



The Razorback Report

Arkansas Chapter #062, Region VIII

American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc.

www.arkansasashrae.org

Volume XVI, Issue III, November 2004

The President's Message

By John Carter, P.E., 2004-2005 Arkansas ASHRAE Chapter President

Greetings, fellow ASHRAE members. I am writing this article in the Saturday morning hours before my kids awake. You know, the home has never seemed so quiet; and boy is that refreshing as we still have three kids that are down with a temporary sickness. It helps remind me how thankful I am that I have all of these kids and that they are relatively healthy despite the current situation that will pass. It also helps to remind me why I do what I do and that **we are all volunteers in ASHRAE**. This local organization wouldn't happen without Tracy Hayes sending you newsletters; without Tom Hanlon putting together successful continuing education seminars; without Shawn Wilson taking a major role in both the central section and the northwest section to help where needed; without Bill Harrison taking additional responsibility to serve you on a regional and society-level basis; without Eddie Finley committing much of his time to make sure you have fun and we raise a lot of money for ASHRAE research; without many others who devote their time, money and other resources to serve you! I want to thank them for their continual service to ASHRAE and to our local chapter.

Well, Don Huggins did an excellent job of teaching us the fundamentals of hydronic system design and the best practices of how to control air and expansion in hydronic systems. Thank you Don for putting such hard work into that presentation; it showed. If you missed his PowerPoint presentation, check out our **recently updated website** to download a copy of it.

Our recent co-sponsored Continuing Education seminar with NEBB was a huge success with the room full of attendees and many in the design field. Many of the attendees had very good feedback on the speakers and topics. Thanks again, Tom, for making it happen.

Are ya' ready for some **GOLF?!!** Sign-up ASAP to play or become a sponsor.

Don't miss the Northwest Section Meeting this month. Murl Meredith has lined up a great program to tour the new dedicated outside air system serving Concorde Elementary School. There are many benefits to this approach to schools; so come see them for yourself.

In addition, as a special bonus, **we are honored to host Hugh McMillan, our current Region VIII Director and Regional Chair, to our Northwest Section meeting this month**. This is Hugh's only planned visit to our chapter this year and he picked the Northwest Section meeting to attend. This is your chance to hear some current things that are going on at regional and society levels of ASHRAE like:

- A potential ASHRAE certification program for designers & engineers
- A potential annually sponsored continuing education seminar to each Region
- Winter meeting details in Orlando

In Little Rock, we have a very unique program. We have a special guest from Houston, Kwatsi Alibaruho, who is a friend of our own James McKinnie. Do you want to know how we condition the air and atmosphere in our **space station**? That is what our program is about. This will be a fascinating talk on the technology our scientists and

November Meetings



Central Arkansas

Date: WEDNESDAY, NOVEMBER 10th
"Research Promotion"
Location: WHOLE HOG CAFÉ CANTRELL
Cost: \$15.00 / person
Schedule: 10:30 am Board Meeting
11:30 am Technical Session -
Donor Recognition 2003-2004
12:00 pm Buffet Lunch
12:15 pm – 1:00 pm PROGRAM

"International Space Station Life Support & Thermal Control Systems"

Speaker - Mr. Kwatsi Alibaruho

Northwest Arkansas

Date: THURSDAY, NOVEMBER 11th
Location: AQ CHICKEN - Springdale
Cost: \$12.00 / person
Schedule: 5:30 pm DRC Hugh McMillan
6:00 pm Business / Dinner
7:00 pm PROGRAM

Tour of Concorde Elementary School

Mr. Bill Sharp will discuss the dedicated outside air system which is used to downsize the individual classroom split systems

Please return the RSVP form enclosed or reply via electronic invite

engineers chose to use for one of the most sensitive environments in the world (or out of the world)!

