

# PYRAMID PRESS

ASHRAE – Memphis Chapter  
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September, 2004

**LUNCH MEETING 11:30 TUESDAY,  
 SEPTEMBER 14, 2004, EAST  
 LOUNGE, THOMAS CENTER at  
 CHRISTIAN BROTHER'S UNIVERSITY  
 (Building 16 -see map attached)**

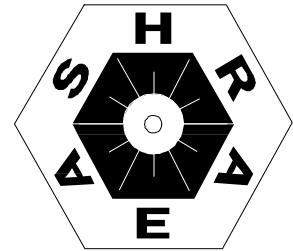
## **DESIGNING FOR ABSOLUTE MOISTURE CONTROL**

**R. MARK NUNNELLY, P.E.**  
**Nunnelly & Associates (A Division of ADCO Companies)**  
**Birmingham, AL**

Mark Nunnelly is a mechanical engineering graduate of Auburn University, is a registered professional engineer, and has been involved in the construction, engineering and HVAC industry for over 20 years. Over the last several years, his involvement with projects has primarily pertained to the humidity control, ventilation air treatment and energy savings aspects of his clients' buildings. Currently, Mr. Nunnelly is the president of Nunnelly & Associates, a firm primarily engaged in humidity control consulting engineering and equipment sales. He has presented training seminars on dehumidification technologies (desiccant and mechanical-based) and their applications, as well as psychrometrics and designing for proper humidity control. He has been a member of ASHRAE for over 18 years and currently serves as a Regional Vice Chairman for the Society.

He has co-authored and published a paper entitled "Designing for Absolute Moisture Control" which addresses ways in which HVAC systems should be designed in order to ensure proper humidity control within buildings.

Please find the attached Bio on pages 15 and 16 of this newsletter.



## **Memphis Chapter Contacts**

### **PRESIDENT:**

Jeff Gatlin: 452-2500  
 Fax: 452-2530

### **PRESIDENT ELECT:**

Evans Jack: 324-6610  
 Fax: 324-6612

### **V. PRES, - PROGRAMS**

Stephanie Cianciola 820-0820  
 Fax: 683-1001

### **SECRETARY:**

John Colmer: 761-0885  
 Fax: 761-2943

### **TREASURER:**

James Prillaman: 452-6283  
 Fax 458-9640

### **MEMBERSHIP:**

Jason Snyder: 683-3900  
 Fax: 683-3990

### **NEWSLETTER:**

Denver Glazier: 432-3348  
 Fax: 396-4864



## THE PRESIDENT'S CORNER

### President's Column

Welcome back to ASHRAE Society Year 2004-2005! I am looking forward to a successful, informative, and fun society year. This is my eighth consecutive year on the Board of Governors, and I really feel that this is one of the best groups of Officers, Board Members, and Committee Chairs that I have served with so far. It is an honor to serve once again with President-Elect Evans Jack. Evans was the President-Elect when I had my first Committee Chair assignment, and he has graciously agreed to accept election to another two years of service to ASHRAE-Memphis.

Speaking of service, I am happy to announce that three Chapter members were recognized for service to ASHRAE over the summer. First, Mike Bilderbeck was appointed to the ASHRAE College of Fellows. He joins Chapter members Griff Burr and Gil Avery in this select and distinguished group of ASHRAE members. Next, Jim Corzine has been promoted to the grade of Life Associate Member. Finally, the 2003-04 Membership Promotion Chair Calvin Williams was recognized as a Shining Star by the Region VII RVC for his efforts in recruiting and retaining members in the Chapter. The details of these awards follow in more detail later in the Newsletter.

The abundance of volunteers is what makes our Memphis Chapter so successful. Four of us are journeying to Point Clear, Alabama to attend the CRC next week. Stephanie Cianciola is hard at work scheduling the programs and the meals for the monthly meetings and the PDH seminars. Jason Snyder is already working on recruiting and on membership upgrades. You will be hearing from Chris Claude soon regarding a donation to Resource Promotion. Bill Jason will be contacting many of you for assistance with biographies on senior members - both individuals and firms.

