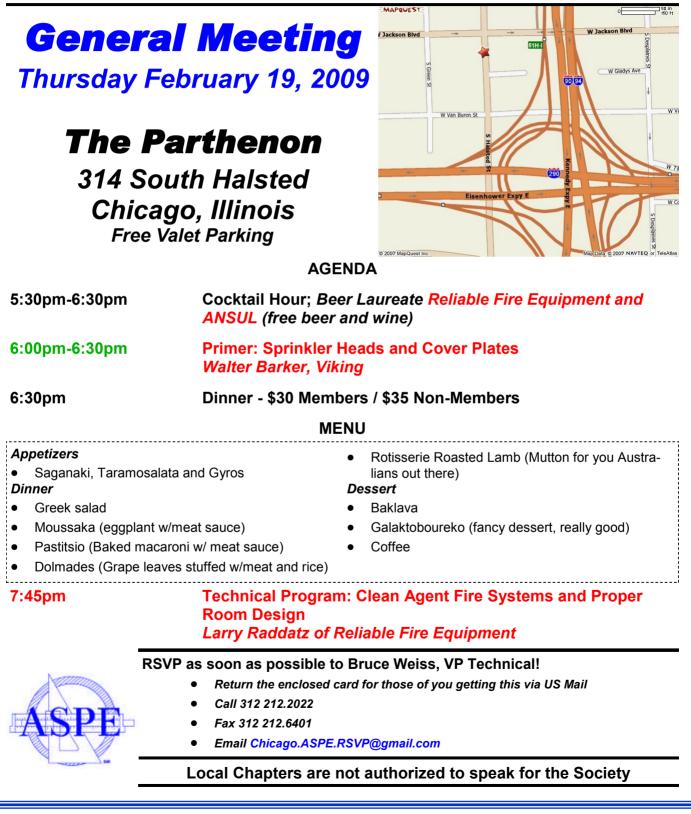
**** Chicago ASPENEWS

Chicago Chapter of the American Society of Plumbing Engineers Vol. 40, No. 7 February, 2009



PRESIDENT'S MESSAGE



Happy Groundhog Day!

SO what could a groundhog know anyway? There is always 6 more weeks of winter after Groundhog Day. SO, what's with that? It infers that maybe the Vernal Equinox is just going to pop up on our calendars a few weeks early?

They say a shadow of a groundhog means six more weeks of winter and no shadow means spring is around the corner. Groundhog Day proponents state that the rodents' forecasts are accurate 75% to 90%. A Canadian study for 13 cities in the past 30 to 40 years puts success rate level at 37%. Also, the National Climatic Data Center (http://en.wikipedia.org/wiki/National_Climatic_Data_Center) reportedly has stated that the overall predictions accuracy rate is around 39%. I'm a

little skeptical. But as far as the weather goes, it's going to a beautiful spring and it's coming early! (I saw my shadow and that's what it told me!)

NO ACTUAL GROUNDHOGS WERE KILLED OR INJURED IN THE PRODUCTION OF THIS DOCUMENT!

January Meeting

Rosewood Restaurant was great and we enjoyed another tasty meal at our January meeting. It was a bargain for the prices that we charge. The brave souls that trudged into the cold dark night were aptly rewarded. Congratulations for having the fortitude to venture out. And special thanks to those who RSVP'd and followed through with their commitment! We even had several National Board Members in attendance!

The speakers were interesting. Plastic piping is a big subject and a bit of a foreign language to us Chicagoans. George's presentation on Alternative Venting Methods was a lively topic. Again, Chicago people are in a bit of a vacuum because we are more limited than other parts of the world might be. That's not always a bad thing. These alternatives require thought to insure that they are the appropriate answers for your application. There may be "adverse" affects. We need to consider all of the consequences. That's why Plumbing Engineers get the big bucks! 8[^])

ASPE CHICAGO 40th ANNIVERSARY!

Well, we are in our 40th year as a Chapter, and we haven't celebrated yet! How is that possible? We will unleash Phase 1 or our celebration at the February meeting. In honor of the great amount of time that we have been chartered as a Chapter, we will be giving away a Grandfather's Clock. One lucky person will be enjoying the warm chimes of Father Time in his/her home or office. That's all I can say at this time. (No pun intended-it just happened!)