See ya', and take note: **THE NOVEMBER MEETINGS ARE EXACTLY ONE WEEK LATER THAN TYPICAL – PLAN ON THE SECOND WEEK IN NOVEMBER!**

Board Meeting of October 6, 20041. Officers and Board Members Present

John Carter, President
 Chance Hollingsworth, President Elect/Technology Chair
 John Hodoway, Secretary
 Steve Titus, Treasurer
 Tracy Hayes, BOG Member, Newsletter Editor
 Randy Ragsdale, BOG
 Randy Moore, CRC Delegate, Honors/Awards Chair
 Rick Sellers, CRC Alternate, Resource Promotion Chair

2. Committee Chairs Present

James Dayer, Membership Promotion Chair
 Kim Koch, Student Activities Chair
 James McKinnie, Historian
 Shawn Wilson, Reception Chair

3. Members Present Wade Wetzler4. Meeting Minutes

President John Carter called the meeting to order at 10:35.

The minutes of the Board Meetings of August 27 and September 1, and the minutes of the September 1st Regular Meeting were approved by voice vote.

President John Carter asked for MBOs and committee co-chair names.

Vice-President Chance Hollingsworth proposed that November 10th be the date of the next Regular Meeting to accommodate the seminar on the new Arkansas Energy Code that is scheduled for November 3rd. There was no objection and the date was adopted. Historian James McKinnie offered to attempt to reschedule the program on the International Space Station to November 10th because the Green Building program scheduled for November 3rd is not available on November 10th.

Chance asked that members submit their correct e-mail addresses for the e-vite that is sent each month as a meeting reminder and RSVP system. Chance said that an annual schedule of meetings would be published as soon as the November program is firmed up.

Treasurer Steve Titus reported that the accounts receivable reported at the end of the preceding year were 75% to 80% collected and that he expected almost all of the remainder to be collected before the next meeting. Final approval of the August and End-of Year Treasurer's Reports was tabled pending further collection.

President John Carter reported that he had discussed the Chapter's tax filing status with his accountant and agreed that the Chapter probably needed to file a return. Kelly Austin, the accountant, had proposed a fee of \$350 to \$500 for preparing the returns.

John Hodoway moved that the Chapter hire Kelly Austin to prepare state and federal returns for the chapter year ending June 30, 2004. Kim Koch seconded. Motion passed.

Secretary John Hodoway distributed information on the pros and cons of two approaches to pre-paid meals and proposed that the discussion of pre-paid meals be deferred to another meeting after everyone had had a chance to review the information. Discussion was deferred.

Newsletter Editor Tracy Hayes reported that she had mailed a number of the October newsletters to those who were unable to receive it by e-mail, but that none of the September newsletters had been mailed. The deadline for submitting material for the November newsletter is October 20th.

President John Carter reported that on-line PAOE reporting is now available and provided the user name and password. He also urged all committee chairs to make their initial report before November 1st to earn the points for early reporting.

John also urged early registration and hotel reservations for the San Antonio CRC because the CRC coincides with the very popular "Fiesta Week" in San Antonio. It was pointed out that the headquarters hotel has changed from an Adams Mark to a Crowne Plaza. The phone numbers are the same as before.

John announced that Eddie Finley needs sponsor and team information for the golf tournament.

Chance reported that the chapter is a sponsor of two continuing education seminars and is looking into two more. The NEBB/ASHRAE seminar is October 15th at Pulaski Tech and the 2004 Arkansas Energy Code seminar is November 3rd at Pulaski Tech. He also reported that planning is underway for two seminars in the spring. One will be the satellite broadcast presentation of "Mold in Our Building Environment" on April 13th, 2005. The other is to be a seminar on steam of 4 or 8 hours on a date to be announced later.

Treasurer Steve Titus reported that he had changed the amount in the budget for Region VIII dues from \$1 per member to \$3 per member to reflect the increase in regional dues.

Resource Promotion Chair Rick Sellers reported that he has received \$1,010 to date and reminded the Board that Extended Gold Circle contributions must be received at Society before the end of the year.

Student Activities Chair Kim Koch announced that today's meeting has been designated as "Student Member Day".

