

Pile of Bones

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OCTOBER 2008

President's Message

by Ted Cooke

Last month, for a change of pace, meeting attendees were toured through the new Saskatchewan Transit Corporation facility in Regina following a scrumptious Asian feast at Lang's Café. I would like to thank Brian Saunders and Greg Popowich of Saunders Evans Architects and Harley Friesen of Westridge Construction for donating their time to tour our chapter through the facility. I would also like to thank STC for making the site available for the tour.

This month's meeting will be back in our usual digs at the Hotel Saskatchewan where attendees get the chance to hear about the focus of the Clean Coal project at Boundary Dam from Doug Daverne of SaskPower. The environmental impact of coal is significant for Canada where coal is the source of 12% of all energy use (2005 Statistics) but is immeasurable for Saskatchewan where coal is the source of 45% of our power generating capacity (2006 Statistics). In this age of environmental controversy, this presentation provides an

exciting opportunity to learn first hand about SaskPowers initiative to reduce the environmental foot print of coal within our province.

I hope to see you all at the meeting.

ASHRAE Calendar of Events



For more information on the ASHRAE Conference, please visit: www.ashrae.org/chicago

Meeting Notice!

Wednesday
October 15, 2008

Hotel Saskatchewan
Radisson Plaza
2125 Victoria Ave
Regina

- 5:00 – Social / Cocktails
- 5:30 – Doug Daverne from SaskPower with us to present on the SaskPower Clean Coal Project at Boundary Dam
- 6:30 – Dinner
- 7:15 – Chapter Meeting

Please note: that you should have received your Regina ASHRAE Chapter fees invoice. In order to keep our chapter strong and vibrant, please remit any unpaid or new dues promptly once received.

Please note: anyone not having received their invoice please contact via email: ashraeregina@accesscomm.ca

See you all at the meeting.

Technical Program for October

This month we have Doug Daverne from SaskPower with us to present on the SaskPower Clean Coal Project at Boundary Dam. Doug is the Deputy Project Manager for the Clean Coal Project and is responsible for coordinating the engineering activities on the project. The Clean Coal Project comprises preliminary engineering, provisional contracting and licensing of a near zero emissions coal fired unit in Saskatchewan. The project was originally initiated in January 2006 to look at new unit options and more recently has focused on retro-fitting clean coal technology.

The presentation will discuss:

- Objectives and expectations for the project.
- □□□□□□□□ Underlying commercial and technical approach.
- □□□□□□□□ Examining the expected time frame for project completion.
- □□□□□□□□ Latest developments.

For Doug's complete Bio, please refer to the Chapter Technology Chair Report.

2008/2009 Meetings and Events

Schedule

October 15, 2008: SaskPower – Doug Daverne - Boundary Dam Integrated CCS Demonstration – focus of Clean Coal Project

November 12, 2008: Brian Brunskill – Geothermal Opportunities in Saskatchewan

December 10, 2008: Christmas Social – To be determined

January 14, 2009: Duane Rothstein – McQuay International – topic to be confirmed

February 11, 2009: Saskatchewan Research Council Update

March 11, 2009: To be Determined – possible Distinguished Lecturer

April 15, 2009: Student night

May 13, 2009: To be Determined – possible Distinguished Lecturer

June, 2009: ASHRAE Research golf tournament

Committee Chair Reports

President Elect and Chapter Technology Transfer Chair

by Greg Fluter

Thanks to everyone who came out last month to the tour of the new STC Bus Facility. The evening began with a great meal at Lang's café followed by an excellent tour guided by Brian Saunders, Principal Architect at Saunders Evans Architecture. I would like to thank Brian as well as Westridge Construction for taking the time to allow us to tour the facility. I'd also like to thank Grant Dawson for organizing the tour and for his input on the mechanical systems during the tour.

As mentioned at last month's (quick) meeting, we need to decide if we want to do something different for this year's Christmas Social. The last few years a Pool and Dinner night has been held at the Broken Rack. Last year we looked into having Poker Night at Casino Regina but decided not to because we needed to confirm 50 participants or face increased costs. If this is something we are interested in doing this year, we should confirm numbers quickly and book a date. We'll discuss this at this month's meeting.

Doug Daverne - Bio

Doug is the Deputy Project Manager for SaskPower's Clean Coal Project and is responsible for coordinating the engineering activities on the project. The Clean Coal Project comprises preliminary engineering, provisional contracting and licensing of a near zero emissions coal fired unit in Saskatchewan. The project was originally initiated in January 2006 to look at new unit options and more recently has focused on retro-fitting clean coal technology.

Doug holds a Bachelor of Science in Mechanical Engineering from the University of Saskatchewan, graduating in 1990. Since that time he has been working for SaskPower in the design, construction and operation of generating equipment and facilities for SaskPower.