Don't forget that the Product Show is coming soon. If you want to be an exhibitor, be sure to get your paperwork and checks in ASAP. *OR YOU MAY BE A SPECTATOR!* If you are a spectator, not that there is anything *WRONG* with that, mark your calendar and be there for the seminars and the Show. We will have some new exhibitors this year, as well as all of your favorites! We have prizes and surprises as well. There's dinner, too, as you know. Watch for announcements of the Product Show Committee meetings. Frank Sanchez is the Product Show Chairman again this year, so contact him if you have any questions or comments. Thanks Frank and Phill Kroll (Co-chair)!

(continued on page 3)

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Donald Johnson

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PRESIDENT'S MESSAGE (continued)

Plan Now to Attend the 2009 ASPE Technical Symposium

The ASPE Technical Symposium will be held Oct. 23-25, 2009 in Dearborn, Michigan. Intense educational sessions and fun special events will be included. The Engineered Plumbing Exposition (EPE) promises an array of exhibitors who will showcase the newest products in the industry. Attendees will have numerous opportunities to win prizes. Visit www.aspe.org for more updates.

Look for more info in future issues of the ASPE News, as well as PS&D, and The Pipeline. And read the whole ASPE Newsletter! You're probably spending plenty of time indoors lately, so read the newsletter! You never know what you might be missing. Stay tuned for more details.



Next CPD Exam Will Be Held April 17 &18, 2009

The Certified in Plumbing Design examination will be administered on Friday and Saturday, April 17 or 18, 2008, depending on available sites. The exam is an online proctored exam with approximately 200 possible testing sites throughout the U.S. and Canada. The testing fee for the examination is \$375 for ASPE members, \$300 for ASPE members with PE, and \$625 for nonmembers or \$550 for nonmembers with PE. Download the *CPD Bulletin* for more

information - http://aspe.org/new/CPD/cpd.php. Registration Closes April 3, 2009!

FREE (for ASPE Members IN GOOD STANDING) CPD REVIEW CLASS

David DeBord, your FAVORITE "CURRENT" ASPÉ President, and Jason McDonald, your favorite Newsletter Editor, will present the famous Ficek/McDonald CPD Review Class - **Saturday March 14** at the luxurious offices of **Grumman/Butkus** in beautiful downtown Evanston, IL! If you are planning to take the exam, this is the *PERFECT* way to target your studying energy in the right direction! Watch for more details soon! Please contact Jason if you are interested in attending - jsm@grummanbutkus.com.

Free Webinar in March

ASPE is presenting a webinar on **LEED Point Strategies** on March 18. The webinar will be free to ASPE members thanks to sponsorship by Bradley. The presenter, ME, much appreciates their sponsorship and the opportunity to wow you with LEED information. Go to the ASPE website and register today - http://aspe.org/new/RSA/Webinar/info/LeadPoint.php.



Plumbing Engineering Design Handbook Volume 2

ASPE Wisconsin Chapter is taking care of Volume 2 and can use your help. They are looking for writers/editors for the following chapters:

- Fuel-Gas Piping Systems
- Private Onsite Wastewater Treatment Systems (POWTS)
- Private Water Wells
- Water Treatment, Conditioning and Purification

If you want to help, you can either contact me or Sarah Balz, Wisconsin Chapter President at sbalz@aeieng.com.

Make sure that you don't miss any upcoming meetings! We only have a few left this season! Thanks for your support! See you **February 19**th at **The Parthenon** at 314 S Halsted in Chicago! We'll hear about **Sprinkler** Heads and Cover Plates, and our main topic will be about Clean Agent Fire Systems.

RSVP as soon as possible for the February meeting to Bruce Weiss, VP Technical! Email Chicago.ASPE.RSVP@gmail.com OR, if you can't email: Call 312 212.2022; Fax 312 212.6401.

Also, we still have about 30 Tables books. They will be available at the Feb meeting. Payment by check is best so I don't have to keep track of the cash.

David DeBord, CPD LEED AP; President

ddebord@esdesign.com; 312 456.2359



JANUARY MEETING RECAP

Primer Recap

Acid waste and high purity piping systems; Presented by Steve Mutton of Simtech

Steve had a nice table top display of acid waste piping and joining methods. Thank you to everyone who dropped by and talked to Steve.