Membership Promotion Chair James Dayer reported that he was looking for the display board that had been used last year and had been unable to reach Russell Black who is now a teacher.

Social Chair Eddie Finley announced that he needs committee members to help with social activities.

Meeting adjourned at 11:28

*Submitted by John Hodoway, Secretary
 2004-2005 Arkansas ASHRAE Chapter #042*

Student Activities

By Kim Koch, *Committee Chair*

The Student Zone of the ASHRAE website has been updated this month. There are several useful and fun links in this area of the society webpage. If you are asked to give a presentation at a career day at your child's school, this site can be a great starting place. There are activities designed to promote our industry for almost every age level. Please remember to let me know if you volunteer your time at a career day activity so I can record the PAOE points.

We will be continuing to visit the area students this month including an upcoming visit with the students at Arkansas Tech on October 28th. We will be collecting resumes of graduating students and those looking for internships. You can obtain copies of their resumes from me at kkoch@tmeecorp.com. Let's work together to keep these young students in our industry and in our state.

Membership Meeting of October 6, 2004

The meeting was called to order at 11:38 AM

Vice President Chance Hollingsworth introduced Jerry Duncan, Director of Plumbing and Natural Gas, Protective Codes Division, Arkansas Department of Health, to present the Technical Session on the 2004 Arkansas Plumbing Code.

The original Arkansas Plumbing Code was adopted in 1951 and was modified through the years with the last, relatively minor, update in 1999. The Division has wanted to adopt a model code for some time, but that has been an uphill battle that was finally won with the Labor Day, 2004, adoption of the International Plumbing Code. There are 35 Arkansas amendments to that model code that involve 75 specific changes from one word to virtually an entire chapter. 500 printed copies of the new code are on order and are expected at the Division in about two weeks.

Why was one of the more stringent plumbing codes in the country changed to a model code? The old code was printed by the Department of Correction with many quality problems caused by unmotivated workers. The limited staff within the Division made it difficult to keep up with advances in the Industry. That same staff is required to proctor the exams that are required for licensing. There are only eight state plumbing inspectors. Coordination with the Arkansas Fire Prevention Code and the Arkansas Mechanical Code and consistency between the codes was becoming more difficult.

The "theology" of the code has not changed. The biggest change that many will notice is that "wet" venting rules are more liberal than under the old code. While waiting for copies of the new code, everyone should know that any job that would meet the old code will meet the new code.

Lunch was announced.

President John Carter made several announcements.

1. Membership promotion Chair James Dayer has been honored by Society with the Membership Incentive Award for 2003-2004. An ASHRAE golf shirt is part of the award and was presented.
2. The golf tournament is on October 29th and we need more corporate and hole sponsors. Suitable recognition will be given and signage will be displayed.
3. A database will be kept of attendance and PDH certificates will be done on an annual basis rather than meeting by meeting.

Vice Pres Chance Hollingsworth made several announcements:

1. The NEBB/ASHRAE seminar will be October 15th at Pulaski Technical College in North Little Rock.
2. The Arkansas Energy Code Seminar will be November 3rd at Pulaski Technical College in North Little Rock.
3. There will be a satellite broadcast of "Mold in Our Building Environment" on April 13th, 2005. Site to be determined.
4. We need better RSVP response, either to the e-vite or the fax form in the newsletter.

Kim Koch announced that she had résumés for the December class of Engineering graduates at Arkansas Tech. She encouraged every one to help keep these graduates in Arkansas.

Chance introduced Don Huggins to present the program "Hydronic Practices in the Equipment Room".

There are two main types of water system, open and closed. An open system is exposed to the atmosphere and a closed system is not. The most common example of an open system is the cooling tower and most hot and chilled water systems are closed. The technical definitions are that a closed hydronic system has only one point of interface with a compressible gas where an open system has more than one. In order to keep closed systems closed attention needs to be given to keeping mechanical pump seals clean; use manual air vents at system high points and assure that they are closed after venting air from the system; monitor proper operation of the automatic air vent on the air separator; and use snubbers, which are common on steam systems on pressure gauges on hydronic systems.

