Dale R. Sanchez, Vector Process Equipment Inc., Roundtable Moderator
24 - 15 7:00 am	Effects of Modified Pulping on Chemical Recovery Systems Patrik Lownertz, AF-IPK AB, Roundtable Moderator
24 - 16 7:00 am	The Forest Biorefinery-Are We Barking Up the Right Tree? Benjamin A. Thorp, , Roundtable Moderator

24 - 17 7:00 am **Boiler MACT**
Heather McHale, , Roundtable Moderator

8/30/2005 **8:30:a.m. - 10:00:a.m.**
Session: 25 **A Tutorial on Mineral Scale and Trace Metals Management (joint session PMD/AICHE)**

Session Chair

Brian N. Brogdon, Kemira Chemicals Inc.

25 - 1 8:30 am **Fundamental Chemistry of Precipitation and Mineral Scale Formation**
Peter W. Hart, MeadWestvaco Corporation, Speaker
Alan W. Rudie, USDA Forest Products Lab

25 - 2 9:00 am **Non-Process Elements in the Paper Industry**
Peter W. Hart, MeadWestvaco Corporation, Speaker
Alan W. Rudie, USDA Forest Products Lab

25 - 3 9:30 am **Application of Fundamental Principles to Mineral Scale Reduction – Case Studies**
Peter W. Hart, MeadWestvaco Corporation, Speaker
Alan W. Rudie, USDA Forest Products Lab

8/30/2005 **8:30:a.m. - 10:00:a.m.**
Session: 26 **Innovative Waste Water Treatment Opportunities**

Session Chair

Michael H. Foster, Env. Bus. Specialists L.L.C.

26 - 1 8:30 am **Innovative Primary Solids Treatment with Dissolved Air Flotation**
Phil Sparks, Louisiana-Pacific Corp., Speaker
Sam C. White, RMT Inc., Speaker
John Joyce, Louisiana-Pacific Corp.
Anita Doepke, RMT Inc.

26 - 2 9:00 am **Effect of Solids on Activated Sludge Aeration Basin Design for Biological Treatment of Pulp and Paper Mill Wastewater**
W. Wesley Eckenfelder, Jr., AquAe Ter Inc., Speaker

26 - 3 9:30 am **Thermophilic High-Rate Biological Treatment of Kraft Mill Effluent in a Biofilm-Chip MBBR Process**
Asa Malmqvist, ANOX AB, Speaker
Anders Lofqvist, ANOX AB
Ruben Fredrikson, Munksjo Aspa Bruk AB
Thomas Welander, PhD, ANOX AB
Bengt Lindqvist, Munksjo Aspa Bruk AB

8/30/2005 **8:30:a.m. - 10:00:a.m.**
Session: 27 **Better Testing and Process Control**

Session Chair

Gail E. Sherson, International Paper

27 - 1 8:30 am **Flow Cell Imaging Fiber Analysis, a New Way to Characterize Pulps**
Joseph J. OLeary, Techpap Inc., Speaker
Guy Eymin-Petot-Tourtolllet, CTP

27 - 2 9:00 am **A Mill Procedure for Monitoring Fiber Quality Variations**
Geoffrey G. Duffy, University of Auckland, Speaker

27 - 3 9:30 am **New Generation Rotary Consistency Transmitter**
Matti J. Laitinen, Kajaani Process Measurement Ltd., Speaker

8/30/2005 8:30:a.m. - 9:30:a.m.
Session: 28 Maintenance & Mill Engineering I

Session Chair

Jerry D. Kahn, JK Consulting

28 - 1 8:30 am **Reliability Focused Asset Management**
William D. Turner, Jacobs Engineering Group Inc., Speaker

28 - 2 9:00 am **Elements of a Successful Plant Maintenance Program**
Jerry D. Kahn, JK Consulting, Speaker

8/30/2005 8:30:a.m. - 10:00:a.m.
Session: 29 Boiler MACT Tutorial (joint Air Quality/Engineering)

Session Chair

Karin M. Greenacre, RMT Inc.

29 - 1 8:30 am **Boiler MACT Regulations-An Overview**
Ashok K. Jain, NCASI, Speaker

29 - 2 9:00 am **General Provisions Requirements for Boiler MACT Compliance**
Robert C. Kaufmann, Georgia-Pacific Corporation, Speaker

29 - 3 9:30 am **The Boiler MACT for the Forest Products Industry: An Engineering Evaluation Protocol NESHAP for Industrial/ Commercial/ Institutional Boilers and Process Heaters**
Rene Borrel, URS Corporation, Speaker

8/30/2005 8:30:a.m. - 10:00:a.m.
Session: 30 Developments in Enzyme-Assisted and Polyoxometalate Bleaching

Session Chair

Corina Popovici, IOGEN Corporation

30 - 1 8:30 am **Development and Optimization of Biotechnology Use in the Manufacture of Bleached Chemical Pulps**
Carine Kuligowski, Centre Technique Du Papier, Speaker
Michel Petit-Conil, Centre Technique Du Papier
Bernard Brochier, Centre Technique Du Papier
I. Housen, Centre Technique Du Papier

30 - 2 9:00 am **Effect of pH Control on Xylanase Performance in Kraft Pulp Bleaching**
David A. MacEachern, Iogen Corporation, Speaker
Luc Thibault, Iogen Corporation
Peter W. Hart, MeadWestvaco Corporation

30 - 3 9:30 am **Structural Changes of Residual Lignin of Softwood and Hardwood Kraft Pulp upon Oxidative Treatment with Polyoxometalates**
Biljana Bujanovic, PhD, University of Wisconsin-Madison, Speaker
Richard S. Reiner, USDA Forest Products Lab
Sally A. Ralph, USDA Forest Products Lab
Umesh P. Agarwal, USDA Forest Products Lab
Rajai H. Atalla, USDA Forest Products Lab