Main Presentation Recap

Alternate Venting Methods- Venting beyond individual fixture venting; Presented by: George B. Swietczak, Plumbing Inspector for the Village of Villa Park, Illinois

George did an excellent job on presenting an often misunderstood section of the plumbing code. He explained the basics of venting and more. He was able to give brief explanations of the other types of venting besides individual fixture venting.

FEBRUARY MEETING

Primer

Sprinkler Heads and Cover Plates; Presented by Walter Barker, National Technical Representative of Viking

We have had a change from what we originally advertised (CPVC piping); however this will be just as good. Steve will bring a display of the latest sprinkler heads and cover plates. He will discuss the features and benefits of various models and specific applications of certain sprinklers.

Main Technical Presentation

Clean Agent Fire Systems and Proper Room Design; Presented by Larry Raddatz of Reliable Fire

There will be a brief overview of clean agent systems and the gases currently available on the market.

The main emphasis will be on the design of clean agent systems, detection methods and what design considerations to take into account during the preparation of bid documents. Larry will discuss each of the components required within a room protected by a clean agent system. He will also touch on items to consider that interface with other trades such as mechanical and electrical requirements.

Bruce Weiss, CPD LEED AP; Vice President Technical

bweiss@aeieng.com; 312 212.2022

MEMBERSHIP UPDATES

Remember that if you change companies, email addresses, personal information and the like, PLEASE contact your VP Membership Rick Butler ASAP (rick@luczak.com or 847 781.5100). This will ensure that you keep getting your ASPE mailings and that your directory information will be accurate. Thanks!



FELLOW AFFILIATES – PRODUCT SHOW IS COMING!

January is over and hopefully we will see a warm up in the near future. Speaking of the future, don't forget our upcoming Product Show. Your Product Show Committee is working very hard to make this our best show ever. Look for some minor changes to the format and layout to improve the display area and also attendance. Watch your mail for more info.

Richard Simms, Affiliate Liaison dsimms@deery-pardue.com; 630 350.7575



LEGISLATIVE CORNER

The Great City of Chicago Plumbing Code "Informal" Interpretations

There are more topics I will be covering in future newsletters. So far, I received interesting comments and feedback, but I still want to hear from you! I will skip the "Chitown Informal Interpretations" this month, because I want to pass along some info regarding a commonly misinterpreted 18" rule.

Please remember that you should **always** check your local codes and contact the authorities having jurisdiction because they have the final word on code interpretations.

The City of Chicago Plumbing Bureau can be reached at 312 743.7477; fax number 312 743.7434. All questions should be submitted to Mr. John Flynn, Plumbing Inspector.

Maintaining 18-inch Clear Space below Sprinkler Deflectors

During a recent survey, I noticed this line painted along the wall at the storage rooms. Have you seen them? It is used as a way to maintain the 18" clearance below the deflectors.

Although many nursing homes and hospitals have been told that storage is not permitted within 18" of the ceiling in a sprinklered building, this is not totally correct. Just like this place I visited, some facilities have even been told to paint a line along the wall 18" inches below the ceiling.

Question: Can a facility store items within 18-inches of the ceiling in a sprinklered building?

Answer: Yes. Note that the storage along a wall shall not be directly below a sprinkler head. Otherwise, it will be considered an obstruction.

The 18" rule is meant to prevent objects (storage, lights, ducts, etc) from interfering with the spray pattern of the sprinkler head during a fire. However, since the only thing between storage to the ceiling along a wall and a sprinkler head is a wall itself, the Code allows storage to the ceiling. This would apply to storage on shelving units, wardrobes, etc.

Note that you cannot store to the ceiling along the walls if:

- The storage will interfere with the spray pattern of a sidewall sprinkler head.
- The storage is directly below a sprinkler head. This will apply to sidewall and pendent sprinklers. It is rare when you find sprinklers installed that are close to a wall on a storage room, but if that is the case, you need to respect the 18" rule.

This is important because facilities can gain a lot of storage space. However, you need to consult with the local authority and inform him/her of this code interpretation.