In a closed system flow cannot be motivated by static head differences; pumps do not provide static lift; the system is always full of water; and chemical use for water treatment is much lower. Because the system is always full of water expansion of the water due to temperature change must be addressed. The pressure increase from as little as 30F of temperature change can be 600 to 800 PSI. Expansion tanks vary from the air-over-water type to the diaphragm and bladder types in common use today. The air-over-water tank must be monitored to detect waterlogging; the diaphragm and bladder types must be piped to a floor drain in case of membrane rupture; and tanks must be charged to operating pressure with air before filling the system with water.

Some useful approximate values related to expansion tanks are 12 gallons of water per ton, 35 gallons per BHP (that's a little over 1 gallon per mbh), fill pressure = height of system (psi) plus 5, keep the pump suction above 0 psig. The final size of the expansion tank may be affected by its location in the building. The expansion tank must be at a point of no system pressure change regardless of pump operation. Most systems should have the tank connection close to the pump suction. Be cautious with strainers at the pump suction.

Air separators are used to remove entrained and dissolved air. Trapped air must be vented or possibly reabsorbed as dissolved air. The air separator works best when the warmest water in the system is presented to it and at the lowest possible pressure. That generally translates to at the pump suction after the boiler or before the chiller. In a multi-story building, the best performance will be obtained if the pumps, air separators and boiler are high up in the building. The most common air separators are the in line and the centrifugal. The in line is used in small systems with piping under 2". The centrifugal is used on larger systems and may be a large an heavy item. The coalescing air separator uses a special medium to trap air from the circulating water. There are many small things that add up to a good hydronic system in the equipment room.

Meeting Adjourned at 1:01 PM.

*Submitted by John Hodoway, Secretary
2004-2005 Arkansas ASHRAE Chapter #042*

Resource Promotion

by Rick Sellers, 2004-2005 R.P. Chair

It is my honor as Resource Promotion Chair for 2004-2005 to recognize the R.P. Donors from 2003-2004. The donors are listed below and honor roll level contributors or higher (\$100 for an individual or \$150 for a company) will be recognized and presented with a commemorative coin at our November Chapter meeting. Your 2003-2004 R.P. Chair, Mr. Randy Moore did an outstanding job and has set a high mark for us to match this year. Thanks go out to Randy and each of the donors!

