

# FOG DISPENSER

Golden Gate Chapter



ASHRAE

VOLUME XLVII - NUMBER 3

December 2008

## December Meeting Details

Date: Thursday, December 4th, 2008

Place: Genentech Building 33, South San Francisco ([map & directions](#))

Schedule:

- 5:30 pm Registration and social hour
- 6:30 pm Dinner with announcements and introductions
- 7:45 pm Break
- 8:00 pm Speaker presentation
- 9:00 pm Adjourn

Cost:

	NLT Nov. 24th	No late RSVP's
GG or SJ ASHRAE Members	\$40	n/a
Non-members	\$47	n/a
Students	Free, but please register	n/a
Voucher holder	\$0, but please register	n/a

Please make your reservation at <http://www.ggashrae.org/meetings/2008-2009/dec.htm>

**NOTE:** If you make a reservation and cannot attend, you need to cancel in advance, or you will be billed. Tom Weaver will be taking reservations. If you need to CANCEL, please send a message to Tom at [cancellation@ggashrae.org](mailto:cancellation@ggashrae.org).

## Integrated Design: The Key to Success for Biotech Facilities

Speaker: Doug DeVeny, Director, Design Engineering, Genentech, South San Francisco



Doug DeVeny has been with Genentech since September 2005. As Director of Design Engineering, he provides management and technical leadership in the architectural, electrical, mechanical and civil/structural disciplines for the design, construction, start-up, and validation of Genentech's capital facility projects worldwide. He is also responsible for developing and implementing design standards and guidelines for Genentech's administrative, research and development, and manufacturing facilities, including cost effective methods for engineering solutions. In addition, Doug leads the Environmental Sustainability Team, providing corporate guidance for Genentech projects involving energy and water use, transportation, as well as raw materials and waste management. Previously, as Manager of Architecture at Jacobs Engineering in Cincinnati, Ohio, Doug led architects and designers in the conceptual design through construction support of multiple pharmaceutical-related projects. Prior to his management role at Jacobs Engineering, he was a project architect at a variety of architectural firms specializing in the design of commercial facilities. Doug has over 24 years of practice, management and leadership of architectural and engineering design for pharmaceutical manufacturing, laboratory, chemical process, medical, office, commercial, educational and residential projects. He is a licensed architect in several states, including California, with a B.Arch degree from the University of Cincinnati. He has extensive experience providing programming, master planning, design and construction support for a variety of pharmaceutical clients, including Genentech, Wyeth, Eli Lilly, Abbott, Genzyme, BioMarin and Bayer.

*Continued on next page*

**Presentation Summary:** In complex projects like the type you find in the Biotech sector, an integrated design approach is essential for success. Sub-optimal performance in any single area puts the success of the entire facility at risk. The success of anyone working on a biotech facility project relies on the individual achievements of every member on the design and construction team.

Doug will present on several aspects that are vital for success in Biotech Facilities including: Regulatory versus Building Code compliance; Operational versus Process flow; Energy efficiency versus Air Change requirements; Quality versus Schedule speed. Resolving the seemingly endless list of inherently contradictory demands of biotech facilities requires extreme focus on the interdependence of multiple, complex technical systems and architectural interfaces.

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### **Minutes of November 6, 2008 Chapter Meeting**

1. Location: Pacific Energy Center; San Francisco, CA
2. Meeting called to order by President, Jeff Blaevoet at 12:00
3. Self Introductions
4. Announcements:
  - a. Tyler Bradshaw, CTTC reminded members that the Technology awards deadline is approaching; it will be the end of February. Tyler also offered his assistance in completing the application form, or answering any questions on the awards process.
  - b. Jeff Violet, Research Promotion asked all who can, to donate, even a small amount to Research.
  - c. Gina Kalil, Student Activities calls on all members to mentor a student and get involved.
  - d. Scott Wayland, December Meeting Details. Topic will be *Integrated Design: The Key to Success for Biotech Facilities*. Speaker will be Doug DeVeny, Genentech
5. Speaker presentation: Scott Wayland introduced speaker, **Josh Plaisted, PVT Solar**
6. Marble Draw. Annie Foster presided and we had a \$500 winner, Erik Kolderup. He donated it all back to research and scholarships.
7. Jeff Blaevoet announced the next chapter meeting will be a joint meeting with the San Jose Chapter. To be held on Thursday, December 4<sup>th</sup> at Genentech SSF. Dinner 5:30pm
8. Meeting was adjourned at 1:50PM

Submitted by

Gary Harbison  
GGASHRAE Secretary

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## Golden Gate Chapter President's Message, December 2008