## PRES. CORNER CONT.

Evans Jack has helped me to assign each and every one of you to a committee - see the rosters later in the Newsletter. Chuck Royer continues to keep the website up-to-date and running, and you are reading this because Denver Glazier has been busy editing and publishing the Newsletter. Many others are hard at work to keep the Chapter going, and I join you in thanking them in advance for a great year in 2004-2005!

Jeff

## MEMBER NOTICES

Please note the following attachments:

- Mike Bilderbeck's nomination information
- Distinguished lecturer bio
- Annual Golf Tournament info
- 2004 ASHRAE Committee assignments
- Campus Map



## **FUTURE PROGRAMS**

### **September 14, 2004**

- **11:30 a.m. – 1:00 p.m. Chapter Meeting** – “Designing for Absolute Moisture Control” – Mark Nunelly
- Location: Christian Brothers University, East Lounge Thomas Center

### **October 12, 2004**

- **11:30 a.m. – 1:00 p.m. Chapter Meeting** – “What training does the degreed engineer need to be a successful manager?” – Dr. Neal Jackson
- Location: CBU, Montesi Conference Center

### **November 09, 2004**

- **11:30 a.m. – 1:00 p.m. Chapter Meeting** – “Fabric Ductwork”
- Location: CBU, Montesi Conference Center

### **December 2004**

- **Christmas Party**

### **January 11, 2005**

- **11:30 a.m. – 1:00 p.m. Chapter Meeting** – Topic TBA.
- Location: Christian Brothers University, East Lounge Thomas Center

### **February 08, 2005**

- **11:30 a.m. – 1:00 p.m. Chapter Meeting** – “Professional License Rules and Regulations” – Barbara Bowling
- Location: CBU, Montesi Conference Center

### **March 08, 2005**

- **11:30 a.m. – 1:00 p.m. Chapter Meeting** – “Greenheck Fire Dampers”
- Location: CBU, Montesi Conference Center

### **April 12, 2005**

- **11:30 a.m. – 1:00 p.m. Chapter Meeting** – Topic TBA
- Location: CBU, Montesi Conference Center

### **May 10, 2005**

- **11:30 a.m. – 1:00 p.m. Chapter Meeting** – Topic TBA
- Location: CBU, Montesi Conference Center

## **CONGRATULATIONS**

### **MIKE BILDERBECK APPOINTED TO ASHRAE COLLEGE OF FELLOWS**

Memphis Chapter member Mike Bilderbeck, PE, of Pickering, Inc. has been appointed to the ASHRAE College of Fellows. The appointment was made by the ASHRAE Board of Directors in July. Mike will officially accept the appointment at the Winter Meeting in Orlando in February 2005.

Mike joins Memphis Chapter members Griff Burr and Gil Avery in receiving the highest honor bestowed by ASHRAE for service to our industry and to the Society. A big part of what makes our Chapter so successful is members who are willing to participate in ASHRAE at all levels from Chapter up to Society, and the employers who allow them the time and resources to do so.

Some of the highlights of Mike distinguished ASHRAE service include: (listed in attachment)

Let's all be sure to congratulate Mike on this achievement.

### **2003-04 MEMBERSHIP PROMOTION CHAIR CALVIN WILLIAMS RECOGNIZED BY REGION VII**

Calvin Williams, PE, the Chapter Membership Promotion Chair for 2003-04, was informed in July that he had been recognized as a Shining Star by the Region VII Vice Chair for Programs, David Dinse. Overall, the Region had a net membership loss of 2.79%. Under Calvin's leadership, the Membership Promotion Committee netted a membership gain of 1.21% for our Chapter. The Region's maximum delinquency goal was 10%, and Memphis came in well under that at just 9.31%. Congratulations, Calvin!

Calvin will continue to serve in the MP Committee as Vice Chair, and Jason Synder of EOCR, Inc. will Chair the Committee in 2004-05.