<u>Company</u>	<u>Donation</u>	<u>Company</u>	<u>Donation</u>	<u>Individual</u>	<u>Donation</u>
Arkansas ASHRAE Chapter	\$10,000	Jaco Sales Incorporated	\$150	Mr. James D. Dayer	\$100
Comfort Systems USA (Arkansas), Inc.	\$1,800	Middleton Incorporated	\$150	Mr. Tad E. Hankins	\$100
Carrier Corporation - UTC	\$1,500	Power Equipment Company – NLR	\$150	Mr. Thomas J. Hanlon	\$100
Wade Company	\$1,500	B & W Mechanical Contractors Inc	\$100	Miss Tracy E. Hayes	\$100
Airetech Corporation	\$1,000	Capitol Service Company Inc	\$100	Mr. John W. Hodoway	\$100
Cromwell Architects Engineers, Inc.	\$1,000	Independent Air Conditioning	\$100	Mr. Jay C. Hollingsworth	\$100
Fluid Solutions Incorporated	\$1,000	The Sudduth Firm	\$100	Mr. R. Alan Hope	\$100
Lewis Elliott & Studer, Inc.	\$1,000	Witsell Evans & Rasco P A	\$100	Mr. Joseph J. Janowski Jr.	\$100
MPE Consulting Engineers, Inc.	\$1,000	Brown's Sheet Metal Incorporated	\$50	Mr. Clyde A. Jester	\$100
Pettit & Pettit Consulting Engineers Inc.	\$1,000			Mr. Terry Lee Looper	\$100
Sunbelt Mechanical Incorporated	\$1,000	<u>Individual</u>	<u>Donation</u>	Mr. Anthony D. Lyons	\$100
Trane Arkansas – Little Rock Sales	\$1,000	Mr. Samuel D Cummings, Jr	\$1,000	Mr. Michael J. McClellan	\$100
The Balson Firm	\$750	Mr. Bill & Molly Goodman	\$1,000	Mr. James L. Pitts	\$100
Trane Matching Funds	\$750	Mr. Hugh A. Pack	\$300	Mr. Randall M. Ragsdale	\$100
Powers Of Arkansas	\$500	Mr. Christopher J. Ahne	\$200	Mr. Edgar K. Riddick III	\$100
Southwestern Energy	\$500	Mr. Douglas F. Bown	\$200	Mr. Rick L. Sellers	\$100
Jack T Carter Company Incorporated	\$300	Mr. Hamid Habibi	\$200	Mr. Christopher A. Shaw	\$100
Northwest Section - Arkansas Chapter	\$277	Mr. Nicholas R. Moore, III	\$200	Mr. Scott A. Smith	\$100
Custom Metals - Little Rock	\$250	Mr. Harley W. Baker	\$150	Mr. Stephen C. Titus	\$100
Edwards Sheet Metal Works, Inc.	\$250	Mr. Robert Dale Boatright	\$150	Mr. Sam E. Weatherford	\$100
Independent Air Conditioning	\$250	Mr. Charles A. Brunner	\$125	Mr. Micheal L. Welborn	\$100
Innovative Solutions Group, Inc.	\$250	Mrs. Charlotte A. Brunner	\$125	Mr. Charles G. Wetzler	\$100
Little Rock Mechanical Incorporated	\$250	Mr. William A. Harrison	\$125	Mr. Wade A. Wetzler	\$100
Northwest Controls Systems, Inc.	\$250	Mr. Charles D. Batson	\$100	Mr. Christopher S. Wilson	\$100
SE Of Arkansas - Service Experts	\$250	Mr. Joseph R. Black	\$100	Mr. Mark R. Wolthius	\$100
Waco Distributing Company	\$250	Mr. Brett A. Bolan	\$100	Mr. Greg Blair	\$50
Air Distribution Products Incorporated	\$200	Mr. Paul E. Briscoe	\$100	Mr. Christopher R. Ladner	\$50
Air Filter Systems Incorporated	\$150	Mr. Allen Bullard	\$100	Mr. Frank M. Mayfield	\$50
B R McGinty Mechanical Contractors	\$150	Mr. Christopher K. Call	\$100	Mr. Joe D. Miller	\$50
Fitton Systems Incorporated	\$150	Mr. Guy A. Caple	\$100	Ms. Tammy Leah Siler	\$50
General Mechanical Contractors, Inc.	\$150	Mr. Jack T. Carter	\$100	Mr. Scott R. Carter	\$20
Ice Incorporated Consulting Engineers	\$150	Mr. John T. Carter	\$100	Mr. Christopher R. Borne	\$10



American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
Arkansas Chapter Meeting RSVP Form

ROUTING

Company Name: _____
 Phone #: _____ Fax #: _____
 Signed: _____ E-mail: _____

For reservations to the Central Arkansas Chapter meeting fax this form by **Monday, November 9th** to 501.370.9298 *Attn: Chance Hollingsworth*

For reservations to the Northwest Arkansas Chapter meeting fax this form by **Tuesday, November 8th** to 479.443.0580 *Attn: Murl Meredith*

MEMBER NAME (Please Print)	CENTRAL Nov 10 th	NW ARK Nov 11 th	EATING (Y or N)

NOTES: Please fax this form to the name and fax number as referenced above.
 The meal is no cost to student members, however an RSVP is necessary.
 All "no shows" will be responsible for the cost of their meal.
In order to provide you with the best service for your Chapter's money, it is necessary to RSVP for each meeting.