8/30/2005	8:30:a.m. - 10:00:a.m.
Session: 31	Residuals Management Panel
	<u>Session Chair</u>
	Richard K. Lowe, International Paper
31 - 1 8:30 am	Phosphate Fertilizer Value of Paper Mill Residuals Steve J. Shimek, STS Consultants Ltd., Speaker
31 - 2 9:00 am	Escanaba Paper Company No. 1 Lagoon Restoration/Geotube Project Dave A. DeVet, P.E., NewPage Corporation, Speaker
31 - 3 9:30 am	Program Management and Process Controls for Utilization of Primary and Secondary Paper Mill Sludges in Agricultural, Horticultural, and Miscellaneous Agronomic Beneficial Re-Use Applications David M. Perdick, George B. Wittmer Associates Inc., Speaker
8/30/2005	8:30:a.m. - 10:00:a.m.
Session: 32	Stickies
	<u>Session Chair</u>
	Carl J. Houtman, USDA Forest Products Lab
32 - 1 8:30 am	Measured Macro and Microstickies at an OCC Mill R. Daniel Haynes, Sr., Eka Chemicals Inc., Speaker Jere Koskinen, PTS Munich Sujit Banerjee, IPST At Georgia Tech Ronald Sabo, USDA Forest Products
32 - 2 9:00 am	Drying Section Deposits: Origin Identification and Influence of the Recycling Processes: Deinking and Packaging Line Comparison Thierry Delagoutte, Centre Technique Du Papier, Speaker Josiane Brun, Centre Technique Du Papier
32 - 3 9:30 am	Flotation of Forward Cleaner Rejects Removes High Density Stickies Robert L. DeJong, 2 Fiber Consulting, Speaker
8/30/2005	8:30:a.m. - 10:00:a.m.
Session: 33	Black Liquor and ESP Dust Properties
	<u>Session Chair</u>
	Alarick J. Tavares, Diamond Power
33 - 1 8:30 am	Comprehensive Time Dependent Black Liquor Single Droplet Experiments and Predictions Dale R. Tree, Brigham Young University, Speaker Elvin Ip, Brigham Young University Larry L. Baxter, Brigham Young University Andrew Mackrory, Brigham Young University
33 - 2 9:00 am	Pyrolysis of a Kraft Black Liquor Char Bed under an Impinging Gas Jet Adriaan Van Heiningen, University of Maine, Speaker Thomas S. Connolly, University of Maine Edgardo Schwiderke, University of Maine
33 - 3 9:30 am	Evaluation of the PDR Technique in Order to Analyze the Solubility of Cl- and Na2SO4 Recovery Danielle Jaguaribe, Univ. Federal Da Paraiba, Speaker

8/30/2005	10:30:a.m. - 12:00:p.m.
Session: 34	Tutorial on Recovery System Fouling Mitigation (joint Pulp/Eng)
	<u>Session Chair</u>
	Christopher L. Verrill, IPST@ Georgia Tech
34 - 1	10:30 am Evaporator Fouling 101- Sodium Salt Crystallization and Soluble-scale Fouling Christopher L. Verrill, IPST@Georgia Tech, Speaker William J. Frederick, IPST@Georgia Tech
34 - 2	11:00 am Evaporator Fouling Mitigation-Case Studies Nikolai A. DeMartini, IPST@Georgia Tech, Speaker Christopher L. Verrill, IPST@ Georgia Tech
34 - 3	11:45 am Update of the American Forest and Paper Association Recovery Boiler Program Thomas J. Grant, American Forest & Paper Assn., Session Chair
8/30/2005	10:30:a.m. - 12:00:p.m.
Session: 35	Air/Water
	<u>Session Chair</u>
	Reid A. Miner, NCASI
35 - 1	10:30 am Material Substitution to Reduce Mercury Concentrations in Pulp and Paper Industry Final Effluents Jeff Louch, NCASI, Speaker
35 - 2	11:00 am Understanding Wastewater Treatment Plant Odors at Kraft Pulp Mills Paul S. Wiegand, NCASI, Speaker Diana Cook, NCASI Robert J. Crawford, NCASI Ashok K. Jain, NCASI James Palumbo, NCASI John E. Pinkerton, NCASI
35 - 3	11:30 am Reduction of Odorous Reduced Sulfur Emissions from Kraft Pulp Mills Using Green Liquor Dregs Howard L. Empie, Jr., GeorgiaTech., Speaker Daniel Lane, Degussa Corp.
8/30/2005	10:30:a.m. - 12:00:p.m.
Session: 36	Boiler MACT Control Technology (joint Air and Engineering)
	<u>Session Chair</u>
	Patricia Fleischauer, ENSR International
36 - 1	10:30 am A Review of the Evolving Technologies for Control Of Mercury Emissions From Boilers George S. Dowe, Jacobs Engineering Group Inc., Speaker
36 - 2	11:00 am Boiler MACT Compliance with New Scrubber Technology, A Case Study Magnus Rundqwist, EnviroCare International, Speaker Kimmo Peltonen, Andritz Inc. Marty A. Duckworth, Gulf States Paper Corporation

36 - 3 11:30 am **Innovative Solutions for a Challenging Biomass Fuel and Boiler Upgrade Project**
Joseph R. Strempek, Babcock & Wilcox Co., Speaker
Aaron J. Rose, Babcock & Wilcox Company
Larry A. Hiner, Babcock & Wilcox Company
W. Glass, Gulf States Paper

8/30/2005 **10:30:a.m. - 11:30:p.m.**
Session: 37 **Optimizing the Caustic Extraction Stage**

Session Chair

Daniel Connell, EKA Chemicals Inc.