Extract from NFPA 13, Installation Standard for Sprinkler Systems, 1999 Edition

A-5-6.6 * Clearance to Storage (Standard Pendent and Upright Spray Sprinklers)

The clearance between the deflector and the top of storage shall be 18 in. (457 mm) or greater. *Exceptions: Where other standards specify greater minimums, they shall be followed.*

Note the asterisk (*). This means that explanatory material on the paragraph can be found in Appendix A.

Here is where someone a long time ago forgot to look and created this common misinterpretation.

(continued on page 6)

LEGISLATIVE CORNER (continued)

Appendix A

A-5-6.6 The 18-in. (0.46-mm) dimension is not intended to limit the height of shelving on a wall or shelving against a wall in accordance with 5-6.6. Where shelving is installed on a wall and is not directly below sprinklers, the shelves, including storage thereon, can extend above the level of a plane located 18 in. (0.46 mm) below ceiling sprinkler deflectors. Shelving, and any storage thereon, directly below the sprinklers cannot extend above a plane located 18 in. (0.46 mm) below the ceiling sprinkler deflectors.

NFPA 13, 2007 Edition moved things around a little, but it is the same concept.

Extract from NFPA 13, Installation Standard for Sprinkler Systems, 2007 Edition

8.5.6.1 * Unless the requirements of 8.5.6.2, 8.5.6.3, 8.5.6.4 or 8.5.6.5 are met. The clearance between the deflector and the top of storage shall be 18 in. (457 mm) or greater.

Please note that NFPA 2007 modified the Annex A clarification. Currently, it does not state clearly that the intention is to avoid interferences with the spray pattern, but it states that the minimum required unobstructed space below sprinkles shall be maintained. Also, you need to comply with 8.5.6.2, 8.5.6.3, 8.5.6.4 or 8.5.6.5 requirements as indicated.

As a reference, I included a formal interpretation from NFPA 13, 2007 Edition. This interpretation is related to storage of Medical Records on fixed open shelves NFPA 13 2007, 8.15.9.

Please remember that you should always check your local codes and contact the authorities having jurisdiction. Note that some jurisdictions still use NFPA 13, 1999 Edition and others adopted NFPA 13, 2007. However,

the Artij and the Fire Department will			
always have final word (or at least a	Formal Interpretation		
strong opinion) regarding code interpre-			
tations.	NFPA 13		
Do you agree with this 18" rule code interpretation?	Installation of Sprinkler Systems		
Do you consider necessary we sub- mit a formal request to NFPA 13	2007 Edition		
2007 regarding this 18" rule?	Reference: 8.15.9 F.I. No.: 13-99-2		
Here you can find more formal Interpre- tations from NFPA: http://www.nfpa.org/itemDetail.asp? cate- goryID=1173&itemID=27578&URL=Codes% 20and%20Standards/Code% 20development%20process/TIAs,% 20Errata%20and%20FIs/FIs	 Background: Section 8-5.6 states that the clearance between the sprinkler deflector and the top of storage shall be 18 in. (457 mm) or greater. Section 8.15.9 provides guidance on sprinkler protection of library stacks. This guidance allows floor to ceiling bookshelves and requires sprinklers to be installed in every aisle with a distance between sprinklers along aisles not to exceed 12 ft (3.6 m). Question: Is it acceptable to apply the principles of NFPA 13, 8.15.9 to the storage of Medical Records on fixed open bookshelves, thereby allowing the tops of the bookshelves used for this purpose to come within less than 18 inches of the horizontal plane of the sprinkler deflector with sprinklers installed in every aisle? 		
Please send me your questions and comments.	Answer: Yes.		
Frank Sanchez, CPD Vice President Legislative c/o: Grumman/Butkus Associates 820 Davis St., Suite 300 Evanston, IL 60201 Phone: 847.328.3555 Ext: 251 Fax: 847.328.4550	Issue Edition: 1999 Reference: 5-13.10 Issue Date: January 3, 2002 Effective Date: January 23, 2002		
fxs@grummanbutkus.com	Copyright © 2006 All Rights Reserved NATIONAL FIRE PROTECTION ASSOCIATION		
	(continued on page 7)		

6

LEGISLATIVE CORNER (continued)

2009 International Building Code® will be released in March!!! www.iccsafe.org

The International Code Council is a membership association dedicated to building safety and fire prevention and develops the codes used to construct residential and commercial buildings, including homes and schools. Most U.S. cities, counties and states that adopt codes choose the International Codes developed by the International Code Council.

