



## CONTENTS:

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Pulp, Paper & Forest Products .....	1
Materials Fabrication .....	2
Municipal Water & Wastewater .....	2
Healthcare .....	2
Agriculture .....	3
Food .....	3
Chemicals, Petroleum and Natural Gas .....	4
Communications Products Listing .....	5
Calendar of Events .....	6

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December 1999

## PULP, PAPER AND FOREST PRODUCTS

### CENTER ACTIVITY

#### 1999 PPFPO Alliances

The EPRI Pulp, Paper and Forest Products Office (PPFPO) enhanced and strengthened numerous industry alliances in 1999. Organizations the PPFPO worked with include:

- Technical Association of the Pulp and Paper Industry (TAPPI)
- Paper Industry Management Association (PIMA)
- Canadian Pulp and Paper Association (CPPA)
- International Electric Research (IERE)
- US Department Of Energy/Office of Industrial Technologies (DOE/OIT)
- Institute of Paper Science and Technology Research Advisory Council (IPST RAC)
- Business Development Executives (BDE)
- EPRI Municipal Water and Wastewater Center (MWW)

In addition, PPFPO sponsored a technical conference at the EPRI NDE (Non Destructive Evaluation) center in Charlotte.

The alliance of EPRI and IPST enables target members to have services performed at member rates. Several members have taken advantage of this by having people from their organization attend training sessions at IPST such as "Introduction to Pulp and Paper Technology".

Another service available to EPRI PPFPO target members is the use of IPST Laboratory facilities for activities such as Chemical Analysis, Microscopy & Fiber Analysis, Pulp Analysis, Paper Analysis, Optical Calibration Services and providing of optical property calibration standards. A complete list of laboratory services that impact the bottom line of pulp and paper customers is available upon request.

In the booth at the TAPPI Mega-conference in March, PPFPO displayed the logos of target members, viewable by over 3,000 industry attendees. The IPST RAC, which consists of technology executives from 54 leading forest products companies that are members of IPST, was presented with the list of members of the EPRI PPFPO target.

Presentations given by the PPFPO at these organizations provided background information on EPRI, introduced the IPST Alliance, provided paper industry information, and details about PPFPO activities and technical project developments. Copies of the presentations in Power Point slide format are available through the PPFPO upon request.

By attending meetings and sponsoring conferences with these allies, the PPFPO provided EPRI and EPRI PPFPO target members with positive exposure to the pulp and paper industry.

Please contact Ernie Soczka at the PPFPO with any questions or to request additional information by phone 404-894-6642, fax 404-894-6429 or email [ernie.soczka@ipst.edu](mailto:ernie.soczka@ipst.edu).

FOR ADDITIONAL INFORMATION CALL U.S. & CANADA 800-313-3774 (EXT. 4) • INTERNATIONAL 650-855-2121 (EXT. 4)



## MATERIALS FABRICATION

### PROJECT UPDATES

#### Interesting Results Uncovered with IR Curing

In a study conducted at the University of Southern Mississippi, we have observed problems with blocking agents used in some powder coatings when cured with short wave infrared (IR). If the evaporated material is not sufficiently removed from the surface of the part, it can recondense in the coating and cause poor coating performance. These observations confirm actual observations noted in the field. Preventative action is as simple as providing a small amount of air movement to sweep the evaporated material from the surface of the part. For more details, contact Sal Lovano at [slovano@tarateccorp.com](mailto:slovano@tarateccorp.com).

#### Everyone is Talking Lean

The latest mantra in the manufacturing community is "lean", meaning lean manufacturing. This involves doing more with fewer resources and in a fashion that can respond quickly to changing needs in the marketplace. Many manufacturers are exploring these new techniques and have begun to adopt the "lean" principles. The Center for Materials Fabrication (CMF) will be monitoring developments in this area, reporting to its members and developing projects, if appropriate. For more information, contact Bill Munk at [bmunk@tarateccorp.com](mailto:bmunk@tarateccorp.com).