## Mike Bilderbeck Nomination Information

### Attachment 1

#### PROJECT MANAGEMENT

Since 1990, Mr. Bilderbeck has served as Pickering's "Principal-in-Charge" of their contracts with the University of Tennessee and with the University of Memphis. During this time, Pickering has successfully completed the following projects:

#### University of Tennessee

- UT Martin Humanities Building Re-Roof
- UT Martin Central Plant Chiller Addition
- UT Martin Central Plant Boiler Replacement
- UT Martin Gooch Hall HVAC Replacement
- UT Martin Open-End IDT Engineering Contract 2000-2003
- UT Martin Engineering and Physical Sciences HVAC Replacement
- UT Martin Phase II Underground Steam/Chilled Water Pipe Replacement
- Current projects include a Campus-wide (22 building) Fire Alarm System replacement and design/monitoring of hazardous material removal for dormitory demolition.
- UT Memphis Open-End IDT Environmental Contract 1999-2003

#### University of Memphis

- Speech and Hearing Center HVAC Replacement
- Renovation and Addition to HPER Building
- Update to Campus Utility Master Plan

This work was accomplished over several years. The range of projects represent all the disciplines within Pickering (Architectural, Structural, Mechanical, Civil, Electrical, and Environmental). The long-standing relationship between Pickering and these important clients is attributable to their providing good design and project management, on time, and in-budget. As Principal-in-Charge, Mr. Bilderbeck has had overall responsibility of keeping these clients happy. Some of these projects overlapped in design or construction. Mr. Bilderbeck's management abilities allowed him to control the various personnel working on the projects and assure a satisfied Owner while maintaining project profitability.

Mr. Bilderbeck's importance to Pickering was recognized in 1988 (only 8 years after graduation) when he was invited to become one of 14 Principal Owners in the firm. Since then, he has served on the Board of Directors of the Pickering Companies and has helped grow the firm from 85 to 190 people.

### Attachment 2

#### DESIGN

Mr. Bilderbeck's career spans twenty-three years as a mechanical engineer for Pickering Firm, Inc., an architectural/engineering firm in Memphis, Tennessee. A registered mechanical engineer and fire protection engineer, he has served as primary mechanical engineer on a variety of significant projects:

- **Advanced X-Ray Astrophysical Facility, Marshall Space Flight Center- Huntsville, AL.** X-Ray Telescope Testing Facility. 525 tons, includes a 90 x 60 x 35 foot tall Class 100 clean room (600,000 CFM supply air). Clean room and deep space vacuum chamber were required to be hydrocarbon-free.
- **Memphis Cook Convention Center - Memphis, TN.** Expansion and renovation project included the demolition of current auditorium building and design and construction of a 120,000 SF expansion consisting of 40,000 SF exhibit hall, 2,500 seat performing arts hall, 2,000 seat ballroom with kitchen, and meeting rooms. Project cost \$55 million and included 2400 tons of variable-flow central plant and VAV air systems.
- **St Francis Hospital Expansion - Memphis, TN.** Included addition of 96 patient beds, 25 ICU beds, pediatric ICU, 7 operating suites, new ER, radiation therapy department, and 40,000 SF laboratory. Patient rooms are served by 4-pipe induction units with tempered chilled water to avoid condensation at the induction unit. Exhaust air was brought across 2 heat recovery wheels. Added 900 ton chiller to existing 2,700 ton Central Plant and converted the Central Plant from constant-flow to variable-flow. Added 27,000 lb/hr steam boiler to 80,000 lb/hr steam system to serve as "summertime boiler".