37 - 1 10:30 am **A Survey of Mills Using Caustic-Saving Extraction Stage Chemistry**
Wayne Bucher, WB Consulting Inc., Speaker
Richard M. Berry, PAPRICAN
James T. Wearing, Noram Engineering

37 - 2 11:00 am **Magnesium Hydroxide: An Alternative Chemical for Pulp Bleaching**
Aileen R. Gibson, Martin Marietta Magnesia Spec., Speaker
Mark Wajer, Martin Marietta Magnesia Spec.
Paul Schmidtchen, Martin Marietta Magnesia Spec.
Tiffany Petrie, Martin Marietta Magnesia Spec.

8/30/2005 **10:30:a.m. - 12:00:p.m.**
Session: 38 **Residuals Management Committee Meeting**

Session Chair

Saul J. Furstein, Georgia-Pacific Corporation

38 - 1 10:30 am **Thinking Outside the Box**
Joseph W. Laubenstein, Synagro Technologies Inc., Speaker

8/30/2005 **10:30:a.m. - 12:00:p.m.**
Session: 39 **Environmental Permitting (Panel)**

Panel Moderator

Dale K. Phenicie, Env. Affairs Consulting

39 - 1 10:30 am **Improving the Environmental Permitting Process**
Dale K. Phenicie, Env. Affairs Consulting, Speaker

8/30/2005 **10:30:a.m. - 12:00:p.m.**
Session: 40 **Microstickies Concentration Measurement Methods (Panel)**

Panel Moderator

Carl J. Houtman, USDA Forest Products Lab
Mahendra R. Doshi, Progress in Paper Recycling

40 - 0 10:30 am **Panelists**
Richard A. Venditti, Jr., North Carolina State Univ.
Thierry Delagoutte, Centre Technique Du Papier
R. Daniel Haynes, Sr., Eka Chemicals Inc.

8/30/2005 Session: 41	1:30:p.m. - 3:00:p.m. PBT TMDL (Panel)
	<u>Panel Moderator</u> TBA <u>Panelist</u> Marc E. Gold, Manko, Gold, Katcher, and Fox J. David Dean, ENTRIX
8/30/2005 Session: 42	1:30:p.m. - 3:00:p.m. Troubleshooting Pulp Mill Operations (Panel)
	<u>Panelist</u> Jeffrey W. Brown, Georgia-Pacific Corporation Sean M. Smith, Rock Tenn Company Michael P. Ferguson, Blue Ridge Paper Products Inc. Jefferson A. Stevens, Bowater Inc. Douglas C. Pryke, Consultant <u>Session Chair</u> Thomas J. McDonough, Consultant
8/30/2005 Session: 43	1:30:p.m. - 3:00:p.m. Novel Methods for Upgrading Recycled Fiber (joint session of the Pulping and Bleaching Committee and the Recycled Fiber Committee)
	<u>Session Chair</u> R. Daniel Haynes, Sr., Eka Chemicals Inc.
43 - 1 1:30 pm	"DBI" Bleaching of Recycled Fibers for the Production of Towel and Napkin Grades Goda Rangamannar, Rohm and Haas Company, Speaker Joseph R. Bettano, Rohm and Haas Company Richard P. Hebert, Rohm and Haas Company
43 - 2 2:00 pm	Enhancement of Wood Pulps by Cellulase Treatment Daniel L. Michalopoulos, Dyadic International Inc, Speaker Brian Murdoch, Dyadic International, Inc. Debayan Ghosh, Dyadic International Inc.
43 - 3 2:30 pm	The Effectiveness of TAED on the Peroxide Bleaching of Mechanical, Chemical, and Recycled Pulp Jeffery S. Hsieh, Georgia Inst. of Technology, Speaker Jane Mathews, Warwick Intl. Group Ltd. John G. Kokoszka, EvCo Research Inc. Chhaya Agrawal, Georgia Inst. of Technology Hong Xiang Xu, Georgia Inst. of Technology
8/30/2005 Session: 44	1:30:p.m. - 3:00:p.m. Air Committee Meeting
	<u>Session Chair</u> Karin M. Greenacre, RMT Inc.
44 - 1 1:30 pm	The New EDR: A Status Report on EPA's NOx Budget Program Revisions and How it Will Impact Subjected Pulp and Paper Mills

8/30/2005	1:30:p.m. - 3:00:p.m.
Session: 45	Corrosion & Materials Selection
	<u>Session Chair</u>
	Andrew Garner, Consultant
45 - 1 1:30 pm	Corrosion of Evaporators Angela Wensley, P.E., Angela Wensley Eng. Inc., Speaker Dave Christie, Bacon Donaldson Consulting Engineers
45 - 2 2:00 pm	Erosion Resistance of Infiltration Brazed Tungsten Carbide Cladding Chad Juliot, Conformal Clad Inc, Speaker D. W. Bucholz, Conformal Clad Inc
45 - 3 2:30 pm	Corrosion and Corrosion Prevention of Digesters Operating with Modern Cooking Processes Casimir E.V. Svensson, Savcor LTD, Speaker Martti T. Pulliainen, Savcor Group Ltd. Oy Martti K. Huttunen, Savcor Consulting Inc. Pasi Niemelainen, Savcor Ltda.
8/30/2005	1:30:p.m. - 5:00:p.m.
Session: 46	Management of Major Capital Projects Around the World Roundtable (SESSION CANCELLED)
8/30/2005	1:30:p.m. - 2:30:p.m.
Session: 47	Improving Mill Operations
	<u>Session Chair</u>
	Bruce P. Archibald, International Paper
47 - 1 1:30 pm	Asymmetrical Washing Liquor Flow Control in Continuous Digester Manne Tervaskanto, University of Oulu, Speaker Timo Ahvenlampi, University of Oulu
47 - 2 2:00 pm	Observation and Visualization of the Chip Compaction Disturbances in Digester Heidi-Maria Puolakka, University of Oulu, Speaker Manne Tervaskanto, University of Oulu Timo Ahvenlampi, University of Oulu
8/30/2005	1:30:p.m. - 3:00:p.m.
Session: 48	Environmental Management Committee Meeting
	<u>Session Chair</u>
	Dale K. Phenicie, Env. Affairs Consulting
48 - 1 1:30 pm	Applications Of Best Available Technologies (BAT) For Integrated Environmental Management Dilip P Chandarana, Century Pulp & Paper, Speaker Rameshwar L. Lakhota, Century Pulp & Paper
48 - 2 2:15 pm	Is Environmental Management System Implementation an Option? (A Panel Discussion) Sarah Burton, RMT Inc., Speaker Daniel A. Curry, RMT Inc., Speaker
8/30/2005	1:30:p.m. - 3:00:p.m.
Session: 49	Recovery Boiler Fouling and Sootblowing
	<u>Session Chair</u>
	James A. Dickinson, Babcock & Wilcox Company