### MEETING WRAP-UPS

#### CMF Advisory Council Met in Philadelphia

The CMF Advisory Council held their final meeting of the 1900s in Philadelphia on October 25 and 26. Attendees heard presentations on over two dozen candidate projects and activities for the CMF program in 2000. In addition, special guest presentations were made on factory floor automation, plasma depolymerization and experiences in the deregulated market of Pennsylvania. CMF members were asked to submit their priority rankings for next year's program as soon as possible. For additional information on the projects or a ranking sheet, contact Bill Munk at [bmunk@tarateccorp.com](mailto:bmunk@tarateccorp.com).

#### IREA Met in San Francisco

The Infrared Equipment Association (IREA) held a general membership meeting in San Francisco on October 22 and 23 to plan its future as an independent organization. The group has decided to remain independent and not affiliate

with any other organization and the current members are committed to making the organization succeed. Jim Seals has been retained to continue as Executive Director. IREA will continue to work on programs to improve the professional level of the industry and is developing a web site. For more information, contact Jim Seals at [jimseals@msn.com](mailto:jimseals@msn.com).

## MUNICIPAL WATER & WASTEWATER

### PROJECT UPDATE

#### MWW Program Research Collaboration with California Energy Commission Leads to Technology Transfer Extravaganza

The MWW (Municipal Water and Wastewater) Program, along with the California Energy Commission (CEC), is in the midst of a \$2.8 million research program. The program, in collaboration with Southern California water utilities, is designed to expand the use of electrotechnologies in the areas of disinfection and desalination of potable water supplies. This month, the EPRI/CEC team is cosponsoring a workshop in the Los Angeles area to present interim results of the research and to receive feedback from others in the water utility industry. The research program will be completed in the fall of 2000 and two additional workshops are planned at other locations in California. One workshop will be held in San Diego while the final one is planned for Sacramento. For more information contact John Murphy with the Community Environmental Center through the EPRI Customer Assistance Center.

## HEALTHCARE

### PROJECT UPDATES

#### Winter 2000 HCI Conference

The Winter 2000 Healthcare Initiative (HCI) Conference will be held in San Antonio, Texas, February 22-24 at the Marriott Riverwalk. The Marriott Riverwalk is located at 771 East Riverwalk and is located in the heart of the Riverwalk district. You can call and make your room reservations at 210-224-4555. A block of rooms is being held under the name "EPRI Healthcare". The rate of \$149 is being held for our group and can be reserved for February 21 through February 24.



The meeting begins at 9:00 a.m. on February 22 and on that day will include the following topics:

#### *Morning Session*

- Presentation of UVGI Case Study at Queens Hospital in Honolulu, Hawaii
- Presentation of the Hospital Purchasing Report
- Presentation of the Benchmarking Report
- Presentation of key HCI service opportunities

#### *Afternoon Session*

- Presentation of HCI screening tools and building blocks for commercialization / logic and weights used to develop.

The meeting continues on February 23 with a field trip to the Hospital of the Future in Laredo, Texas.

Transportation will be provided and time of departure will be forthcoming. The Chairs Committee Meeting will be held in the evening.

The meeting concludes around 3:00 p.m. on February 24, after the following agenda items are covered:

- Applying Screening Tool to 2000 offering
- Business meeting – Budget- product/service delivery-active project status
- Review of proposed 2000 product and services offerings (weights and logic previously applied)
- Steering Committee Voting Session

A complete and detailed agenda will be available by January 14, 2000. All information regarding this conference is posted on [www.EPRI.com](http://www.EPRI.com) under Healthcare, Conferences and Meetings. View updated information by [clicking here](#).

Please contact Kelly Ciprian at 614-855-1390 with questions or for additional information.