Note that the 2009 International Plumbing Code will be available in March. So mark your calendars and keep your eyes open for the upcoming changes. You can also go to the ICC website and preorder your copy.

In April you will be able to purchase the booklet "Significant Changes to the International Plumbing Code/ International Mechanical Code/International Fuel Gas Code, 2009 Edition". Key changes: http:// www.iccsafe.org/ps/2009KeyChanges.pdf

2009 IPC

- Building occupant loads are required to be split into male and female numbers before plumbing fixture ratios are applied.
- Frost-proof yard hydrants with below grade waste valves are specifically prohibited unless upstream backflow protection is provided and the hydrant is permanently identified with "do not drink" signage.
- Sinks utilized for cleaning food utensils, dishes, pots, pans and serviceware must indirectly connect to the sanitary drainage system by an air gap or air break.
- Water heaters must have a level working space of 30 in. by 30 in. on the control side and equipment and piping/ ductwork running to and from unrelated equipment cannot block removal of a water heater.
- Public toilet facilities must have directional signage for the route to the facilities.

2009 IFC

• Retroactively, all non-sprinklered Group 1-2 occupancies will now require automatic sprinkler protection.

Frank Sanchez, CPD; Vice President Legislative

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WORDS FROM THE TREASURER

This is your friendly Treasurer again wishing everyone a prosperous year. Remember to include a copy of your invoice for the dinner meetings along with your payment.

Some plumbing fun facts:

- A low flush toilet can save you up to 18,000 gallons of water per year.
- If a drip from your faucet fills an eight ounce glass in 15 minutes, it will waste 180 gallons per month and 2,160 gallons per year (CHU CHING).

Not-so-fun plumbing facts:

The Earth has somewhere in the neighborhood of 326,000,000,000,000,000,000 gallons (326 million trillion gallons) of water on the planet. Roughly 98% of our water's in the oceans of the world, and therefore is unusable for drinking because of the salt content. That means only around 2% of the planet's water is fresh, but 1.6% of that water is locked up in ice caps and glaciers. Another 0.36% is found in very deep, underground sources - meaning only about 0.036% of the planet's total water supply is found in lakes and rivers (our main supplies of drinking water)!



We need to start looking (as plumbing engineers) for alternative ways to start conserving this water for our children and their children.

Remember the 2009 ASPE Product Show is just around the corner.

Mark G. Mannarelli, Treasurer

mmannarelli@esdesign.com; 312 456.2354



CORRESPONDING STUFF

IFPA/SFPE; www.chicagosfpe.org / www.ifpanet.org Combined Fire Prevention Show Tuesday March 24, 2009, 4pm – 8pm White Eagle Banquets and Restaurant; 6839 N. Milwaukee; Niles, IL; 847 647.0660

ASHRAE, www.illinoisashrae.com Advanced Energy Design Guides Series

February 10, 2009

Parthenon Restaurant; 314 S. Halsted Street; Chicago Afternoon Seminar 1:30pm - \$30 – PDH hours: 3 Presenters: Dan Nall, Flack & Kurtz – Gordon Holness, President-Elect ASHRAE Dinner: 5:00PM - \$35 – PDH Hours 1 – Path Towards Net Zero Energy Buildings, Student Night and Scholarships Awards Presentation – Presenter – Gordon Holness

Tour of Loyola's New Digital Library – Go to website for more information March 3, 2009

Chicago Bulls Outing – Call 708 636.5819

March 4, 2009

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ILPHCC; www.ilphcc.org Trade Show

Sunday, February 8, 2009 Pheasant Run Resort, St Charles, IL – See web for more details.

