



CTI NEWS

COOLING TECHNOLOGY INSTITUTE • HOUSTON, TEXAS

VOLUME LIV

SPRING & SUMMER 2012

NUMBER 1



Mark Your Calendar!

Committee Workshop
July 8-11, 2012
El Conquistador
Tucson, AZ

Annual Conference
February 4-7, 2013
Omni Bayfront
Corpus Christi, TX

2012 Committee
Workshop
July 8-11, 2012
Registration Form
on our website
www.cti.org



Inside...

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Jack Bland

The 2012 Annual Conference was a resounding success as measured by the excellent papers presented, the number of table top exhibits, and the great attendance at the general sessions and all of our standing committee meetings.

CTI continues to attract new members to our organization, many of which represent international manufacturers, owner-operators, and suppliers. With the influx of these new attendees and continued membership growth in North America comes a responsibility for CTI to address the demands of the global technical organization which we have become.

As president during this challenging period, I am striving to maintain our classic organizational structure, and still meet these new responsibilities; however, this will require the dedicated involvement of the CTI Board as well as ALL OF THE COMMITTEE/ TASK GROUP CHAIRS AND MEMBERS.

This year the Committee Workshop will be held July 8-11 at the El Conquistador resort in Tucson, Arizona

It was indeed an honor to accept the President's gavel from Jess Seawell at our February, 2011 annual conference in Houston. I look forward to serving as your President for the 2012-2013 term and to help maintain the energy and enthusiasm created by Jess and his committee/ task group chairs as well as all active members of CTI.

<http://www.hiltonelconquistador.com/>

I hope this attractive venue will provide the necessary incentive for a record attendance in order to make serious progress and to finalize many of the most pressing issues facing our association.

As many of you are aware, there are several items related to Thermal Certification, STD-159, STD-202, ECC/Eurovent logistics, Certification Administration transition, R&D project completion, and long Term financial planning, that must be addressed at this workshop and will require unprecedented participation and input by our membership as stated above.

For those who have not attended before, the Hilton El Conquistador resort, in conjunction with the family friendly CTI summer workshop atmosphere, will present a great opportunity for all to enjoy the surroundings of the Arizona desert when not working on CTI business.

Again, many thanks to all of the hard working committees and task groups within CTI who have brought us to this unprecedented opportunity to further expand our role as the pre-eminent global organization for all things related to cooling technology.

Looking forward to seeing you in Tucson in July. CTI needs you there.

Jack Bland
2012/2013 President

Press Release

Contact: Chairman, CTI Multi-Agency Testing Committee

Houston, Texas, 1 May 2012

The Cooling Technology Institute announces its annual invitation for interested drift testing agencies to apply for potential Licensing as CTI Drift Testing Agencies. CTI provides an independent third party drift testing program to service the industry. Interested agencies are required to declare their interest by July 1, 2012, at the CTI address listed.

2012 CTI Board of Directors

Serving as President for 2012 and 2013

Jack Bland
ChemTreat, Inc.



2010-2012

2011-2013

2012-2014

Manufacturers



Frank Foster
Tower Performance
of Texas



Trevor Hegg
Evapco, Inc.



Tom Toth
Midwest Towers, Inc.

Suppliers



Don Zelek
Brentwood
Industries



Phil Kiser
Hach Company



Dean Lammering
Nalco Company

Owner Operators



Denny P. Shea
Shea Consulting
Services, Inc.



Frank Michell
American Electric
Power



Raul Castillo
The Dow Chemical
Company

Meet 2012's Newest Board Members!



Raul Castillo
The Dow Chemical Co.

Raul is a Sr. Metallurgical Specialist for the Dow Chemical Company. Based in Freeport Texas, Raul has focused on corrosion control in the areas of Cathodic Protection, Water Treatment, and Cooling Towers. A member of the site Maintenance Technical Services, Raul provides technical support to over 80 production plants in Texas Operations and many more globally. Filling the role of Contractor Business Specialist (CBS) for those three disciplines, Raul oversees the implementation of aftermarket maintenance contracts as well preparation specifications for new construction. Raul has received a Bachelor 's Degree in Chemistry from St. Mary's University (San Antonio) and a Master's degree from the University of Texas (EL PASO).