49 - 1 1:30 pm **Field Studies on Composition of Carryover Particles in Recovery Boilers**
Asghar Khalaj-Zadeh, University of Toronto, Speaker
Christopher L. Verrill, IPST at Georgia Tech
Honghi Tran, University of Toronto
David C. S. Kuhn, University of Toronto

49 - 2 2:00 pm **Mill Trial on Low Pressure Sootblower Performance in a Recovery Boiler**
Andrei Kaliazine, University of Toronto, Speaker
Honghi Tran, University of Toronto
Ishaq Jameel, Clyde-Bergemann Inc.
Dan C. Mott, Irving Pulp & Paper Ltd.
Donald McCabe, Irving Pulp & Paper Ltd.
Danny S. Tandra, University of Toronto
Donald E. Cormack, University of Toronto

49 - 3 2:30 pm **An Optimized Recovery Boiler Cleaning System**
Alarick J. Tavares, Diamond Power, Speaker
Simon Youssef, Diamond Power International

8/30/2005 **3:30:p.m. - 5:00:p.m.**
Session: 50 **Optimizing ECF Bleaching**

Session Chair

Wayne Bucher, WB Consulting Inc.

50 - 1 3:30 pm **Improving Chlorine Dioxide Bleaching Efficiency by Selecting the Optimal pH Targets**
Daniel Connell, EKA Chemicals Inc., Speaker
Peter W. Hart, MeadWestvaco Corporation

50 - 2 4:00 pm **Softwood Bleaching Practices in Canada: Analysis of the 2003 PAPTAC Bleaching Committee "Best Practices" Survey**
Douglas C. Pryke, Consultant, Speaker
Paul F. Earl, Paul Earl Consulting Inc.

50 - 3 4:30 pm **Adoption of Chloroform Certification in Lieu of Bleach Plant Effluent Monitoring – A Status Report**
Paul S. Wiegand, NCASI, Speaker

8/30/2005 **3:30:p.m. - 5:00:p.m.**
Session: 51 **Air Fair(SESSION CANCELLED)**

Session Co-Chair

Carole J. Stapper, URS Corporation

Stephen E. Huza, FOUR SOME PLUS TECHNOLOGIES

8/30/2005 **3:30:p.m. - 5:30:p.m.**
Session: 52 **Recovery Boiler Materials Performance**

Session Chair

Margaret E. Gorog, Weyerhaeuser Company

52 - 1 3:30 pm **Metallurgical Characteristics and Performance Experience of Unifuse Overlay Tubes in Black Liquor Recovery Boilers**
George Y. Lai, Corrosion and Metallurgical Consulting, Speaker
Angela Wensley, P.E., Angela Wensley Eng. Inc.

- 52 - 2 4:00 pm **Investigation of a Superheater Tube Cracking Problem**
James R. Keiser, Oak Ridge National Laboratory, Speaker
Gorti B. Sarma, Oak Ridge National Laboratory
Douglas L. Singbeil, PAPRICAN
Francois R. Jette, P.E., Domtar Inc.
Kimberly Choudhury, Oak Ridge National Laboratory
Richard Emerson, Domtar Inc.
Elizabeth F. Walker, Domtar Inc.
Joseph R. Kish, PAPRICAN
- 52 - 3 4:30 pm **Minimizing the impact of Stress Assisted Corrosion in Paper Mill Boilers**
Norris N. Johnston, Hercules Pulp & Paper Division, Speaker
Mark A. Sargent, International Paper
Mel J. Esmacher, GE Water and Process Tech.
- 52 - 4 5:00 pm **Modeling of Recovery Boiler Tube Wall Panels to Investigate the Effect of Attachment Plates on Waterside Corrosion**
James R. Keiser, Oak Ridge National Laboratory, Speaker
Steven J. Pawel, Oak Ridge National Laboratory
Preet M. Singh, Georgia Institute of Technology
Gorti B. Sarma, Oak Ridge National Laboratory

8/30/2005 3:30:p.m. - 4:30:p.m.
Session: 53 Improving Heat Transfer and Heat Recovery

Session Chair

James A. Dickinson, Babcock & Wilcox Company

- 53 - 1 3:30 pm **Reducing Mill Energy Costs with Compact Heat Exchangers and Condensers**
Joe Polito, Alfa Laval Inc, Speaker
Sheldon Young, Alfa Laval Inc
Peter S. Tran, Alfa Laval Inc.

- 53 - 2 4:00 pm **The Economics of Direct Steam Injection**
Bruce Cincotta, Hydro-Thermal Corporation, Speaker

8/30/2005 3:30:p.m. - 5:00:p.m.
Session: 54 Environmental New Technology Showcase

Session Chair

Michael R. Corn, P.E., AquAeTer Inc.