- **St. Jude Children's Research Hospital, 6<sup>th</sup> and 7<sup>th</sup> Floor Renovation - Memphis, TN.** Renovation of 50,000 SF of research spaces, including 3,000 SF of pressurized clean rooms for virus research.
- **St. Jude Children's Research Hospital, Interior Renovations - Memphis, TN.** Included addition of new CT suite, MRI suite, and linear accelerator suite. Also included design of HVAC system to use 2 double-wide trailers for temporary use as animal research labs (100% exhaust humidity controlled).
- **Methodist Hospital North, OB/Gyn Wing - Memphis, TN.** Included 30 patient rooms, 2 OR suites, and 4 LDRP rooms. Patient rooms are VAV. OR/LDRP are constant volume. Added 350 ton chiller to existing 800 ton Central Plant and converted the Central Plant from constant-flow to variable-flow.
- **Methodist Hospital North, Outpatient Surgery Wing - Memphis, TN.** Included 50,000 SF, 2 OR suites, 3 Cardiac Catheterization Suites.
- **VA Medical Center – Murphreesboro, TN.** Indefinite Delivery Contract for mechanical renovations that included replacement of 1,000 ton chiller in 3,000 ton Central Plant and conversion from constant flow to variable flow.
- **St. Joseph Hospital - Memphis, TN.** Several projects, including 30,000 SF Emergency Room Outpatient Addition, renovation of five Surgery Suites, a new Cardiac Catheterization Unit, a new MRI Unit, and a 60 bed Skilled Nursing Facility
- **Veterans Administration Medical Center - Memphis, TN.** 60,000 SF Spinal Cord Injury Unit with laboratory facilities.
- **Smith-Nephew Manufacturing Building - Memphis, TN.** 140,000 SF building that includes 70,000 SF manufacturing space, offices, kitchen and a 600-person cafeteria. Building system consists of 900-ton chiller system, eight MMBTU boiler system (both systems are variable flow), low temperature air distribution, and eight VAV air handlers. HVAC cost of \$1.8 million
- **University of Memphis, University Library – Memphis, TN.** 240,000 SF library with interior atrium. Included 5,000 SF humidity-controlled archival storage space. Project included addition of 80,000 lb/hr steam boiler to the existing 150,000 lb/hr Central Plant. Design included two-330 ton chillers, piped primary/secondary with variable flow distribution. Set up system to be supplemented by central plant chilled water. The project included a complete direct digital control (DDC) system.
- **University of Memphis, Physical Education Building - Memphis, TN.** 98,000 SF of renovations and a 37,920 SF addition to the existing building. Renovations included aerobics area and weight room, racquetball and handball courts, locker rooms, a multipurpose room, classrooms, lounge/lobby area, indoor and outdoor pool areas and renovations of the existing gyms. Project included the design of the largest swimming pool dehumidification system in Memphis (50,000 CFM). Building addition is the training facilities for the Men's Basketball team.
- **University of Tennessee, Martin - Martin, TN.** Mechanical Engineer and Project Manager for \$700,000 connection of Humanities and EPS buildings to central plant chilled water loop. The project included a 600 ton chiller and cooling tower additions to the Central Plant and 1,400 feet of underground steam and chilled water pipe additions.
- **The University of Tennessee, Martin - Martin TN.** Replacement of two existing coal-fired steam boilers in the Central Plant with new oil/gas-fired boilers. Project required the installation of aboveground oil storage system. Also included in the project were new steam lines as part of the main steam system for the campus.
- **The University of Tennessee, Martin - Martin TN.** Upgrade to EPS Building, which included replacement of fan coil units and the provision of ventilation air to the building.
- **Gooch Hall HVAC Renovation, University of Tennessee, Martin - Martin, TN.** Work included refurbishing two 70,000 CFM air handlers, conversion of chilled water system to variable flow and replacement of 330 VAV boxes to an occupied building. Total cost \$900,000.
- **University of Tennessee Institute of Pathology Building, Memphis - Memphis, TN.** Renovation of 80,000 SF of building to high laboratory usage, including provisions for the addition of 77 chemical fume hoods to the building. Each hood is provided with make-up air and an individual exhaust duct and fan.
- **University of Tennessee, Memphis - Memphis, TN.** Multiple renovation/modification tasks including In Vitro Fertilization Laboratory, Animal Research Laboratory, Nerve Gas Containment Laboratory, four Laboratories in the Wittenborg Building, Animal Clean Rooms in the Coleman Building and 20,000 SF of laboratory space in the Dobbs Building.
- **Bowld Hospital AHU Replacement, University of Tennessee, Memphis - Memphis, TN.** Replacement of existing ICU AHU and ductwork.
- **The Pyramid/Memphis-Shelby County Government - Memphis, TN.** Mechanical systems design review and construction inspection for \$60 million arena.
- **Regional Nuclear Pharmaceuticals – Memphis, TN & East Rutherford, NJ.** 50-ton chiller system with 600-gallon chilled water storage serving year round process loads and space cooling loads. HVAC system includes radioactive space exhaust and 100% OSA laboratory air handler.
- **Wapanocca National Wildlife Refuge Visitor Center – Arkansas.** HVAC design included DX cooling units with heat pump heating to back up the solar heat recovery system. Warm-air solar collectors heated air, which was blown into a loose rock bed. The heated rocks provided the majority of the building heat.
- **Memphis Zoo Veterinary Hospital - Memphis, TN.** Complete mechanical design for the design/build of an 11,300 SF veterinary hospital for the zoo located in Midtown Memphis. The hospital includes surgery suites, quarantine areas for new animals, holding bay for sick animals, a small indoor pool for waterfowl and sea lions, treatment rooms, necropsy room,