Dean received a BA degree from Wabash College - Crawfordsville, IN with a Major in Biology and a minor in Ecology. Dean started with Nalco Chemical Company in 1973 and is still working with them today. working a short stint from 2003 – 2010 with Lonza, Inc. as a Senior Account Manager – Water Treatment. Working with Nalco Dean has served in the areas of Biologist w/ Cooling Water Biocide Development; District Sales Representative – Selling Cooling/Boiler water treatment programs to light industry, commercial buildings, hospitals; District Sales Manager – San Francisco; Product Manager – Cooling Water Chemicals; Marketing Manager – Cooling Water Chemicals; Marketing Manager – Strategic Marketing Group; and today is the Senior Product Manager – Cooling Water.



Dean Lammering
Nalco Company



Tom Toth
Midwest Towers, Inc

Tom is Senior Structural Engineer at Midwest Towers, Inc., Chickasha OK. He is a licensed Professional Engineer in the states of Virginia, New Jersey, Colorado, Oklahoma and Nebraska. His background includes 4 years in the Engineering office of a major Steel Fabricator and 18 years in Consulting Engineering Offices where he first became associated with the Cooling Tower Industry. All told he has 20 years of Cooling Tower Design experience including the last 12 years working for Cooling Tower Manufacturers.

He graduated in 1977 from the New York Institute of Technology with a B.S. Degree in Architectural Technology and received his Masters of Administration Degree in Industrial Management in 1984 from Lynchburg College. He is active on the ASCE Fiber Composites and Standards Committee, the ASME RTP Committee and the ASME BPTCS Project Team on FRP Piping.

Married to his wife Carol for 35 years, he has 3 sons, 1 grand daughter and 2 grand sons.

WT Minutes continued from page 8

organization.

- ASME (Stroman reporting): Municipal wastewater for cooling tower makeup use is the newest form of water reuse under consideration. Kiser proposed setting up a Task Group to address this specific topic since municipal wastewater has not been specifically considered up till now.

6. New Business

- Legionella STD 159 is projected to be public by 2012 CTI Summer Meeting. ASHRAE STD 188P is projected to be public by June 2012.
- Wangerin solicited topic ideas for 2013 CTI Winter Meeting Water Treating Panel Discussion. The main ideas to be moved forward for further development include:
 - After STD 188P and STD159—What Next? (Water Treatment Standards and Compliance)
 - Recycled Water in Cooling Towers (Municipal Wastewater, possibly?)
 - What Type of Cooling System is Best Suited for My Facility?

- Non-traditional/Alternative Water Treatment
- HACCP—How Do We Implement It? (1 person from a certified subject authority to serve on panel)
- Idea proposed to contact a Certified HACCP Implementation Training Group to provide a 2-Day training workshop, possibly tacked on the end of the CTI Winter Meeting in 2013 in Corpus Christi, TX. This would require a good deal of advance notification to all CTI members, for obvious scheduling and cost considerations to be addressed. Cunningham will establish contact with the HACCP Implementation Training Team he knows of, in Long Beach, CA, to determine the overall feasibility of making this a reality.
- Cooling Tower Fill and Basin Cleaning – Bill Howard: Joint Committee effort to be included in the agenda for the CTI Summer meeting.
- Summer Meeting announced: July 8-11, 2012 Tucson, AZ
- Minutes prepared by: Pete Elliott, WT Secretary
- Matt Wangerin, WT Chairman

2012 Annual Conference



(l-r) Jasbir Gill, Nalco Company; Paul J.M. Nelissen, Howden; and Martin Kubicek, FANS A.s.



(l-r) Paul Lindahl, SPX Cooling Technologies; John Chapman, Ashland Water Technologies; Paul Puckorius, Puckorius & Associates; Gregg Mailen, EvapTech, Inc.