- 54 - 1 3:30 pm **New Probe and Measurement Technologies for TRS Monitoring**
Greg Muldrew, Environmental Systems Corp., Speaker
- 54 - 2 3:40 pm **SBR System Treats Integrated Paper Mill Wastewater in China**
Albert A. Cocci, ADI Systems Inc., Speaker
- 54 - 3 3:50 pm **Pilot Trials on "Filterdynamic®" Technology for Ultra Clarification of Whitewater for Reuse in Place of Fresh Water**
Francis Miller, Jannanco, Speaker
- 54 - 4 4:00 pm **Geotube® used to contain P&P Waste**
Glenn M. Lundin, Ten Cate Nicolon MiraTech Div, Speaker
- 54 - 5 4:10 pm **Geotextile Tube Technology is Environmentally and Economically a Success**
Glenn M. Lundin, Ten Cate Nicolon MiraTech Div, Speaker

- 54 - 6 4:20 pm **Oxycair Solution: New and Unique Technology for Pulp & Paper Secondary Sludge Management**
Daniel Gagnon, PhD, Whaddon Water Management, Speaker
- 54 - 7 4:30 pm **Roadmap to Compliance - Lessons Learned by Industrial Sources Complying with the NOx SIP Call**
Rudi Muenster, VIM Technologies Inc., Speaker

8/30/2005 3:30:p.m. - 5:30:p.m.

Session: 55 Fiber Raw Materials

Session Chair

William S. Fuller, FRM Consulting

- 55 - 1 3:30 pm **Poplar Breeding for Superior Papermaking Fibers**
Samar K. Bose, State University of New York, Speaker
Raymond C. Francis, Empire State Paper Res. Inst.
Soo-Jeong Shin, SUNY-ESF
Alton Brown, SUNY-ESF
Don Riemenschneider, US Forest Service
Robert Hanna, SUNY-ESF
- 55 - 2 4:00 pm **Hybrid Poplar Plantations for the North American Pulp and Paper Industry - History and Future Outlook**
Brian Stanton, GreenWood Resources in, Speaker
- 55 - 3 4:30 pm **U. S. Hardwood Fiber Demand and Supply Situation: Globalization and Structural Change**
Peter J. Ince, USDA Forest Products Lab, Speaker
Irene Durbak, USDA Forest Products Lab
Paul Sendak, USDA Forest Service
- 55 - 4 5:00 pm **Technological Characterization of the New Generation of Brazilian Eucalyptus Clones for Kraft Pulp Production**
Jose L. Gomide, Federal University of Vicosa, Speaker
Jorge L. Colodette, Federal University of Vicosa
Rubens de Oliveria, Federal University of Vicosa
Claudio Mudado Silva, Federal University of Vicosa

8/30/2005 3:30:p.m. - 5:00:p.m.

Session: 56 Recycled Fiber Committee

8/31/2005 7:00:a.m. - 8:30:a.m.

Session: 57 Hot Topic Breakfast

Session Chair

Don R. Sorenson, AMEC

- 57 - 1 7:00 am **CCA/Hard Pipe Issues and Alternatives**
Moira Y. Layman, International Paper, Session Chair
- 57 - 2 7:00 am **Residuals Utilization**
Richard K. Lowe, International Paper, Roundtable Moderator
- 57 - 3 7:00 am **Sludge Dewatering**
Glen Bowan, , Roundtable Moderator

- 57 - 4 7:00 am **EMS Success Stories**
William M. Jernigan, Georgia-Pacific Corporation, Roundtable Moderator
- 57 - 5 7:00 am **Boiler MACT**
Heather McHale, , Roundtable Moderator
- 57 - 6 7:00 am **Making O2 Delignification More Effective**
Gopal C. Goyal, International Paper, Roundtable Moderator
- 57 - 7 7:00 am **Dealing with Evaporator Fouling**
Christopher L. Verrill, IPST@ Georgia Tech, Roundtable Moderator
- 57 - 8 7:00 am **Reducing the Dead Load in Your Recovery Cycle**
Howard L. Empie, Jr., GeorgiaTech., Roundtable Moderator
- 57 - 9 7:00 am **Climate Change**
Reid A. Miner, NCASI, Roundtable Moderator
- 57 - 10 7:00 am **Nutrients & Aeration**
Robert M. Stein, Aware Environmental Inc., Roundtable Moderator
- 57 - 11 7:00 am **Multi-Level Secondary Air**
Andrew K. Jones, International Paper, Roundtable Moderator
- 57 - 12 7:00 am **Primary Air Port Velocity Dampers-Experience with Recent Designs**
Alarick J. Tavares, Diamond Power, Roundtable Moderator

8/31/2005 **8:30:a.m. - 10:00:a.m.**
Session: 58 **Water Quality Committee Wet Testing**

Panel Moderator

J. David Dean, ENTRIX

Panelist

Jim Pletl, Hampton Roads Sanitation District

Paul S. Wiegand, NCASI

8/31/2005 **8:30:a.m. - 9:30:a.m.**
Session: 59 **More Effective Enzyme - Assisted Bleaching**

Session Chair

Wei Wang, Potlatch Corporation

- 59 - 1 8:30 am **Specificity of Kraft Pulp Bleaching With Xylanase - A Key Factor in Cost Benefit Analysis**
Michael G. Paice, PAPRICAN, Speaker
Richard M. Berry, PAPRICAN
Robert Bourbonnais, Videotron
Sophie Labonte, Videotron
Sylvie Renaud, Videotron

- 59 - 2 9:00 am **Discovery and Development of Advanced Enzyme Products to meet the needs of the Pulp and Paper Industry**
Charles W. Hancock, Diversa Corporation, Speaker