pharmacy and special caging for apes, tigers and lions. System is DX constant-volume. Heat recovery wheels are used in the systems serving 100% OSA isolation rooms.

- **Komodo Dragon Exhibit, Memphis Zoo – Memphis, TN.** Renovations to an existing facility to accommodate three Komodo Dragons included adequate heating and humidity to simulate their natural habitat. Used forced air heating system combined with in-floor hot water radiant heating system to provide zoned control.
- **Apache Helicopter Maintenance Hangar - Fort Campbell, KY.** Design for all HVAC systems for \$10 million, 60,000 SF hangar and shop spaces including battery storage and explosion proof areas.
- **Naval Air Station - Memphis, TN.** Demolition of field-built 80,000 lb/hr steam boiler and installation of two packaged 40,000 lb/hr boilers with stack economizers in Central Plant.
- **Navy Brig, Naval Air Station – Memphis, TN.** Mechanical systems design for new 30,000 SF detention facility including HVAC and smoke removal system
- **Naval Air Station, Memphis - Millington, TN.** 2-100,000 SF of Applied Instruction Buildings. Design included two-250 ton chiller central system per building, piped primary/secondary with variable flow distribution. Chiller systems set up for operation 12 months/year.
- **National Civil Rights Museum - Memphis, TN.** 40,000 SF museum, including alteration projects for converting the two-story Lorraine Motel to a museum. Systems are VAV with humidity control.
- **Paris Special School District - Paris, TN.** Mechanical design for additions and renovations to two elementary schools and one middle school. Project included fire and code upgrades.
- **United States Post Office - Memphis, TN.** 35,000 SF Addition to the Processing and Distribution Center. The project included the addition of a 500-ton chiller to the existing 1000-ton system; plus the conversion of the chilled water distribution system to primary/secondary. The project also included a complete direct digital control (DDC) system.
- **U.S. Army Corps of Engineers, Mobile District Fort Rucker, AL.** Improvement to 302 housing units with four different floor plans and 10 different exterior finishes. Project included all utilities underground, improving surface drainage, new landscaping, street lighting, playground and a new 5,500 SF community center. Estimated construction cost: \$22 million.
- **U.S. Job Corps Center - Memphis, TN.** Renovations to an existing 86,000 SF building to meet the dining, recreational and classroom needs of 327 Job Corps students. Estimated construction cost: \$8 million. Mechanical design used a water-source heat pump system for heating and cooling the spaces.
- **Fire Services Division - Memphis, TN.** Renovation of 51 fire stations under two contracts with the City of Memphis
- **Weston Companies - Memphis, TN.** Five-story, 185,000 SF, Operations Center for Leader Federal Bank. Project included two computer areas with uninterruptible power, special air conditioning and rooftop VAV system
- **Ballet Memphis - Memphis, TN.** Mechanical design for the design/build of a new performance facility including three open floor studios, three dressing rooms, wardrobe room, costume shop, lounge and lunchroom, reception areas and administrative offices, scene shop and costume shop.
- **Little Rock AFB Physical Fitness Center - Little Rock, AR.** Two 90 ton air cooled chillers serving 50,000 SF of occupied space, the gym, weight room, cardio, aerobics, family fitness, and each of the four racquetball courts each have a dedicated constant volume air handler with economizer, health fitness evaluation spaces and the main corridor are served by a 10,000 CFM variable volume air handler with economizer and a 1.5 million BTU firebox hot water boiler serves the building.
- **Gibson Guitars - Memphis, TN.** Multipurpose 300 ton facility including a manufacturing plant, retail outlet, museum of Gibson memorabilia and parking garage