(l-r) Robbie McElveen, Baldor Electric Company, Bill Martin, Baldor Electric Company; Magose Abraham Eju, Nigeria LNG Limited; Paul Schook, Dow Microbial Control



(l-r) Michel Monjoie, Monjoie Cooling SPRL; Chris Baron, Ashland Water Technologies; Dan Robinette, Rocky Mountain Water Engineering; Narendra Gosain, Walter P. Moore and Associates, Inc.



(l-r) Peter Nicoll, Modern Water Plc; Christophe Duquennoy, EDF Septen; Tom Weast, Cooling Tower Test Associates, Inc.; Helene Troncin, EDF Septen



(l-r) Rodrigo Romo, Zeta Corporation; Ken Mortensen, SPX Cooling Technologies; Kevin O'Shea, MasterClimbers LLC; John Pilsits, Nalco Company

Speakers and Participants

Educational Seminar



(l-r) Dave Suptic, EvapTech, Inc.; Tom Toth, Midwest Towers, Inc.; John Stacks, Composite Cooling Solutions, LP; Jamie Bland, Composite Cooling Solutions, LLP

Program Committee



(l-r) Phil Kiser, Hach Company; Brandon Rees (Chair), Cooling Tower Depot, Inc.; Don Zelek, Brentwood Industries; Gary Geiger, GE Water and Process Technologies

Passing of the Gavel



After serving 2 years as the CTI Board of Directors president, Jess Seawell, Composite Cooling Solutions, LP passes the gavel on to Jack Bland, ChemTreat, Inc.

Retiring Board Members



Two of the three members that have completed their 3 years serving on the Board of Directors are Tim Facius and Helen Cerra. Thank you for your time and service. (Missing is Jon Bickford of Allient Energy)

Retiring Committee Member



After a number of years of service Jim Baker retires from serving as Chair of the Engineering Standards & Maintenance Committee

Past President's Council



One of many committees serving the CTI organization.

A WORD FROM OUR COMMITTEES

Engineering Standards and Maintenance Committee Annual Conference – Hilton Hotel, Houston, Texas February 6-10, 2012

Chair: Bill Howard, Cooling Tower Depot, Inc.
Vice Chair: James F. Blake, Jr., American Lightning Protection
Vice Chair: Ken Mortensen, SPX Cooling Technologies



(l-r) Ken Mortensen, SPX Cooling Technologies; Bill Howard, Cooling Tower Depot, Inc.; James Blake, Jr., American Lightning Protection

- I. Call to Order/Announcements/Introduction of Attendees - At 1:36 pm, Bill Howard opened the updates. A list of 11 attendees at the closing meeting is available.
- II. Lead Task Group Chair Reports

Wood, Metal, and Concrete Materials Task Group [Bill Howard]

New Guideline, Cleaning of Cooling Towers - The group outlined 2 sections, Basin Cleaning and Disinfection, for the draft document.

- Information, R Seismic Factor – No Report. Expecting a proposal for work and schedule soon.

Mechanical Equipment Task Group [Dave Suptic]

- STD-151 – Variable Frequency Drives The group met and finished a draft document that is now ready for Ad Hoc.
- New Standard – Vibration The group wrote an overview that includes monitoring, baseline development, with Discrete

Frequency Graph. A final draft will be completed in July at the summer meeting.

- Chapter 11 – Electrical Components The group met to plan a major rework to this chapter based on current industry standards.

FRP and Plastics Task Group [Glenn Barefoot]

- New Guideline – Wood to FRP The group met and will expand the outline of the “process for design” of combined structures.
- New Guideline – FRP Fan Stack Design The group met to consider adding this information to STD-203 Industrial Cooling Tower Standard.

Tower Operations Task Group [Jim Baker]

- Chapter 13 – Inspection of Cooling Towers The group met to review current document and approve it for AdHoc Review.
- STD-203 - Industrial Cooling Tower The group met to work from the outline put together for this document.