Prior to joining the Clean Coal Project, Doug was a Project Leader in SaskPower's Power Production, Engineering Services group. This group provides engineering and project management services for large capital projects for existing and new SaskPower generating facilities. Doug's recent work in this group included lead roles in various coal fired unit life extension projects, SaskPower's Emissions Control Research Facility, and the Centennial Wind Power Project.

Greg Fluter
President Elect and Chapter Technology Transfer
Chair

Vice president – Newsletter

by Dean Nagel

Regina Chapter Email Address:

<mailto:ashraeregina@accesscomm.ca>

Regina Chapter Website Address:

Currently Under Construction

ASHRAE HVAC&R Industry eNewsletter
If you wish to subscribe to the ASHRAE HVAC&R Industry eNewsletter, e-mail subscribe-eneews@ashrae.org with "Subscribe this address to The HVAC Industry eNewsletter" in the e-mail subject line.

ASHRAE Learning Insitute

The ASHRAE Learning Institute is offering on-line courses. [Online Courses Registration Form](#) Please see attached information.

Interested in more information about Clean Coal Website follow the link below:

<http://www.saskpower.com/cleancoal/project.html>

Changes Proposed for ASHRAE Standards, Guidelines

ATLANTA – ASHRAE is currently accepting public input on more than 35 proposed addenda to

standards as well as a proposal to withdraw Standard 52.1.

Addendum to various standards, including 15 (refrigerate safety), 34 (classification of refrigerants), 55 (thermal comfort), 90.1 (energy efficiency), 62.1 (ventilation), 62.2 (residential ventilation), and 135 (BACnet) are open for review, as are seven standards and one guideline. Complete information can be found at www.ashrae.org/publicreviews.

Among them is the proposed withdrawal of ASHRAE Standard 52.1-1992, *Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter*.

The most important features of this standard, dust-holding capacity and arresstance, have been incorporated into Standard 52.2-2008, *Method of Testing General Ventilation Air Cleaning Devices for Removal Efficiency by Particle Size*. The only unique features remaining in Standard 52.1 are the dust-spot efficiency tests – now replaced particle-size efficiency tests in 52.2 – and a renewable filter test not used by the industry for decades, according to Monroe Britt, committee chair.

Among the proposed addenda to Standard 90.1 is addenddum *ap*, which would modify the requirements for demand control ventilation; adding the demand controlled ventilation requirements to the simplified approach in order to keep the stringency of this path the same as the mandatory plus prescriptive path of compliance. Also proposed is a change to addendum *af* to modify energy savings requirements to recognized varied piping material pressure drops.

Six proposed addenda to Standard 62.1 are open for comment, including a proposal regarding outdoor air cleaning. Addendum 62.1*c* adds significant air cleaning requirements in many locations within the United States. Regarding particulate matter 2.5 micrometers and smaller, for buildings in those U.S. locations established as non-attainment for PM2.5 by the U.S. Environmental Protection Agency, 62.1*c* would require that the ventilation system include particle filters rated at least MERV 11 (installed between the outdoor air intake and the occupied zone). Regarding ozone air cleaning, the proposed addendum would require that the ventilation system include ozone air

cleaners rated for at least 40% ozone removal efficiency.

ASHRAE/IESNA Standard 90.1-2007 User's Manual Makes it Easier to Save Energy

ATLANTA – A revised user's manual will assist users of the ASHRAE/IESNA energy conservation standard in energy efficient design.

The User's Manual for ANSI/ASHRAE/IESNA Standard 90.1-2007, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, is now available. This manual has been through an extensive revision process to incorporate the various addenda approved since the 2004 edition according to Keith Emerson, who oversaw review of the manual for the Standard 90.1 committee. Since the 2004 edition was published, 44 addenda have been approved and are now incorporated into the manual.

Updates have been made to reflect and illustrate the changes in every portion of the 90.1 Standard. Appendix G changes have also been made.

“The Appendix G changes will be particularly useful to people involved with projects that are trying to achieve a certain amount of savings over and above the minimum requirements of the standard,” Emerson said.

The *90.1-2007 User's Manual* illuminates the standard by providing detailed instruction, calculation examples and compliance forms for the design of commercial and high-rise residential buildings. It includes sections on administration and enforcement, building envelope, HVAC systems, service water heating, power, lighting, the energy cost budget method and the building performance rating method.

The cost of the *90.1 User's Manual* is \$93 (\$74, ASHRAE members), plus shipping and handling.

To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit at www.ashrae.org/bookstore.

ASHRAE Publishes Residential IAQ Guideline

ATLANTA – A new residential ventilation and indoor air quality (IAQ) guideline is now available from ASHRAE.