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At our last GGASHRAE meeting at the PEC on November 6th, Josh Plaisted gave a lively presentation on solar thermal applications. Two things particularly impressed me about his presentation – how well he knows his subject and how overlooked this technology currently is. It is a very economic and a very feasible addition to our armory of energy efficiency measures. It does not take as much space as PV's and has a better payback typically, *so what are we waiting for?* Maybe we are still remembering the over zealousness of some vendors the last time solar thermal went through a growth spurt in the seventies and eighties. Times change and so do the economics of things – just look at gas prices and the recent reductions back down to \$2 per gallon; should we not worry about our vehicles mileage now? Or should we be thankful for the breathing room, and take advantage of reduced pressure before prices go back up again? If something makes sense, we should be forward looking and invest in it before we are forced to.

*All of us involved in helping building owners decide what systems to include in their projects need to get familiar with the details of solar thermal, and start presenting the economics more aggressively. We need to specify more solar thermal systems on our projects!*

Sustainability has been a strong theme of the Golden Gate Chapter meetings the last few years, and that will continue in 2009. December's meeting mixes it up a little, as our membership is very diverse and we want to engage as wide an audience as possible. Energy efficiency may not be the highest priority for Biotech projects, as functional requirements and reliability often take precedence, but economic evaluation of alternatives should still be part of any project. Doug DeVeney will put the spotlight on what the important issues are for design engineers to consider in undertaking biotechnology projects on Thursday December 4<sup>th</sup>. We look forward to seeing you there.

Respectfully,

Jeff Blaevoet.  
GGASHRAE.

## ASHRAE....Aging?

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Tom Gilbertson, Chapter Historian

ASHRAE has lost a past-President....James May, at the age of 100.

Historically speaking, Mr. May, who joined a successor society ASHVE in 1935, saw about as much “change” as is imaginable. Lets look at the “ASHRAE-rooted” changes that we now can refer to as “historical”, and see what took place over this man’s life span in ASHRAE.

Let’s see...1935...no VAV, no digital control, no hermetic centrifugal, as a matter of fact...hardly any air-conditioning! In 1940 less than 40% of the single family homes in the United States...there were 48 states then...had central heat!...and less than 55% had indoor plumbing! These seem to me to be astounding numbers....considering where we find ourselves, today.

Another “number” that surprised me was the percentage of Americans who had not taken a “scheduled airline flight” in 1960....more than 96%! Imagine, only 4% of the U. S. Population had taken a flight on a scheduled airline...1960!...and I remember 1960 quite clearly.

Where will ASHRAE involvement take in the next 48 years?...What will be “new” to the present ASHRAE president...when he is 100 years old?...I don’t know, but I look forward to doing an interview with him....in about 50 years.

Could some one share with me some of the items that they think will be new...and will be described in the History column in 50 years?...I’d like to hear!

What do you suppose Mr. May might have anticipated for future ASHRAE-activity in 1935?

As late as 1963 our industry was using pretty crude devices....I recall a “special” lighting controller being “unveiled” at ASHRAE’s 1963, Winter Meeting in New York....are you ready for this???....It was a light sensitive transducer that measured classroom lighting levels, and converted this “lighting-level” to a pneumatic signal that operated a damper motor that had a crank arm that turned a gear that in turn rotated a shaft that had cams that operated “Micro-switches”... (“Micro-switch” that was a “hated” Minneapolis-Honeywell brand name....Minneapolis-Honeywell was the arch competitor to the “loving” Johnson Service Company...my employer at the time..)....and these Micro-switches “stepped” the rows of fluorescent lights in the classroom....to save electric energy!!!

This revolutionary energy saving device was employed on a school in New England...but not without some “growing pains”. On a day with “passing clouds” the device cycled the classroom lights, in 4 stages, from full “off” to full “on”....about every two minutes!....Lovely!....The distraction to the students, and the teacher was unbearable; “fortunately” the electric wiring “failed” and actually burned the school to the ground....That fixed the “cycling problem”.....History, and perhaps some progress, is not made without some miss-steps.

Milt Garland... ASHRAE member....and about as a historical person as you can have.... ..the man the President Clinton honored as the “oldest-working American”, when Milt was 103...(Milt had worked his entire civilian life for Frick...starting right after WWI)....was nice enough to be on an ASHRAE refrigeration committee with me. One day when Milt was about 98, I asked him....”Gee Mr. Garland, when are you going to retire?”...Milt drew me closer, and said...”I can’t”...My question was...”How come?”...His reply... “Because we have a lousy retirement program...”.