## AGRICULTURE

### MEETING WRAP-UP

#### **EPRI/NYSEG Research Projects Meeting**

Winston Chow, EPRI Area Manager & Center Network Director, Industrial & Agricultural Technologies/Services; Chuck Sopher, Director, EPRI Agriculture and Food Technology Alliance (AFTA) and members of the EPRI Client Relations Team met with New York State Electric & Gas (NYSEG) Corporation's Dick Peterson and Steven Church; Northeast Regional Agriculture and Food Center Manager, Dave Ludington; along with other utility and university representatives November 22, 1999, in Ithaca,

New York. The meeting was held to discuss on-going and new research projects at the EPRI/NYSEG sponsored Northeast Regional Agriculture and Food Center also located in Ithaca. Discussion topics included brainstorming on future regional projects and leveraging funding. The Northeast Regional Center provides a mechanism to develop and showcase technologies applicable to their region and through its affiliation with EPRI's Agricultural and Food Technology Alliances, provides a national and international connection to disseminate all EPRI information to members of the Agriculture and Food Targets.

### PROJECT UPDATE

#### **New Technology Utilizing Injection of On-site Generated Ozone Gas Into Soil**

To meet the challenge to develop environmentally friendly alternatives to the scheduled phase-out of methyl bromide (to be banned starting 2001) for soil fumigation, SoilZone, Inc. began an EPRI and Edison Technology Solutions sponsored project in 1997. This project was an attempt to develop a new technology utilizing injection of on-site generated ozone gas into soil. In 1998, SoilZone, Inc. conducted ten field trials using the new technology, which could prove valuable to the agricultural and horticultural markets. The results of the field trials are detailed in a final project report entitled "[Ozone Gas as a Soil Fumigant: 1998 Research Program](#)" (TR-113751). (Click on the blue link to view the abstract and to download this publication)

For further information, contact Chuck Sopher at the Agricultural Technology Alliance through the EPRI Customer Assistance Center.

## FOOD

### PROJECT UPDATE

#### **Food Irradiation**

Food safety has become a major factor that affects all individuals worldwide. Food safety awareness has increased dramatically as information on food-related illnesses and deaths has been made available to the general population. Food irradiation is a reliable and safe food treatment option that utilizes electrotechnologies to reduce microbial contamination at a competitive price. An EPRI sponsored guide has been compiled to provide the food processing industry with information to evaluate and implement the various options of irradiation systems.



Hundreds of resources were evaluated for inclusion in this guide, which discusses regulatory and governmental issues, includes an explanation of irradiation and how it works, economic analyses, a historical perspective of food irradiation in the United States, food irradiation facilities, consumer attitudes and concerns, definitions, references, and listings, citations and contact sources for additional information on irradiation systems which can be beneficial to energy consumers in the food processing and related industries. The publication entitled "[Resource Guide for Food Irradiation](#)" (TR-113701), completes this project. (Click on the blue link to view the abstract and to download this publication)

For additional information, contact Chuck Sopher at the Food Technology Alliance through the EPRI Customer Assistance Center.

## CHEMICALS, PETROLEUM AND NATURAL GAS

### PROJECT UPDATE

#### US DOE/Advanced Distillation Petroleum Refinery Opportunity

Advanced distillation offers the following benefits:

- For revamps, doubling capacity at 50% of the capital cost of a conventional parallel train.
- For new construction, 30% reduction in capital.
- In addition to the above, 50% reduction in reboiler duty per BBL (barrel) of distillate.

The US Department of Energy (DOE) is aware of this technology and is encouraging the EPRI Chemicals, Petroleum and Natural Gas Center (CPNG) to submit a proposal on it for a RFP (Request for Proposal) they will issue this month. CPNG will have 60 days to submit a proposal and will need a petroleum refinery willing to be involved with solving a real problem. Potential problems in some refineries include a need for a substantial increase in capacity (50% or more) for cat cracker gas plants, hydro cracker gas plants, heavy ends products distillation, distillation for removal of aromatics and sulfur from gasoline, and cat cracker capacity constrained by gas plant capacity, with or without the utilities being at maximum capacity.

CPNG will also need sources of matching funds to use with the DOE funds (up to about \$300,000 per award from DOE, three awards anticipated). An electric utility serving

the site could be a source of funding in conjunction with EPRI. Hyprotech (the owner of the HYSYS process simulation suite, the dynamic modeling software that would be used in the project) could be another source of funding.