ASHRAE Guideline 24-2008, *Ventilation and Indoor Air Quality in Low-Rise Residential Buildings*, is the companion guideline to ANSI/ASHRAE Standard 62.2-2007, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*, the only nationally recognized ventilation and IAQ standard developed solely for residences. Guideline 24 provides information on achieving good IAQ that goes beyond the requirements contained in Standard 62.2 by providing explanatory and educational material not included in the code-intended standard.

The guideline, which was written by the committee responsible for maintaining Standard 62.2, includes information on envelope and system design, material selection, commissioning and installation, and operation and maintenance.

Committee chair Steven Emmerich said, “While Standard 62.2 contains the essential minimum requirements that all low-rise residential buildings should meet to achieve acceptable IAQ, Guideline 24 is an essential resource for designers, builders and others looking for reliable information on topics not covered in the standard or seeking to go beyond minimum for high performance construction. Topics covered range from fundamentals of building airflow to humidity control to verification of equipment performance.”

The cost of Guideline 24-2008 is \$54 (\$43, ASHRAE members). To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit at www.ashrae.org/bookstore.

ASHRAE Seeks to Engineer Tomorrow....Today in Windy City

ATLANTA – Chicago, with one of the most recognizable skylines in the world, has long-standing status as a livable urban center. That the city has stood the test of time makes it the perfect backdrop for ASHRAE's 2009 Winter Conference

theme, *Sustainable Urban Design: Engineering Tomorrow....Today.*

With a focus that resources must be conserved and environments respected even in urban settings, the ASHRAE Conference takes place Jan. 24-28 at the Palmer House Hilton. Held in conjunction with the meeting is the ASHRAE co-sponsored AHR Expo, Jan. 26-28, McCormick Place.

For complete meeting information and to register, visit www.ashrae.org/chicago. Take advantage of the "Early Bird" rate and register by Oct. 31.

Meeting highlights include availability of more than 200 Professional Development Hour credits available through the technical program, with its theme of *Sustainable Urban Design*, and ASHRAE Learning Institute courses.

Seeking to create additional value for Expo and Conference attendees, ASHRAE is launching "Wednesday Welcome," at which all ASHRAE program sessions on Jan. 28 will take place at McCormick Place. Hands-on, applications-type programs are offered in the morning, leaving the afternoon open to tour the Expo.

ASHRAE's free public session also focuses on *Sustainability in the Urban Development*, sharing how the industry is building on its efforts to increase energy efficiency and indoor environmental quality of buildings by furthering the sustainability of entire communities. It is held at 3 p.m. Jan. 26 at McCormick Place.

Also featured in the technical program is the technical plenary speaker, Adrian Bejan, Ph.D., J.A. Jones Distinguished Professor of Mechanical Engineering at Duke University. Bejan developed the constructal theory, which he says can predict how everything flows through time and space. The session takes place from 9:45-10:45 a.m. Jan. 25, Palmer House. Overall, the tech program features more than 100 sessions with presentations of 68 papers.

Opening the meeting on Jan. 24 at the plenary session is keynote speaker, Chris Luebke, who runs the Global Foresight and Innovation initiative at Arup, a global design and engineering firm. His presentation echoes the meeting theme with a focus on sustainable urbanization, looking at some of the current global

efforts to both design new cities and adapt existing cities to the new era of dwindling resources.

Sustainability is highlighted in the technical tours of facilities, including the ASHRAE Technology Award winning-Chicago Center for Green Technology, the Modern Wing of the Art Institute, the Intercontinental Chicago, which is the first Energy Star-rated hotel in the city, and the Spertus Institute of Jewish Studies, designed on the concepts of tikkun olan (meaning repairing the world) and bal tashchit (do not waste).

The ASHRAE Learning Institute offers five Professional Development Seminars and 12 short courses at the Palmer House and McCormick. New sessions include *Low Temperature Radiant Heating and High Temperature Radiant Cooling Systems*, *Chilled Beam Technology for Excellent Indoor Climate in an Energy-Efficient Manner*, *Installation of Residential Ventilation Systems (Standard 62.2)*, and *Business Management and Operations for Engineers*.

ASHRAE also will launch its latest certification program, Operations and Maintenance Management Professional Certification, during the meeting. For more information, visit www.ashrae.org/certification.

ASHRAE Announces Staffing Changes Related to Technology

ATLANTA – Two senior management changes are being announced related to ASHRAE's Technology Department.

Bruce Hunn, Ph.D., who has served as ASHRAE's director of technology since 1997, has been named to a newly created position, director of strategic technical programs. Claire Ramspeck, who formerly served as assistant director of technology for standards and special projects, has been named director of technology.