8/31/2005	8:30:a.m. - 9:30:a.m.
Session: 60	Advances in Liquor Preparation
	<u>Session Chair</u> Calvin Clark, BE&K, Inc.
60 - 1	8:30 am Recent Advances in the Commercialization of NIR (near-Infrared) Based Analyzers in the Pulping and Recovery Area Russell Hodges, Auburn University, Speaker Gopal A. Krishnagopalan, Auburn University Phillip Woodrow, R. E. Hodges LLC Roy Lightle, Auburn University
60 - 2	9:00 am Alkali Concentration Control in Cooking Liquor with a New Modular Flow-Through Conductivity Sensor Dave Joseph, Emerson Process Management, Speaker
8/31/2005	8:30:a.m. - 10:00:a.m.
Session: 61	Maintenance & Mill Engineering II
	<u>Session Chair</u> Jerry D. Kahn, JK Consulting
61 - 1	8:30 am Energy Conservation and Cost Reduction Through Total Productive Maintenance Dilip P Chandarana, Century Pulp & Paper, Speaker Rameshwar L. Lakhotia, Century Pulp & Paper
61 - 2	9:00 am Positive Displacement Reservoir Breathers: An Active Method of Removing Moisture from Hydraulic Fluids David S. Kolstad, Porous Media, Speaker
8/31/2005	8:30:a.m. - 10:00:a.m.
Session: 62	External and Internal Factors in Gasification
	<u>Session Chair</u> Andrew K. Jones, International Paper
62 - 1	8:30 am The Development and Validation of a Low-Temperature Black Liquor Gasifier Model Mathias Lindstrom, North Carolina State Univ., Speaker Hasan Jameel, North Carolina State Univ. Adrianna G. Kirkman, North Carolina State Univ. Ved P. Naithani, North Carolina State Univ.
62 - 2	9:00 am Black Liquor Gasification at Norampac: An Update Dave G. Newport, Thermochem Recovery Intl., Speaker Robert S. Rowbottom, Norampac Eric J. Connor, Thermochem Recovery Intl.
62 - 3	9:30 am Kinetics of the Direct Causticizing Reaction Between Black Liquor and Titanates During Low Temperature Gasification Adriaan Van Heiningen, University of Maine, Speaker Edgardo Schwiderke, University of Maine Xiaowen Chen, University of Maine

8/31/2005		8:30:a.m. - 10:00:a.m.	
Session: 63		Best Practices: A Tool to Reduce Energy Costs Immediately (sponsored by Agenda 2020, Focus on Energy and Center for Technology Transfer)	
		<u>Panel Moderator</u>	
		Masood Akhtar, Center for Technology Transfer	
63 - 1	8:30 am	Need Analysis	David V. Borowski, Wisconsin Focus on Energy, Speaker
63 - 2	8:50 am	Bench Marking	David E Null, Jaako Poyry Consulting, Speaker
63 - 3	9:10 am	Use Best Practices to Drive Energy Out	Benjamin A. Thorp, Consultant, Speaker
63 - 4	9:10 am	TBA	Theodora Retsina, American Process Inc., Speaker
8/31/2005		8:30:a.m. - 9:30:a.m.	
Session: 64		Environmental Considerations for Firing Alternative Fuels (joint Envr/Eng)	
		<u>Session Chair</u>	
		Cara J. Kurtenbach, Wausau Paper	
64 - 1	8:30 am	Investigations into the Variability in and Control of Dioxins Formation and Emissions from Coastal Power Boilers	Vic C. Uloth, PAPRICAN, Speaker Doreen Mann, USDA Forest Prod. Labs Karen Scallon, USDA Forest Prod. Labs Eric Horn, BioPulping International Louis L. Edwards, University of Idaho
64 - 2	9:00 am	Environmental Considerations Related to Firing Petroleum Coke in Lime Kilns	Bill McPherson, DTE Energy Services, Speaker Michelle Kolozsvary, DTE Energy Services, Speaker
8/31/2005		8:30:a.m. - 10:00:a.m.	
Session: 65		Deinking	
		<u>Session Chair</u>	
		Richard A. Venditti, Jr., North Carolina State Univ.	
65 - 1	8:30 am	New Pulping Strategy for Dip in Tissue Mills	Gerard Galland, Centre Technique Du Papier, Speaker Benjamin Fabry, Centre Technique Du Papier Bruno Carre, Centre Technique Du Papier
65 - 2	9:00 am	Operational Results of Neutral Deinking for Old Newsprint and Potential Application in Asia-Pacific Recycle Mills	R. Daniel Haynes, Sr., Eka Chemicals Inc., Speaker Jim S. Merza, Akzo Nobel John G. Allen, Bowater Pulp & Paper Canada Inc. Jamie McMullen, Tembec Inc Myra Fong, Tembec Inc.

65 - 3 9:30 am **Flotation Deinking of Recycled Paper Aided by Electric Field**
Jeffery S. Hsieh, Georgia Inst. of Technology, Speaker
Akpojotor Shemi, Georgia Tech

8/31/2005 10:30:a.m. - 12:00:p.m.
Session: 66 **Controlling Process Variability**

Session Chair

Gopal A. Krishnagopalan, Auburn University

66 - 1 10:30 am **Optimal Kappa Cooking - a Versatile Tool to Improve Both Cost and Fiber Quality Performance of a Bleached Kraft Mill**
Daniel Connell, EKA Chemicals Inc., Speaker
AnnBritt Forsstrom, EKA Chemicals AB
Jiri J. Basta, EKA Chemicals AB

66 - 2 11:00 am **On the Relationship Between Pulping Temperature and Kraft Pulp Kappa Uniformity at the Single Fiber Level**
Richard R. Gustafson, University of Washington, Speaker
Gauray Rayal, University of Washington
Marianna Arvela, Jaakko Poyry Oy
Jukka Rantamaki, Oy Metsa-Botnia Ab

66 - 3 11:30 am **Process Variability: Laboratory Testing vs. On-line Measurement**
Sean M. Smith, Rock Tenn Company, Speaker
Alison C. Rowat, Metso Automation USA Inc.
Keith Shuttlesworth, Rock Tenn Company