Hazard & Environmental Protection Systems Task Group [James Blake]

- Chapter 7 (Water) & Chapter 8 (ES&M) Environmental Aspects of Cooling System Operation - The group met with the goal of combining Chapter 7 and Chapter 8. The group is to receive help from Jon Cohen of HOH representing the Water Treatment Committee.
- New Guideline, Field Erection Practices – The group is considering the need for this document and wants to ask customers to define their needs.
- BUL-109 Nomenclature of Industrial Cooling Towers - The group will met to review the draft and is planning to add a few more items and then send the document to AdHoc.

- III. Adjournment – at 2:00PM

CTI Annual Golf Tournament

El Conquistador Course

(www.hiltonelconquistador.com)

Sunday, July 8, 2012

7:45 am Tee Time

Cost - \$60/per golfer



Performance & Technology Committee Meeting Minutes

Annual Conference – Hilton Hotel, Houston, Texas,

February 6-10, 2012

Chair: Ken Hennon, Clean Air Engineering, Inc

Vice Chair: Rich Aull, Brentwood Industries, Inc

Vice Chair: Jean-Pierre Libert, EvapTech, Inc.



(l-r) Jean-Pierre Libert, Evapco, Inc. and Ken Hennon, CleanAir Engineering, Inc

Kenneth Hennon, Chairman, called to order the closing meeting of the Performance & Technology Committee on February 8, 2012 at 4:00 p.m. at the Hilton Houston North Hotel in Houston, TX.

I. OLD BUSINESS: OPEN TASK GROUPS REPORTS

1. Test Code for the Measurement of Sound from Water Cooling Towers: ATC-128; Jean-Pierre Libert, Chair. Group met on February 6. New assignments were made to review the last few sections of the standard. Deadline for review – May 1. An interim conference call/web meeting to be scheduled around mid-May
2. Acceptance Test Code for Water Cooling Towers: ATC-105; Rich Harrison, Chair. Group met on February 7 with 33 in attendance. Past assignments were reviewed. Additional assignments were made with a target completion date of May 1. The committee discussed several items including upper level wind effect and measurement.
3. Standard for Liquid Flow Measurement: STD-146; David Wheeler, Chair. Group met on February 7. Group discussed calculating calibration coefficients as function of Reynolds number as opposed to velocity. Assignments were made to review and update sections of the standards pertaining to other flow meters and reclassify if necessary (normative vs. informative). Rich Aull will issue a specification for the

Pitot tube study which was approved by the Research and Development Committee

4. Standard for Publication of Custom Cooling Tower Thermal Performance Test Results: STD-202; Paul Lindahl, Chair. This group met on February 8 to discuss implementation of the new standard. The group nominated candidates to be forwarded to the CTI President for approval and ultimate assignment to the committee. Suggestions were made to assign representatives from power, industry, and EPC groups.
5. Standard for Thermal Performance Certification of Evaporative Heat Rejection Equipment: STD-201; Frank Michell, Chair. Group met on February 8 with over 30 participants. New assignments were made including: updates to Data-of-Record tables, various cooling tower and heat exchanger configurations, definitions, etc. The consensus of the committee was that the standard should be split in two parts, O&M and Ratings, and could be renamed 201a and 201b. The standard in its current form is not ready to include the certification of open tower – plate heat exchanger combinations through ECC. A conference call or web meeting is scheduled for April 19, 2012

II. MISCELLANEOUS

1. Other open task groups did not meet this time but will be scheduled to meet during the summer 2012 workshop or will provide interim updates. These task groups include: CTI Manual Chapters 2 and 3, Technology Review, PTG-156 (Preparation field test) and PFM-143 (Airflow measurement).
2. There will be a discussion at the next meeting regarding the inclusion of the conductivity method as an optional analytical tool for consideration in the ATC-140 Drift Test Code.
3. A joint session between ES&M, P&T and Water Treatment committees will be scheduled at the next meeting. The drafted standard, Legionellosis Related Practices for Evaporative Cooling Systems Standard (STD-159) requires a cross-committee review which is anticipated to occur around April 2012.