"These changes allow for better support of ASHRAE resources as the demand for ASHRAE's technical expertise and collaborative projects continues to grow," Jeff Littleton, ASHRAE executive vice president, said. "This will enhance ASHRAE's efforts in key technical areas such as net-zero-energy policy and the advancement of our activities with other organizations in the building industry."

As director of strategic technical programs, Hunn will oversee ASHRAE's special projects, such as development of its *Advanced Energy Design Guide* series, the upcoming *Advanced Indoor Air Quality* guide and other documents that will provide design guidance to achieve net-zero-energy buildings.

Prior to joining ASHRAE, Hunn served as head of the Building Energy Systems Program, Center for Energy Studies, the University of Texas at Austin.

Ramspeck will direct staff support of ASHRAE's \$3 million per year research program, its 90-plus technical committees and its 120-plus standards as well as technical services.

She has worked at ASHRAE since 1995, previously serving as manager of technical services and manager of standards. Prior to working at ASHRAE, she was a design engineer for Bechtel.

ASHRAE Raises More Than \$2 Million for Research Promotion

ATLANTA -Five hundred twenty-five thousand six hundred minutes. How do you measure, measure a year?

So goes the song from the hit play Rent. But at ASHRAE, we've measured the past year in dollars: \$2,081,422 to be exact. Exceeding the 2007-2008 fiscal year's \$2 million goal, ASHRAE's efforts on the chapter and Society level for raising funds for research have led to a record-breaking year.

"Surpassing our goal for Research Promotion truly signifies the dedication of our volunteer base," says Bill Harrison, ASHRAE president. "ASHRAE volunteers are the backbone of our Research Promotion program, which is a grassroots effort. I thank each of the 160 dedicated fundraising volunteers on the chapter level for helping fund our research program, which is widely respected in the building industry."

With 6,000 total donations for the year, nearly half came from individual ASHRAE member donations, with corporate donations comprising the remainder. With an increase of nearly \$300,000 over the previous year, the money raised will fund research projects beginning in the 2008-2009 fiscal year. ASHRAE conducts about \$8 million in research in any given year, with projects often spanning several years. Currently, there are 92 active research projects, including ones focusing on hospital operating room air distribution and air quality on board commercial aircraft.

Individual chapters raise funds in a variety of ways, including golf tournaments, auctions and educational seminars. ASHRAE's Region VIII, which covers Oklahoma, Texas, Arkansas and Louisiana, led the regions in total funds raised with \$375,591.

Sustainable Urban Design the Focus of ASHRAE Winter Conference '09 in Chicago

ATLANTA – At the 2009 ASHRAE Winter Conference in Chicago, you can be greeted at the Tech program not once but twice, courtesy of this year's extended series of sessions at McCormick Place on Wed., Jan. 28. Although the conference's technical program begins Jan. 25 at the Palmer House Hilton, the "Wednesday Welcome" event at the AHR Expo location offers ASHRAE members a chance to attend a kick-off morning reception and receive critical technical information at the educational sessions, with access to the show floor to see the latest in HVAC&R offerings.

The Wednesday Welcome includes 18 hands-on, applications-type programs, held from 9 a.m. to 1:30 p.m., centering around the Technical Program theme of *Sustainable Urban Design*.

"The Wednesday Welcome gives Winter Conference attendees two great reasons to spend some extra time in Chicago," says Bill Harrison, ASHRAE president. "Not only does this extension of the ASHRAE Technical Program provide

additional opportunities for earning PDHs, but attendees can take advantage of the location to make the most of the experience through AHR Expo's networking and product opportunities. It's the biggest bang for your ASHRAE buck."

Sessions held at McCormick Place feature back to basics sessions on load calculations and liquid chiller operations, BIM, Standard 62.1's demand controlled ventilation and IAQ procedure, VFDs, commissioning for sustainability programs, building automation systems and sessions entitled *Liability and Litigation Issues in Green Design, Part 1 and 2* and *Case Studies in Sustainable Retrofit to Reduce Energy of Existing Buildings*.

Overall, the technical program offers more than 100 sessions, with more than 140 Professional Development Hour credits available.

Also featured in the technical program is the technical plenary speaker, Adrian Bejan, Ph.D., A. Jones Distinguished Professor of Mechanical Engineering at Duke University. Bejan developed the constructal theory, which he says can predict how everything flows through time and space. The session takes place from 9:45-10:45 a.m. Jan. 25.

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The ASHRAE Winter Conference runs Jan. 24-28, 2009, and the AHR Expo takes place Jan. 26-28. For more information on the ASHRAE Conference, please visit www.ashrae.org/chicago.

ASHRAE, founded in 1894, is an international organization of some 50,000 persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.

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Dean Nagel
Vice President – Newsletter

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