Perhaps history does repeat itself??

## **Student Activities**

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Gina Kalil, Student Activities Chair

### **ASHRAE Members!!**

The students need you and have requested at least an hour of your time!! I hope you will take this opportunity to reach out. Please contact me if you are willing to dedicate an hour to mentoring a student, taking them around a jobsite, or showing them what you do in your daily work. If you want to get more involved, please talk to me at the next meeting, give me a phone call, or email me and I can give you some details.

And...thank you to Cal Hydronics for reaching out in support of the students by offering a jobsite visit!

### **Travel Grants!!!**

The deadline for travel grant is December 1<sup>st</sup>!!!! We hope students will take the opportunity to attend the ASHRAE winter meeting and expand their knowledge of and dedication to the ASHRAE community. There is also opportunity to attend the summer meeting – more details to come.

### **Scholarships!!!**

The deadline for submitting for scholarships is March 25th!

### **Science Fair!!!**

The science fair date this year is March 16-20<sup>th</sup> and we will be recognizing students whose projects relate to our industry! Go see this fair if you can – it is great!

We will recognize the scholarship winners and science fair winners at our May, 2009 meeting so plan to be there!

Any questions please contact Gina Kalil at [gina.kalil@jei.com](mailto:gina.kalil@jei.com).

Thank you!!

## **Marble Draw**

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Annie Foster

Thanks to Victaulic for sponsoring November's Marble Draw. Erik Kolderup won the \$500 pot and generously donated it all back to ASHRAE Research and Scholarships. Thank you Erik!

The next GG ASHRAE Marble Draw will be at the January meeting. The pot will be \$500, and the odds are 1 in 9, so be ready to buy your raffle tickets!

We are always in need of raffle sponsors. If you would like to donate a prize for a future meeting, please contact Annie Foster at 415-402-2248 or [annie.foster@wspfk.com](mailto:annie.foster@wspfk.com)

# Chapter Technology Transfer Committee (CTTC)

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Tyler Bradshaw, ASHRAE Golden Gate CTT Committee Chair

2008/2009 Technology Awards

The Technology Transfer Committee would like to encourage all members to consider participating in the Technology Awards this year. Entries must be submitted by February 28th 2009.

There are three stages of competition and awards: Chapter, Region and Society. The first step in this process is to submit your project to the chapter level competition.

First place winners from the Chapter competition move onto the Region X Award Competition. Then the Regional first place winners are eligible to move onto the Society competition.

Every year ASHRAE conducts the Technology Awards program to:

- Recognize ASHRAE members who design and/or conceive innovative technological concepts that are proven through actual operating data;
- Communicate innovative systems designs to other ASHRAE members;
- Highlight technological achievements of ASHRAE to others, including associated professionals and societies worldwide, as well as building and facility owners.

Each year Society presents awards in some of the thirteen categories: Commercial Buildings (New and Existing); Institutional Buildings (New and Existing); Health Care Facilities (New and Existing); Industrial Facilities or Processes (New and Existing); Public Assembly Facilities (New and Existing); Residential Buildings (New and Existing) both single family and multifamily (Low & High Rise); Alternative or Renewable Energy Use.

For each category a first, second, and honorable mention winner may be named. Also, one of the category first place winners may be selected to receive the ASHRAE Award of Engineering Excellence. The recipient will have demonstrated the best overall compliance with the judging criteria.

Society's bar is set pretty high for the awards as indicated in the very short list of awards from the last few years.

The submitted project should be completed and occupied for one year by the due date for the Society award application - September 2009. Therefore, your project should have been occupied by September 2008. By that time there should be good measurement and verification data available. The one year of occupancy is not a requirement for the Chapter award but it is a strong suggestion. This is a requirement for the Society award competition.

Please see our CTTC website or the following links for more info.