A basic project would involve steady state simulation and economic analysis to define an optimum retrofit for a specific distillation system within the refinery (for example, a gas plant), development of a control scheme, and dynamic simulation proof of the control scheme side-by-side with the conventional system. In 1997, the cost for doing such a project for a cat cracker gas plant was estimated to be \$150,000.

An expanded project would involve doing a basic project in parallel with a steady state simulation and economic analysis to define optimum retrofits for all of the rest of the distillation systems in the refinery, defining the economic optimum de-bottlenecking and equipment additions to increase the refinery capacity by 50% and by 100%. The idea is to prove controllability for one distillation system that could be retrofitted on a near-term basis and also determine if it is feasible to substantially increase the capacity of a relatively efficient refinery, so that an old inefficient refinery can be closed.

There are environmental close-down cost issues associated with closing a refinery, but there are sites where more than one refinery is located on the site. This situation would avoid the close-down cost issue. It would also provide a number of existing distillation columns and other equipment that could be used for the retrofit, potentially decreasing the cost of the retrofit. This type of project could be large enough to take full advantage of the \$600,000 type of project DOE is willing to get involved in, and still provide a near-term benefit, identification of potential mid-term projects, and a longer term project aimed at maximizing the benefits.

If you have a petroleum refinery in your service territory that might be a fit for this project, please contact Sam Woinsky at 281-419-1122, fax 281-419-0811 or [epripc1@ix.netcom.com](mailto:epripc1@ix.netcom.com).

### UPCOMING MEETING

#### Industrial Energy Technology Conference (IETC)

The CPNG Center has been heavily involved in the planning of this highly informative annual event for many years. The next IETC, to be held April 4-6, 2000 in Houston, Texas, will usher in the millennium with an exceptionally good program including the Workshop on April 4 and the conference on April 5-6 which will cover the following topics:



- Analysis Methods and Techniques
- Benchmarking of Industrial Operations
- Chemical Manufacturers Association Award Winners
- Combined Heat & Power in the 21st Century
- Deregulation Activities (panel)
- Deregulation Impacts (paper)
- Department of Energy Industries of the Future (panel)
- Efficient Equipment Operations
- Efficient Steam Systems Session 1
- Efficient Steam Systems Session 2
- Industrial Process Improvements
- New and Emerging Technologies (EPRI Chair: Ammi Amarnath)
- Studies in Power Quality Success (EPRI Chair: Sam Woinsky)
- Success Stories in Thermal and/or Water Management (EPRI Chair: Jimmy Kumana)
- System-wide Approaches to Energy Efficiency
- The New World of Computing Solutions

A block of rooms has been reserved at the JW Marriott Hotel, located across from the popular Galleria Shopping Center. Conference and Workshop attendees will receive a reduced room rate of \$139 per night for either single or double occupancy. To secure this special rate, make your reservations on or before Monday, March 6, 2000 and please identify yourself as an IETC registrant. Reservations made after this date are subject to availability and may not be offered at the special rate.

JW Marriott Hotel  
5150 Westheimer  
Houston, Texas 77056  
Phone: 713-961-1500 or 800-228-9290.

For more information on this important event please contact Sam Woinsky at 281-419-1122, fax 281-419-0811 or [epripc1@ix.netcom.com](mailto:epripc1@ix.netcom.com).

## NEW COMMUNICATIONS PRODUCTS

### INSTRUCTIONS FOR VIEWING ALL HYPERLINKED COMMUNICATIONS PRODUCTS

The communications products listed below are available online. Just click your mouse on any of the products listed to access the publications on EPRI.com. Follow EPRI.com instructions for printing, ordering and downloading the products of your choice.