8/31/2005 10:30:a.m. - 12:00:p.m.
Session: 67 **Breakthrough Technologies: A Tool for Substantial Economic Impact (sponsored by Agenda 2020, Focus on Energy and Center for Technology Transfer)**

Panel Moderator

David B. Turpin, MeadWestvaco Corporation

67 - 1 10:30 am **Black Liquor Gasification: The Foundation of the Forest Bio-Refinery "New Value Streams"**
Daniel A. Burciaga, ThermoChem Rec. Int'l Inc., Speaker

67 - 2 10:50 am **Engineered Fillers**
Vijay K. Mathur, G. R. International, Speaker

67 - 3 11:10 am **Alkaline Sulfite Pulping and its Integration with the RTI Absorbion Technology**
Hasan Jameel, North Carolina State Univ., Speaker
Ved P. Naithani, North Carolina State Univ.
Mathias Lindstrom, North Carolina State Univ.
Adrianna G. Kirkman, North Carolina State Univ.
Ragubir Gupta, Research Triangle Inst.
Brian Turk, Research Triangle Inst.

67 - 4 11:30 am **Autocausticizing**
Saied Kochesfahani, U. S. Borax Inc., Speaker

8/31/2005 10:30:a.m. - 12:00:p.m.
Session: 68 **Developments in Causticizing**

Session Chair

Michael H. Schofield, Hercules Inc.

- 68 - 1 10:30 am **Partial Borate Autocausticising Technology - Mill Trial Experiences**
Murray J. Ellis, Carter Holt Harvey, Speaker
Saied Kochesfahani, U. S. Borax Inc.
- 68 - 2 11:00 am **Correlation between Nodule Size and Residual Carbonate Content in Lime Kilns**
Honghi Tran, University of Toronto, Speaker
Mike Gauthier, DMI Peace River Pulp
Shawn Vollicks, Domtar Inc.
- 68 - 3 11:30 am **Treatment of Lime Slaker Grit and Green Liquor Dregs - Current Practice**
Dale R. Sanchez, Vector Process Equipment Inc., Speaker
Honghi Tran, University of Toronto
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- 8/31/2005** **10:30:a.m. - 12:00:p.m.**
Session: 69 **Oxidative Delignification for Improved Fiber Properties**
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- Session Chair**
Brian N. Brogdon, Kemira Chemicals Inc.
- 69 - 1 10:30 am **Medium Consistency Oxygen Delignification Performed with a Hydro Dynamics Controlled Cavitation Reactor**
Peter W. Hart, MeadWestvaco Corporation, Speaker
Douglas Mancosky, Hydro Dynamics Inc.
Daniel A Armstead, Hydro Dynamics Inc.
- 69 - 2 11:00 am **Chemical Modification of Pulp Fibers by Selective Catalytic Oxidation During Oxygen Delignification**
Dongcheng Zhang, IPST @ Georgia Tech, Speaker
Arthur J. Ragauskas, Inst. of Paper Science & Tech.
Xin-Sheng Chai, Inst. of Paper Science & Tech.
- 69 - 3 11:30 am **The Influence of Kraft Cooking Conditions on Fiber Charge of the Flowing Peroxide Bleaching**
Zheng Dang, IPST@Georgia Tech, Speaker
Arthur J. Ragauskas, Inst. of Paper Science & Tech.
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- 8/31/2005** **10:30:a.m. - 12:00:p.m.**
Session: 70 **Sorting the Recycled Fibers**
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- Session Chair**
Terry L. Bliss, Process Consultants Inc.
- 70 - 1 10:30 am **OCC Pulp Quality Improvement at Simpson-Tacoma Kraft Company**
Christopher E. McCarthy, J&L Fiber Service, Speaker
John Hunt, Simpson Tacoma Kraft Company
Kae W. Lee, Simpson Tacoma Kraft Co.
Gregory J. Reiser, Simpson Tacoma Kraft Company
Kenneth A. Coffey, J & L Fiber Services
- 70 - 2 11:00 am **Development of a Bending Stiffness Sensor for Automated Sorting of Recovered Paper**
Richard A. Venditti, Jr., North Carolina State Univ., Speaker
M. K. Ramasubramanian, North Carolina State Univ.
Kalyan C. Katuri, North Carolina State Univ.
- 70 - 3 11:30 am **Effect of Fiber Fractionation on Sheet Properties and Drying Behavior**
Hussam Alkhasawneh, Western Michigan University, Speaker
John H. Cameron, Western Michigan University

8/31/2005	10:30:a.m. - 12:30:p.m.
Session: 71	Boiler NOx Issues
	<u>Session Chair</u>
	Ashok K. Jain, NCASI
71 - 1	10:30 am Site-Specific NOx Permit Limit for Burning SOG in a NSPS Subpart Db Power Boiler Philip K. Smith, Weyerhaeuser Company, Speaker Jerry F. Coker, Weyerhaeuser Company
71 - 2	11:00 am Low-NOx Conversion of 4 PC Boilers Hani Gadalla, RMT Inc., Speaker Andrew M. Redmond, Weyerhaeuser Company George Lala, RMT Inc. Frank Fowler, RMT Inc
71 - 3	11:30 am Impacts of Low-NOx Conversion in 4 Coal-Fired Boilers Robert E Wilson, Bowater Newsprint Division, Speaker Tim McNay, Combustion Solutions Inc.
71 - 4	12:00 pm Nitrogen Oxide Emissions from Recovery Boilers/Pulp Mills – Scandinavian Perspective Esa K. Vakkilainen, Jaakko Poyry Oy, Speaker Kristiina Iisa, Chalmers Univ. of Technology Markku J. Pekkanen, Jaakko Poyry OY
8/31/2005	10:30:a.m. - 11:30:a.m.
Session: 72	BL Gasifier Materials
	<u>Session Chair</u>
	Andrew K. Jones, International Paper
72 - 1	10:30 am Materials Issues In Black Liquor Steam Reforming/Gasification James R. Keiser, Oak Ridge National Laboratory, Speaker Robert DeCarrera, Georgia-Pacific Corporation Bob Rowbottom, Norampac Bruce Pint, Oak Ridge National Lab
72 - 2	11:00 am Fluidized Bed Agglomeration Temperatures as a Function of Impurities Content in Low-Temperature Black Liquor Gasification David M. Dunaway, Brigham Young University, Speaker Larry L. Baxter, Brigham Young University Dale R. Tree, Brigham Young University
8/31/2005	10:30:a.m. - 12:00:p.m.
Session: 73	Energy Economics Tutorial
	<u>Session Chair</u>
	Paul M. Tucker, International Paper
	<u>Speaker</u>
	Theodora Retsina, American Process Inc.
8/31/2005	1:30:p.m. - 2:30:p.m.
Session: 74	Developments in Modified Cooking
	<u>Session Chair</u>
	Gopal C. Goyal, International Paper