### **Attachment 3**

#### **EDUCATIONAL LEADERSHIP**

In September of 2002, Mr. Bilderbeck was among eight Mechanical Engineering alumni invited to join the newly formed Engineering Advisory Board of the School of Mechanical Engineering at the University of Memphis. The initial purpose of the Board was to assist the faculty in preparing for the ABET accreditation evaluation scheduled for October of 2003. The ABET evaluation had changed from “what do you teach?” to “what have your graduates learned?” The faculty wanted assistance from the local engineering community in creating an evaluation process to measure the readiness of the graduates to enter the workplace. Mr. Bilderbeck is the only consulting engineer and the only ASHRAE member on the Advisory Board. Over a series of twelve meetings and outside preparation, the Board and faculty were able to prepare a measurement process that successfully passed the evaluation.

#### **TECHNICAL PUBLICATIONS**

From 1995 until 2003, Mr. Bilderbeck was a member of GPC-16, Selecting Outdoor, Return, and Relief Dampers for Air-Side Economizer Systems. This document is the first location that ASHRAE has published this information. This information is essential to the proper operation of a VAV air handler system. Mr. Bilderbeck has also authored two articles for the ASHRAE Journal.

## Attachment 4

### CONSULTING

Mr. Bilderbeck has been involved in several significant projects that did not involve design, but rather provided planning or evaluation services. The more notable projects include:

- **University of Memphis Master Plan - Memphis, TN.** Authored mechanical portions of comprehensive study that planned the future of the Campus. Study includes predictions of future heating and cooling demands of 20 projected buildings or major additions and infrastructure needs of these buildings
- **University of Memphis Utility Study - Memphis, TN.** Project manager and principal author of an update to an existing campus utility master plan, based on the predictions included in the Campus Master Plan. Includes mechanical and electrical services. Basic focus was to plan the expansion of Central Plant and steam/chilled water distribution system based on projected additions of buildings. Central Plant expected to expand from 5,000 to 9,000 tons in four Phases (always keeping one stand-by chiller available). Also includes a plan to change the distribution system from constant-flow to variable-flow and to phase the replacement of 5 miles of underground steam and chilled water distribution piping.
- **Department of Veterans Affairs - Various Locations.** Eight Veterans Administration Facilities Development Plans for eight VA Medical Centers at seven different locations. Provided mechanical and fire protection portions of comprehensive plan to identify and determine the potential of expanding existing facilities and the need for new facilities.
- **U.S. Army Corps of Engineers, Huntsville Division.** Provided mechanical and fire protection portions of facility condition inspections of nearly 300 buildings at 62 military bases in the Southeast US.

### CONTRIBUTIONS TO ASHRAE

Mr. Bilderbeck's ASHRAE biography is updated at Society. During his twenty-three years as a member, his leadership and competence have led to several positions of importance. He has chaired the TEGA and Standards Committees, and served as a Director-at-Large.

## ASHRAE 2004-05 Committee Assignments

### Student Activities Committee

Russ Fletcher, Chair  
John Colmer, Chapter Secretary  
Mike Allison  
Joe Londino, CBU  
Bill Janna, UofM  
Teresa Boyd  
Steve Carney  
Charlie Garrett  
Jeff Kauerz  
Albert Miller  
Ralph Phillipy  
Mike Walls

### Chapter Programs Committee

Stephanie Cianciola, Chapter Vice President and CTT Chair  
Gary Whittam,  
Ricky Bursi  
Sean Davis  
Larry Vescovo  
Keith Duncan  
Charles Black  
Jim Comella  
Preston Hall  
John Kiersky  
Dave Miller  
Eric Pike  
Don Warren