NEW COMMUNICATIONS PRODUCTS		
Ol#	TITLE	DIST. DATE
<b>Materials Fabrication</b>		
TA-113554	<a href="#">IR Curing of Coatings on Steel Strapping: TechApplication</a>	Dec-99
<b>Materials Production</b>		
TR-114481	<a href="#">Identification of Non-Steel Applications for the Microwave Technology Developed to Treat Steel Mill Sludge</a>	Dec-99
<b>Healthcare</b>		
TB-114311	<a href="#">Telehealth: Integrating Technology and Talent to Create a Healing Environment</a>	Dec-99
TR-113357	<a href="#">EPRI Healthcare Initiative June 1999 Meeting</a>	Oct-99
<b>Municipal Water and Wastewater</b>		
TP-114416	<a href="#">Ozone Alternative Disinfection Study for a Large-Scale Wastewater Treatment Plant</a>	Dec-99
<b>Agriculture and Food</b>		
NL-113887	<a href="#">Food Industry Currents: Volume 3, Number 6</a>	Dec-99
TP-114435	<a href="#">Membrane Filtration and Ozonation of Poultry Chiller Overflow Water: Study of Membrane Treatment to Reduce Water Use and Ozonation for Sanitation at a Poultry Processing Plant in California</a>	Dec-99
TR-113701	<a href="#">Resource Guide for Food Irradiation</a>	Oct-99
<b>Fiber, Apparel, Carpet &amp; Textiles</b>		
WM-114637	<a href="#">Textile Manufacturers Meetings: Alabama, California, Georgia, North Carolina, and South Carolina</a>	Dec-99

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## EPRI INDUSTRIAL AND AGRICULTURAL TECHNOLOGIES & SERVICES

### BUSINESS SUMMARY:

Responding to the needs of EPRI members and their customers, activities focus on being the Business Partner of our members by delivering products and services that provide competitive advantages in the marketplace:

- ▶ Supporting Customer Retention and Competitiveness
- ▶ Growing Electricity Market Share
- ▶ Offering New Business Opportunities
- ▶ Increasing Customer Value of Electricity
- ▶ Providing Customers with Energy Solutions

**EPRI Customer Assistance Center**  
**771 Dearborn Park Lane, Suite P**  
**Worthington, Ohio 43085-5720**  
**800-313-3774 (ext. 4) & fax: 800-832-9267**  
**International 650-855-2121 (ext. 4) & fax: 614-846-7306**  
**Email: [askepri@epri.com](mailto:askepri@epri.com)**

## 2000 EPRI INDUSTRIAL CALENDAR OF EVENTS

Jan 18-21	Industrial & Agricultural Product Line Council Meeting	Long Beach, CA
Feb 7-8	Municipal Water & Wastewater Program Meeting	Long Beach, CA
Feb 9	Water & Energy Conference	Long Beach, CA
Feb 22-24	Winter Healthcare Initiative (HCI) Conference	San Antonio, TX
<b>Mar 1-3</b>	<b>CMF &amp; CMP Advisory Council Meetings</b>	<b>St. Petersburg, FL</b>
Mar 8-10	PDC/ASHE Conference	Nashville, TN
Apr 2-6	Second World Congress on Microwave & Radio Frequency Processing	Orlando, FL
Apr 4-6	Industrial Energy Technology Conference	Houston, TX
Apr 12-13	Board of Directors Annual Meeting	Washington, DC
May 1-3	AFTA (Agricultural & Food Technology Alliance) Spring Meeting	Denver, CO
May 22-26	CEM Users Group Meeting 2000	San Antonio, TX
Jun 19-23	Industrial & Agricultural Product Line Council Meeting	Orlando, FL
Jun 21	Water & Energy Conference	Minneapolis, MN
Jun 22-23	Municipal Water & Wastewater Program Meeting	Minneapolis, MN
Jul 10-13	ASHE 37 <sup>th</sup> Conference & Technical Exhibition	Seattle, WA
Oct (TBA)	Municipal Water & Wastewater Program Meeting	Dallas, TX
Oct (TBA)	Water & Energy Conference	Dallas, TX
Nov 2-4	Second EPRI European Conference	Vienna, Austria

**\*Calendar items in bold have been revised or added since last month's Calendar of Events\***

EPRI • 3412 Hillview Avenue, Palo Alto, California 94304 USA • PO Box 10412, Palo Alto, California 94303 USA  
 800.313.3774 • fax 650.855.2121 • [askepri@epri.com](mailto:askepri@epri.com) • [www.epri.com](http://www.epri.com)

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