74 - 1	1:30 pm	Bleached Hardwood Pulps by the Soda/AQ and MAQ Processes Raymond C. Francis, Empire State Paper Res. Inst., Speaker Samar Bose, SUNY-ESF Nam H Shin, Andritz Inc. Alton Brown, SUNY-ESF S. Omori, SUNY College of Env. Sci. & Forestry
74 - 2	2:00 pm	The Effect of Integrating Polysulfide Pulping and Black Liquor Gasification on Pulp Yield and Properties Mathias Lindstrom, North Carolina State University, Speaker Hasan Jameel, North Carolina State Univ. Ved Naithani, North Carolina State University Adrianna G. Kirkman, NC State University
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8/31/2005	1:30:p.m. - 3:00:p.m.	
Session: 75	Forest Biorefinery: A More Compelling and Profitable Business Model (sponsored by Agenda 2020, Focus on Energy and Center for Technology Transfer) <u>Panel Moderator</u> Benjamin A. Thorp, Consultant	
75 - 1	1:30 pm	Extracting Value Prior to Pulping Thomas E. Amidon, SUNY College Of Forestry, Speaker
75 - 2	1:50 pm	New Value from Residues and Spent Liquor Ryan Katofsky, Navigant Consulting, Inc, Speaker William J. Frederick, IPST @ Georgia Tech, Speaker
75 - 3	2:10 pm	Partnering Opportunities Lori A. Perine, American Forest & Paper Assn, Speaker
75 - 4	2:30 pm	Driving Advances in the Pulp and Paper Space Through Third Party Collaboration Michael J. McMahon, Johnson Controls, Speaker
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8/31/2005	1:30:p.m. - 3:00:p.m.	
Session: 76	Bill Babbington Maintenance Roundtable <u>Roundtable Moderator</u> Jerry D. Kahn, JK Consulting	
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8/31/2005	1:30:p.m. - 2:30:p.m.	
Session: 77	Safety Tutorial <u>Tutorial Moderator</u> David E. White, IPST At Georgia Tech	
77 - 1	1:30 pm	Dust Explosions in the Pulp and Paper Industry Timothy J. Myers, Exponent Failure Analysis Associates, Speaker
77 - 2	2:00 pm	NFPA 70Em Updated, Electrical Arc Flash Jack Bouton Hirschmann, Jr., Oberon Company, Speaker
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8/31/2005	1:30:p.m. - 3:00:p.m.	
Session: 78	Advances in Ozone Delignification for ECF Sequences <u>Session Chair</u> Peter W. Hart, MeadWestvaco Corporation	

78 - 1 1:30 pm **Eucalyptus Kraft Pulp Bleaching: State-of-the-art and New Developments**

Jorge L. Colodette, Federal University of Vicosa, Speaker
Ann Honor Munteer, Federal University of Vicosa
C. M. Gomes, Federal University of Vicosa
M. S. Rabelo, Federal University of Vicosa
Katia M. Eiras, Federal University of Vicosa

78 - 2 2:00 pm **HW Bleach Plant Experiences and Alternatives**

Janne Vehmaa, Andritz-Ahlstrom Corporation, Speaker
Olavi E. Pikka, Andritz Oy

78 - 3 2:30 pm **Modern Bleaching with Powerful Ozone Bleaching**

Solveig Norden, Metso Paper Sundsvall AB, Speaker
Maria Anna Wennerstrom, Metso Paper Sundsvall AB
Sara Eriksson, Metso Paper

8/31/2005 1:30:p.m. - 3:00:p.m.

Session: 79 Recovery Boiler Composite Tube Cracking

Session Chair

Craig Reid, Bacon Donaldson Consulting Eng

79 - 1 1:30 pm **Diagnosis of Conditions Contributing to High Fireside Temperatures and Cracking of Primary Air Port Tubes In Kraft Recovery Boilers**

Laurie A. Frederick, PAPRICAN, Speaker
Joseph R. Kish, PAPRICAN
Douglas L. Singbeil, PAPRICAN

79 - 2 2:00 pm **Reducing Primary Air Port Composite Tube Cracking In A Kraft Recovery Boiler Through Changes In Operation**

Joseph R. Kish, PAPRICAN, Speaker
Laurie A. Frederick, PAPRICAN
James R. Keiser, Oak Ridge National Laboratory
Ibrahim Karidio, PAPRICAN
Douglas L. Singbeil, PAPRICAN
Kim Choudhury, Oak Ridge National Laboratory
Francois R. Jette, P.E., Domtar Inc.

79 - 3 2:30 pm **Heat Transfer Considerations in Tube Temperature Excursions in Recovery Boilers**

Thomas M. Grace, T. M. Grace Company Inc., Speaker
Honghi Tran, University of Toronto