<http://www.ashrae.org/publications/detail/14703>

<http://www.ashrae.org/publications/detail/14704>

<http://www.ashrae.org/publications/detail/14692>

<http://xp20.ashrae.org/STANDCOM/ShortForm.pdf>

Join the CTTC Committee

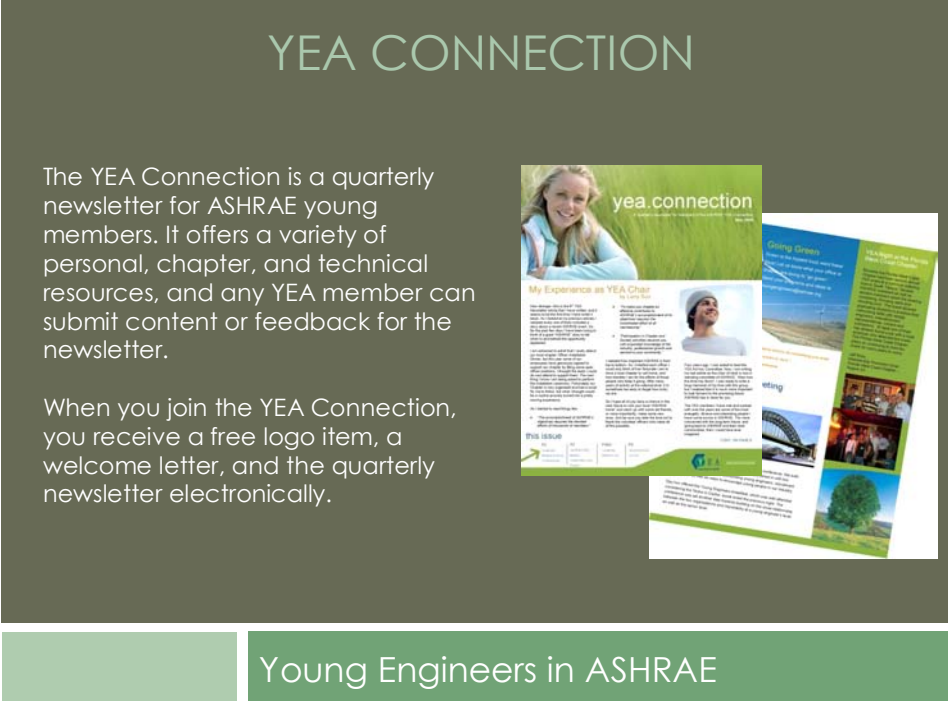
If you like to assist the chapter and get involved with ASHRAE, the Chapter Technology Transfer Committee is one of the best places and we could use your help. Talk to a board member or contact Tyler Bradshaw at [tbradshaw@rumseyengineers.com](mailto:tbradshaw@rumseyengineers.com).

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## Young Engineers in ASHRAE

To ensure the future of the Society and the industry, ASHRAE is committed to advancing its programs and services for young members through helping them build their professional foundations.

With this in mind, ASHRAE has created a Committee called Young Engineers in ASHRAE (YEA), for members age 35 and younger! Be sure to check out the YEA Connection on <http://www.ashrae.org/members/page/861> for information of interest to young professionals.



The YEA Connection is a quarterly newsletter for ASHRAE young members. It offers a variety of personal, chapter, and technical resources, and any YEA member can submit content or feedback for the newsletter.

When you join the YEA Connection, you receive a free logo item, a welcome letter, and the quarterly newsletter electronically.

The graphic includes images of the newsletter cover, which features a young woman and the text 'yea.connection', and several pages of the newsletter with articles like 'My Experience as YEA Chair' and 'Going Green'.

Young Engineers in ASHRAE

### What is the YEA Connection?

YEA Connection is specifically targeted at young ASHRAE members who wish to receive regular communication of interest to young people and who want to network and communicate with one another. It offers a regular newsletter, a free logo item, listserv, and information and updates on special events as they occur. It's a great opportunity to stay up-to-date with Society news and events and network with young professionals around the world.

### Who qualifies to be in the YEA Connection?

All members age 35 and younger with the following member grades:

1. Member
2. Associate Member
3. Student Transfer
4. Affiliate Member

**To subscribe to the YEA Connection**, please send an email to [youngengineers@ashrae.org](mailto:youngengineers@ashrae.org) with the following information:

1. Subject line: Subscribe to YEA Connection
2. Message body:
  - a. Your name
  - b. Your member number
  - c. Your physical mailing address
  - d. Your active E-mail address

## Code Committee

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Gary Harbison

**UMC and California Mechanical Code Section 1125 Cooling Towers, Evaporative Condensers and Fluid Coolers** specifies location restrictions and materials of construction. Are your specifications in accordance with this section?

**Section 1125.1 General** "...when located on roofs, such equipment, having combustible\* exterior surfaces, shall be protected with an approved automatic fire-extinguishing system.

\*"Non-combustible" as defined by ASTM is materials which pass ASTM E 136, 750°C furnace test.

Common exterior tower surface; air inlets and casing materials, in use today are FRP. That material will not survive a 750°C furnace. Hence, where FRP is used, code requires a fire protection system.