### Membership Promotion Committee

Jason Snyder, Chair  
Calvin Williams  
Lecia Martin, Women and Minority Engineer Recruiting  
Evans Jack, President-Elect  
Phil Sawaya, Engineer Recruiting  
Jim Hellums, Facility Engineer and Maintenance Recruiting  
F.P. Hughes, Contractor Recruiting  
David Bradford  
Lee Dowden  
Jim Higgins  
Jack Knight  
Matt Miller  
Michael Pitoniak  
Terry Warren

### Technical, Energy and Governmental Activities Committee

Stephanie Cianciola, Chapter Vice President and CTT Chair  
J.R. Anderson  
Tim Schaffler  
Guy Zebrick  
V.T. Gala  
Thomas Blackwell  
Greg Brown  
Randy Cagle  
Gary Comella  
Lee Gavin  
Jeff Haltom  
Dan Kohr  
Earl Miller  
Phil Shokouhi  
Marty Waung

#### Attendance Committee

Jimmy Doyle, At-Large Board Member  
Brent Wiseman, At-Large Board Member and Chair  
Jeremy Harris  
Dave Edwards  
Jon Foshee  
Jim Bruther  
Chip Cayce  
Billy Dunbar  
Bill Ginalick  
Mike Hill  
Frank Lawrence  
Tom Montoya  
Doug Simmons  
Greg Weaver

#### Honors and Awards Committee

Marty Harrington, Chair  
Ken Jack, Chapter Memorials  
Joe Brackett  
David Collier  
Jim Ham  
Jerry Lee  
Jim Morgan  
David Smith  
Paul White

#### Resource Promotion Committee

Chris Claude, Chapter Past President and Chair  
Brian Schaffler  
Ron Thompson (TEI)  
Ron Thompson (TRO)  
Bob Buckmaster  
Benjamin McKinnie  
James Bernardi  
Roger Buckmaster  
Bill Copeland  
Charles Dunn  
William Hollinger  
Rusty Lulloff  
Lee Morgan  
Fred Smithwick  
Hamp Williams

#### Reception Committee

Brent Wiseman, Chair and Keeper of Nametags  
Davie Lloyd, Vice-Keeper of Nametags  
Steve Dunlap  
Terry Mynatt  
Wendell McAlexander  
Mitchell Bell  
Jim Corzine  
Monte Gist  
Frank Madlinger  
Jason Needham  
Buddy Soefker  
Robert Wilson

#### Historical Committee

Bill Jason, 50 Year Member and Chair  
Roger Buckmaster, 50 Year Member  
Jim Coleman, 50 Year Member

Griff Burr  
Gil Avery  
C.B. Barnett  
Shane Chapman  
Jerry Edwards  
Barry Hay  
Lance Hornsby  
Woody Martin  
Walter Nelms  
Margaret Stanek  
Stan Wilson

**CRC Action Committee**

Alan Sanders, Chair  
Laura Campbell  
Brandon Livingston  
Frank Krouse  
Joe Thomas  
Young Bae  
Jeff Crabtree  
Todd Glenn  
Jeff Maynard  
Clifford Norville  
Mike Stewart  
Steve Wilson

**Refrigeration Committee**

Stephanie Cianciola, Vice President and TCC Chair  
Mark Crum  
Walter Blalock  
Jason Snyder  
Robert Lawson  
Steve Stephens  
Christopher Armstrong  
Steve Burkhalter  
Ed Charlton  
Brian Dougan  
Chris Ewing  
Mike Heidenreich  
Claude McAtee  
Joe O'Brien  
Shane Sullivan  
Steve Wood

**Nominating Committee – Committee Chair to be selected by Committee Members**

Charlie Schaffler  
David George  
Bob Colmer  
Jerry Gatlin  
Bill Cain  
John Crenshaw  
Gary Gorham  
John Hostetler  
William McCoy  
Bernard Owens  
Matt Swain

**Publicity Committee**

Denver Glazier, Chair and Newsletter Editor  
Chuck Royer, Webmaster  
Mike Bilderbeck, Newsletter Columnist  
Jackie Anderson  
Dennis Hubbard