The next meeting will be in Tucson, AZ, July 8-11, 2012.

Meeting was adjourned at 4:16 p.m.

Kenneth W. Hennon, Performance and Technology Chair

Be Sure to sign up for the Monday Evening Dinner

July 9, 2012 - at the *Town Saloon*

• CTI Attendees & Guest - \$75 • Guest 15 & under - \$35 (Price includes: Dinner and Drinks)

Come at 6:00p, stay until 10:00p

Meal detailed on page 12

Water Treating Committee Meeting Minutes

Annual Conference – Hilton Hotel, Houston, Texas,

February 6-10, 2012

Chair: Matt Wangerin, Ashland Water Technologies

Vice Chair: Jim Kanuth, ChemTreat, Inc.

Secretary: Pete Elliott, GE Water & Process Technologies

Coordinator: Jon Cohen, H-O-H Water Technology



(l-r) Matt Wangerin, Ashland Water Technologies; Jim Kanuth, Chem-Treat, Inc.

1. Call to Order - Matt Wangerin, Water Treating Committee Chairman, called the Closing meeting to order at 2:30 P.M. Houston, TX.
2. Attendees - The meetings were very well attended, and attendees from the opening and closing meetings were introduced and recorded under separate file.
3. Minutes - The minutes from the Summer 2011 meeting were approved as written.
4. Task Groups (the following task groups met):
 - Measurement of Corrosion (Geiger)
 - Instrumentation & Control (Dorsey)
 - Microbiological Monitoring WTG-130c
 - Deposit Monitoring WTG-130b (Gill)
 - Non-Chemical Devices (Cunningham)
 - Non-Oxidizing Microbiocides (Cohen)
 - WTG 122-Water Filtration is currently in Board Review
 - WTG 141-Application of Oxidizing Biocides going from Ad Hoc to Board Review.
 - WTG 142-Treatment of Galvanized Cooling Towers Prevent White Rust going from Ad Hoc to Board Review.
 - Bibliography of CTI Technical Papers being reviewed by Chairman
 - Measurement of Corrosion: Wangerin to provide Geiger an electronic copy of STD 149 (Published-2000) for mandatory periodic review and update.
 - Instrumentation & Control: New Chairman is possible for this task group. This meeting welcomed many new participants, with numerous document recommendations being offered. The proposed name for the new document is at this time, "Control of Cooling Water Chemistry". The group will hold one teleconference prior to the CTI Summer Meeting. The official WTG# will be assigned.
 - Microbiological Monitoring: Paul Schook will be permanently replacing Jana Rajan as Chairman. He will obtain all documents established to date, from multiple sources. This group will convene at the CTI Summer Meeting.
5. Liaison Reports
 - AWT (Pierson reporting): Annual convention occurred in October, 2011. It is getting larger each year, consisting of Water treaters and vendors. CTI and AWT possess many similarities in Task Group Formation. Currently AWT is trying to mine universities for its future membership. AWT is still involved in all main water treatment disciplines (Boiler, Cooling, Wastewater). AWT also puts on 2 Technical Training seminars each year.
 - ASHRAE: STD 188P is out and was addressed in the Panel Discussion.
 - EPRI (Micheletti reporting): Sector system was explained. The utility funders meet to decide how research dollars are allocated. Most of the cooling water issues resided within the nuclear sector. The EPRI Cooling Tower Conference is set for the 1st week in August, with abstracts due in this March. Final papers and presentations are due on May 1, 2012. There are currently 2 EPA rules being proposed. The first being 316 B, Clean Water Act, dealing with the adverse effects of Cooling Water Treatment (Once-through effluents, mainly). This will affect 450 power plants by this July, when the proposal is formalized. The second EPA rule deals with Effluent Limitation Guidelines. This represents the first "re-look" at cooling systems in this regard in 30 years, and will be used at the time a plant is setting up its NPDES permit. The principle water discharge characteristics will be focused upon: oil/grease, pH, Temp, TSS, TRC.
 - NACE: No report given.
 - WC (Puckorius reporting): The Orlando meeting was very successful, as many technical papers were presented. The attendance was the highest ever recorded, featuring 15-18 workshops and exhibits. The next meeting is scheduled to take place in San Antonio, TX. The Pittsburgh location may actually be abandoned to the extremely rapid expansion of the