Note: Many specs have "non-combustible" fill, which is not applicable, and a hold-over from when the industry could use asbestos for fill and eliminator materials. The PVC fill and eliminators in the current HVAC towers are classified as "non-flammable" by ASTM E 184, with flame spread of 25.

**Section 1125.6 Location** "...Plume discharges shall be at least 5 feet above or 20 ft. away from any ventilation inlet to a building."

**Section 1125.7 Electrical** "...equipment shall be provided with a vibration switch....in climates commonly subject to electrical storms, lightning protection shall be provided on roof-mounted equipment."

Section 1125.7 would not necessarily seem to be applicable to us in Northern California until summer 2008 when on the weekend of June 20 and 21; 5,000 to 6,000 dry lightning strikes occurred. Resulting in 700 fires. At the peak, there were over 2,700 individual fires. Code does not have an exception when the building itself has lightning protection.

**Conclusion:** If you have any code issues that just drive you crazy or find a section of particular import, please pass it on to Gary Harbison: [glharbison@calhydro.com](mailto:glharbison@calhydro.com) and we will publish in the next edition of *The Fog Dispenser*.

# ANNOUNCEMENTS

## Change of Address

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All members who wish to make changes in their membership data (change of email address, change of address or change of employer are the most common) must make those changes through the national ASHRAE site <http://www.ashrae.org>.

### **THE GOLDEN GATE CHAPTER CANNOT MAKE THESE CHANGES FOR YOU.**

In order to change your membership data, you will need your ASHRAE member number and confidential PIN number, both of which are on the ASHRAE card issued to you each year. Go to the Change of Address link of the ASHRAE website, log in, then to Membership Records. If you don't have your PIN or membership card, please call Customer Service Section: 1-800-5-ASHRAE (US and Canada).

## Job Posting

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### **Mechanical Engineer Wanted at Taylor Engineering**

#### Job Description:

Design HVAC systems and controls, for commercial buildings using CAD tools. Perform load calculations and energy analysis. Analyze building mechanical system operation data, diagnose operation problems, and provide technical leadership. Provide whole building energy model and simulation. Make recommendations for improving system performance.

#### Job Requirements:

Bachelor's degree or equivalent in Mechanical Engineering or closely related field and two years experience performing HVAC systems analysis or whole building energy simulation and analysis, including HVAC.

Please send resume to

**Quanita Savoy**  
Taylor Engineering  
1080 Marina Village Parkway, Suite 501  
Alameda, CA 94501.  
Fax: 510-749-9136.  
E-mail [qsavoy@taylor-engineering.com](mailto:qsavoy@taylor-engineering.com)

## 2008 - 2009 Events Calendar

<i>Date</i>	<i>Venue</i>	<i>Presentation Topic</i>	<i>Speaker(s)</i>
**Thursday, December 4, 2008** Joint Meeting with San Jose ASHRAE Dinner	Genentech Campus- South San Francisco	Bio-Tech Industry & Building Systems	Dough DeVeney Genentech
Thursday, January 8, 2009 Lunch	PG&E Pacific Energy Center, San Francisco	Energy Topic TBD	Dru Crawley DOE
Thursday, February 5, 2009 Dinner	PG&E Pacific Energy Center, San Francisco	CO2 Based Demand Controlled Ventilation	Steve Taylor
Thursday, March 5, 2009 Joint Meeting with Redwood Empire Dinner	Embassy Suites, San Rafael	Airside / Evaporative Energy Saving Systems	Keith Dunnivant Des Champs
Thursday, April 2, 2009 Dinner	Scott's Seafood, Oakland	TBD / Tour	TBD / Tour
Thursday, May 7, 2009 Dinner	PG&E Pacific Energy Center, San Francisco	Showcase/Tech Awards/Student Science Fair	Showcase/Tech Awards/Student Science Fair
Thursday, Jun 4 2009 Dinner	Scott's Seafood, Oakland	TBD	TBD

TBD = To Be Determined

Visit [www.ggashrae.org/calendr.htm](http://www.ggashrae.org/calendr.htm) for updates, presentation summaries, speaker biographies and to register for the meetings. If you have suggestions for meeting topics, please contact Jeff Blaevoet at [jblaevoet@gb-eng.com](mailto:jblaevoet@gb-eng.com).

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### **\*\*Special December Meeting Announcement-November 24<sup>th</sup> Sign-Up Deadline\*\***

The December Meeting will be held on the Genetic Campus and Security is paramount. We must present our attendance list for clearance on Monday, November 24, 2008. Therefore, there will no late sign-ups or walk-ins allowed for this meeting. Any questions, please contact any board member.

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