NOVEMBER PROGRAM - CENTRAL ARKANSAS

" International Space Station Life Support & Thermal Control Systems"

Program Summary: This is technical overview of the International Space Station Life Support and Thermal Control Systems, with particular emphasis on the American and Russian life support systems hardware. The presentation will provide an overview of the high-level performance characteristics capabilities of the integrated system with some details of the specific architecture of the US systems. Also included are some design lessons learned from the operations perspective and some of the most challenging failures that have been experienced on-orbit.

Bio Summary: Kwatsi Alibaruho is the manager of the International Space Station (ISS) Life Support Systems Group, in the Mission Operations Directorate at Johnson Space Center. This group is responsible for overseeing onboard life support systems and operations from the mission control center, as well as developing all procedures, mission rules, and other items needed to safely and efficiently operate these systems. Mr. Alibaruho is a 1994 graduate of MIT with a degree in avionics, and first joined NASA in 1993 as a cooperative education student. Mr. Alibaruho received his certification as an ISS Environmental Control & Life Support Systems officer in July 1998, and since then has accrued more than 1 year of console operations experience, including oversight of five space shuttle assembly missions to the ISS.

This Month in Arkansas ASHRAE History*By James McKinnie, Committee Chair*

17 Nov 1964 – The chapter met at the Sam Peck Hotel at 6pm, with president Joe Miller presiding. Dinner was followed by the treasurer's report, then a presentation by Don Roberson of Armstrong Cork Company on trends in insulation (ed. note: do you think they saw the end of asbestos coming?).

20 Nov 1979 – The board met at the Sam Peck Hotel at 5pm to discuss scholarships, a load calculations seminar and Engineer's Week. The social was followed by a short presentation by Jack Carter on variable speed pumping. After dinner, Roy Gentry of Riddick Engineering presented on gasohol. His material spanned such topics as DOE appraisal of land for production, required engine modifications, by-products of production and combustion, and tax benefits.

17 Nov 1987 – The board met at the Holiday Inn Downtown at 4:30pm and welcomed Region VIII chairman C.D. Callahan to the chapter meeting. Discussion topics were the Christmas Party/Dance, and introduction of several committee chairpersons. The chapter meeting began at 6pm with a presentation on indoor air quality by Forrest Fensil of Farr Filter Corporation. After dinner, Mr. Fensil continued his presentation, focusing on legal liabilities and pollutant sources.

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2004-2005 Chapter Officers

<u>President</u> John Carter	501.666.5463	john@jcarterco.com
<u>Pres-Elect</u> Chance Hollingsworth	501.374.5420	chollingsworth@powersofarkansas.com
<u>Secretary</u> John Hodoway III	501.372.2900	jwhodoway@cromwell.com
<u>Treasurer</u> Steve Titus	501.375.1181	scititus@aristotle.net

Board of Governors

Tracy Hayes	501.834.3320	tracy.hayes@comfortsystemsusa.com
Tom Hanlon	501.661.0621	tjhanlon@trane.com
Randy Ragsdale	501.223.9302	rragsdale@lesarch.com
Randy Moore (Delegate)	501.280.0404	rmoore@airetechcorp.com
Rick Sellers (Alternate)	501.374.3731	rsellers@pettitinc.com

Committee Chairs

Membership	James Dayer	501.663.8886
Student Activities	Kim Koch	501.666.6776
Technology Transfer	Chance Hollingsworth	501.374.5420
Historian	James McKinnie	501.987.7666
Refrigeration	Chris Ahne	501.661.0621
Resource Promotion	Rick Sellers	501.374.3731
Honors & Awards	Randy Moore	501.280.0404
Newsletter	Tracy Hayes	501.834.3320
NW Section	Murl Meredith	479.443.0571
Social	Eddie Finley	501.374.5420
Reception	Shawn Wilson	501.570.7464
Webmaster	Ben Baugher	501.280.0404

**The Razorback Report**

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