WT Minutes continued on page 3

2012 Committee Workshop Agendas

ENGINEERING, STANDARDS AND MAINTENANCE

Bill Howard - Cooling Tower Depot, Inc., Chair
James F. Blake, Jr. - American Lightning Protection, Vice-Chair
Kenneth Mortensen - SPX Cooling Technologies, Vice-Chair

The summer agenda will include committee work on:

- Wood standards (Redwood, Douglas Fir, Connections, Plywood, etc.)
- Concrete and Corrosion
- Cleaning Cooling Towers
- Rw Factor
- Chapter 11 - Electrical
- Tower Vibration
- Fan Stack Guideline
- Wood to FRP Conversions
- STD-203 Industrial Cooling Tower Standard
- Chapter 8 - Environmental Aspects of Cooling Towers
- Bulletin 109 - Nomenclature
- Legionella



PERFORMANCE & TECHNOLOGY

Ken Hennon - CleanAir Engineering, Chair
Rich Aull - Brentwood Industries, Vice-Chair
Jean-Pierre Libert - EvapTech, Inc, Vice-Chair

Call to Order/Announcements

- ATC-107 Air Cooled Condensers – David Wheeler
- ATC-140 Drift Test – Ken Hennon
- ATC-150 Plume Abatement – Paul Lindahl
- STD-201 Certification Standard – Frank Michell
- STD-202 Publication Standard – Paul Lindahl
- ATC-105 Thermal Test – Rich Harrison
- STD-146 Water Flow Standard – David Wheeler
- Technology Review – Trevor Hegg
- Sound Test Code Implementation – Paul Lindahl

WATER TREATING COMMITTEE

Matt Wangerin, Ashland Water Technologies, Chair
Jim Kanuth, ChemTreat, Inc., Vice Chair
Pete Elliott, GE Water & Process Technologies, Secretary
Jon Cohen, H-O-H Water Technology, Coordinator

- I. Call to Order/Announcements
- II. Introduction of Attendees
- III. Approval of 2012 Annual Conference Meeting Minutes
- IV. Task Group Reports
 - A. WTG-130b - Deposit Monitoring
 - B. WTG-130c - Microbiological Monitoring
 - C. Instrumentation & Control
 - D. Application of Non-Oxidizing Microbiocides
 - E. Non-Chemical Devices / Physical Water Treatment
 - F. Chapter 7
- V. Liaison Reports:

ASHRAE	ASM
AWT	EPRI
NACE	IWC
- VI. Old Business
- VII. New Business

CALL FOR PAPERS

2013 Annual Conference
February 4-7, 2013
OMNI Bayfront Hotel
Corpus Christi, Texas

The following schedule will begin the process for papers presented at the 2013 Annual Conference:

2012

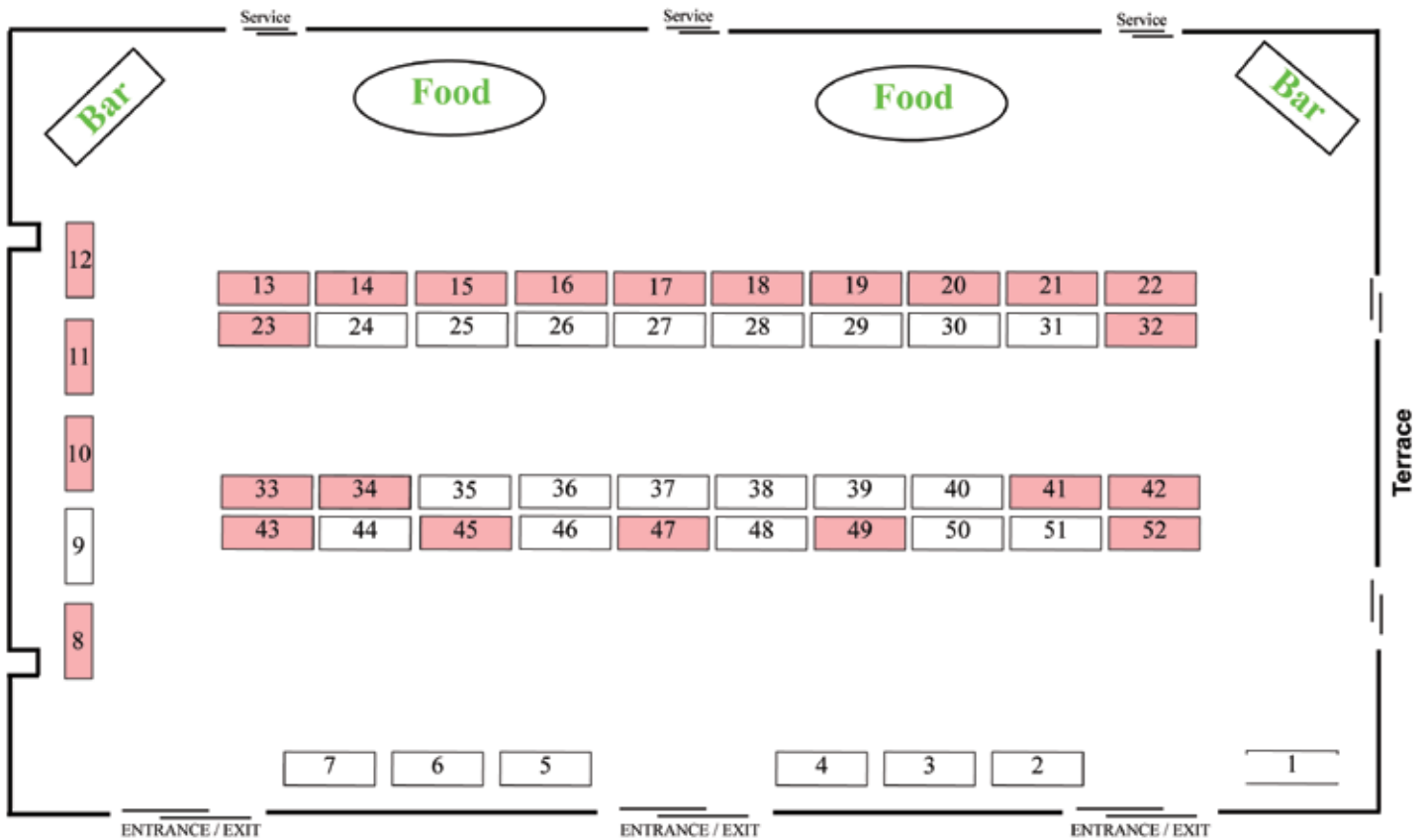
- June 4: Deadline for Abstracts
- June 22: Authors Notified by Program Chair
- Aug 3: Six (6) copies of draft must be sent to CTI office for review
- Nov 9: Final draft, based on review comments and slides due in the CTI office

Abstract Forms can be obtained by contacting the CTI office at 281.583.4087 or at our website www.cti.org



Table Top Exhibits

Tuesday, February 5, 2013 • 4:00p - 9:00p
Omni Bayfront, Corpus Christi, Texas



Don't forget to reserve your space. A total of 52 exhibit spaces available at \$1200/space with a number of tables already reserved (sold spaces indicated by red boxes)

for more information contact Virginia Manser at 281.583.4087 or vmanser@cti.org

Exhibitors to date:

C.E. Shepherd Co.
Composite Cooling Solutions
EvapTech, Inc
Amarillo Gear Company
Brentwood Industries
Ashland Water Technologies
Bedford Reinforced Plastics
Rexnord Corporation

Aggreko
Baltimore Aircoil Company
Proco Products
Hudson Products
Cofimco
Rain for Rent
Strongwell
McHale & Associates
Midwest Towers, Inc