William McGehee  
Tim Page  
Randy Swindle

**Newsletter Committee**

Denver Glazier, Chair and Newsletter Editor  
Chuck Royer, Webmaster  
Mike Bilderbeck, Newsletter Columnist  
Robert Chilcutt  
Chuck Fant  
Joe Herin  
Danny McKee  
Thom Perhac  
Steve Thornburg

**Special Events Committee**

Rodney Lum, At-Large Board Member and Chair  
David Branch  
Brad Grammer  
Greg Norris  
David Bradford  
Billy Sudekum  
Russell Culley  
Bruce Fisackerly  
Mike Graham  
Ralph Hughes  
John McKissack  
Dan Peterson  
Wes Thornburg

**Finance Committee**

Jim Prillaman, Chapter Treasurer and Chair  
J.R. Anderson  
Roger Dacus  
Walt Green  
Smokey McMillian  
Chris Petrick  
Johnny Walker

**Audit Committee**

Jim Prillaman, Chapter Treasurer and Chair  
Steve Beiber  
Jack Blake  
Chip Bilbrey  
Becky Garland  
Ryan Hertter  
John Jerkins  
Debby Metrolis  
Richard Petty  
Jon Wallace



**MEMPHIS ASHRAE  
 'LARRY MALLERY' MEMORIAL  
 GOLF TOURNAMENT  
 AT  
 IRENE COUNTRY CLUB  
 8141 IRENE BOULEVARD  
 MEMPHIS, TENNESSEE  
 PHONE: 752-1521**

**FOLLOW BILL MORRIS PARKWAY TO HACKS CROSS EXIT. ENTRANCE IS SOUTH OF SHELBY DRIVE.**

**FRIDAY, OCTOBER 15, 2004  
 (Rain Date – Tues., Oct. 19, 2004 – 1 PM)  
 (Team Captain can contact Jimmy or Rodney  
 on date change if possible rain on Friday)  
 4-MAN SCRAMBLE COMPETITION  
 Organize your own team or allow us to pair you with other golfers.**

**PRIZES FOR:  
 1<sup>ST</sup> & 2<sup>ND</sup> PLACE FOR  
 CHAMPIONSHIP FLIGHT  
  
 1<sup>ST</sup> & 2<sup>ND</sup> PLACE FOR  
 FIRST FLIGHT**

**8:00 a.m. - SHOTGUN START  
 Lunch and Prizes following**

**CLOSEST TO THE PIN  
 LONGEST DRIVE  
 MOST ACCURATE DRIVE**

PARTICIPANTS	CIRCLE ONE	AMOUNT
	MEMBER - NON-MEMBER	
	MEMBER - NON-MEMBER	
	MEMBER - NON-MEMBER	
	MEMBER - NON-MEMBER	
	MEMBER - NON-MEMBER	
	TOTAL	

**Make check payable to ASHRAE Memphis Chapter and send to:  
 David Branch  
 Power Equipment Company  
 Post Office Box 22007  
 Memphis, Tennessee 38122  
 Phone: (901)327-8251 - Fax: (901)324-0896  
 Note: For questions, please contact:  
 Jimmy Doyle - 320-5216, or Rodney Lum - 682-7727**

**\$70.00 PER PERSON INCLUDES:  
 Green Fees, Cart, Range Balls  
 Lunch  
 Beverages  
 (2) Mulligans**



**ASHRAE MEMPHIS CHAPTER  
'LARRY MALLERY' MEMORIAL  
GOLF TOURNAMENT**

The Memphis Chapter of ASHRAE is asking for your sponsorship for the golf tournament, October 15, 2004. Your contribution of \$125.00 Per Hole will help make the tournament a success. If you wish to sponsor a hole, please make check payable to ASHRAE Memphis Chapter, include the complete form below, and send to:

David Branch  
Power Equipment Company  
Post Office Box 22007  
Memphis, TN 38122  
Phone: (901)327-8261  
Fax: (901)324-0896

Please send checks by September 24, 2004

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

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Contact: \_\_\_\_\_

No. of Holes: \_\_\_\_\_ x \$125.00 = \_\_\_\_\_

Thank you for your sponsorship.