Dynamic Fabricators
Cooling Tower Resources
GEA 2H Water
SPX Cooling Technologies
Cool Water Technologies
Special Pathogens Lab
IMI Sensors
CleanAir Engineering

Registration Form

Committee Workshop July 7-11, 2012 El Conquistador, Tucson, AZ

Name _____ Nickname for Badge _____
 Company _____ Spouse Name if Attending _____
 Address _____ City _____ State _____ Zip _____
 Phone _____ FAX _____ Email: _____

- | | | |
|---|----------|---------------------|
| <input type="checkbox"/> Full 3 Day Registration | \$375.00 | \$425 after June 22 |
| <input type="checkbox"/> Golf Tournament (Handicap _____) Tee Time Begins @ 8:00a | \$60/pp | Closed June 29 |
| Spouse Name _____ (Handicap _____) | \$60/pp | Closed June 29 |
| <input type="checkbox"/> Monday Night on the Beach Club Deck (No. Adults _____)..... | \$75/pp | Closed June 29 |
| No. Kids 15 and under (_____) | \$35/pk | Closed June 29 |

TOTAL DUE

Enclosed is my check made out to CTI for \$ _____

Registration can be charged to the following cards: [] Visa [] Master Card [] American Express

Card# _____ Exp. Date _____ Cardholder _____

CVV/CVC/CID Code _____ (must have to process payment).

Payment for meeting registration can be made at the meeting, but please pre-register. (All recreational activities must be paid for in advance. Events will be cancelled if we do not receive enough reservations by June 29.)

**REFUNDS WILL BE MADE IN FULL FOR CANCELLATIONS MADE PRIOR TO JUNE 29, 2012.
15% CHARGE ON ANY CREDIT CARD REFUND MADE - NO EXCEPTIONS!**

2012 Committee Workshop, July 7-11, 2012 Hilton Tucson El Conquistador, Tucson, Arizona



The 2012 Committee Workshop will be held at the the Hilton Tucson El Conquistador, Tucson, Arizona, July 7-11, 2012. Plan to arrive early and participate in golf, view the sights the area has to offer. Actually the sky is the limit. When making reservations be sure to mention that you are with the CTI Conference

Hilton Tucson El Conquistador Reservations: 520.544.5000

Be sure to mention you are with the Cooling Technology Institute for our group rate.

Guest Room Rates: (Cut off Date: Wednesday, June 22, 2012):

\$89.00/plus taxes (Junior Suites will be available for \$129 and Casita Suites for \$169)

Hotel room rates are subject to applicable state and local taxes and resort fees.

CTI NEWS
 COOLING TECHNOLOGY INSTITUTE
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 (281) 583-4087

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Terry Ogburn, Editor-in-Chief
Art Brunn - Chairperson
Publications Committee

Virginia A. Manser, Managing Editor

Donna A. Jones, Administrative Assistant

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COMMITTEE WORKSHOP PLANNED ACTIVITIES



Monday Evening, July 9, 2012

Dinner on site

- CTI Attendees & Guest - \$75
- Guest 15 & under - \$35

Price includes: Dinner and Drinks

arriving at 6:00p, staying until 10:00p

Serving: Chips & Salsa; Assorted Greens w/ Red Onion, Cucumber, Tomato, Jicama, Grilled Corn, Seasoned Croutons, Sliced Radish, Choice of Dressing; Fish Taco Station w/ Ernesto's Cabbage; Fajita Station, Grilled Marinated Skirt Steak & Spiced Chicken Strips with all the makings; Southwest Rice; Refried Beans' Roasted Pineapple Trifle and Chipotle Chocolate Cake

2012 Board of Directors

President Jack Bland
 Vice-President..... Frank Michell
 Treasurer Dean Lammering
 Secretary Tom Toth

Director..... Raul Castillo
 Director..... Frank Foster
 Director..... Trevor Hegg

Director..... Phil Kiser
 Director..... Dennis Shea
 Director..... Don Zelek