ILPHCC Expo (The State Plumbing Show)

Friday March 20, 2009; noon-6pm Drury Lane Conference Center, Oak Brook, IL

WQA Agautech USA - The Water Opportunity Show; www.wqa-aquatech.com

Conference - March 17-21, 2009; Exhibition – March 18-20, 2009

Donald A. Stephens Convention Center; Rosemont, IL

This is a show for those interested in or involved in water treatment. There are seminars and around 200 exhibitors (as of 10/31/08). Register by 2/19/09 and save some money. You can register online at www.wqa-aquatech.com, fax WQA Aquatech USA at 630 505.9637 or mail WQA Aquatech USA, 4151 Naperville Road; Lisle, IL 60532.

Jerry Fields; Corresponding Secretary jerry@luczak.com; 847 781.5100



NEWS FROM YOUR ADMINISTRATIVE SECRETARY

Happy New year once again everybody! I hope all of you had a great holiday season. We are done with our first meeting of 2009. I would like to introduce our winners from the January meeting. First, Ed Kedzie of UIC (who will be retired by the time you read this newsletter) won a free dinner and Mike Imaoka, MGN was a 50/50 raffle winner. Mike got good karma when he donated his 50/50 winnings from the November meeting, that was ALSO at Rosewood to Toys for Tots. If we ask Mike, I'll bet he will want to have MORE meetings there!

Good start for a new year! Congratulations guys!

Natalia Dankanich, Administrative Secretary nkd@grummanbutkus.com; 847 328.3555 x208

HELP WANTED

Nope, this isn't a company hiring. In fact, the pay is ZERO. The benefits? You get good parking AND you get to play an active role in the best ASPE Chapter in the world! ASPE Chicago is in search of a few good people. As you know, Chicago Chapter Board of Directors elections are in May. ALL positions are open. Sure, there are some people who have already expressed interest in running; but, if you ever wanted to get involved with the Chicago Chapter, here is your chance as big changes are ahead!

Between graduation and other unforeseen circumstances, there are a few more vacancies than usual. THIS is your time! Officer positions available are:

President Vice President Technical Vice President Legislative Vice President Membership Treasurer Administrative Secretary Corresponding Secretary



Also open right now for the 2009-2010 ASPE Chicago season, due to some of those unforeseen circumstances mentioned earlier, is *Newsletter Editor*. Are you creative? Do you like correcting other people's spelling? Do you like trying to figure out just what someone is trying to say? Then this is the job for you. It IS a job you can have fun with if you let it be fun.

A new position might be presented for 2009-2010 - *Chapter Social Coordinator*. This person will be responsible for organizing and coordinating Chapter social events and activities like the Ride to the Rock. He/she will also be involved, perhaps in a liaison level, with events chaired by others like Booster Night, CPD Review class, Product Show, Chapter Anniversary parties and Symposia/Conventions. If you think this might be a position for you but you don't want to be swamped, don't fear as you will have PLENTY of help!

If you are interested in running for any Board of Directors position or would like to become the next Newsletter Editor or Social Coordinator, please contact David DeBord at <u>ddebord@esdesign.com</u>.

Jason McDonald, Newsletter Editor

jsm@grummanbutkus.com; 847 328.3555 x204



IN THE EARLY DAYS OF ASPE

The following appeared in the January 1968 issue of *Air Conditioning, Heating and Ventilating* (ACHV) magazine. Mr. Durazo was Administrative Director of our newly formed Society. A very insightful writing back then. "We've come a long way baby."

How to Get Recognized

As our nation continues to grow in urban concentration and industrial complexity, the word "plumbing" takes on added significance. Today, every plumbing project must meet safety and health standards set forth by building codes and statutes – some of which have recently been put on the books to prevent or control water pollution. The person best qualified to interpret and fulfill all the local, state and federal requirements for piping water, steam, air or sewage is the plumbing engineer.

Yet, the plumbing engineer fails to enjoy the recognition he deserves. Too often, the general contractor bypasses the plumbing engineer and calls him in only when the job runs into trouble. Because emergency measures always cost more than properly planed work, the contractor may try to recoup his added costs by again cutting corners on the next plumbing job.

The cure for this lack of professional recognition, on the part of the plumbing engineer, lies in his own hands. He must help dispel the notion that plumbing is a do-it-yourself job by proposing ideas and layouts that are superior to what the contractor or architect has in mind. And he must support the ASPE in its public relations function of "beating the drums" and trying to raise the status of the plumbing engineer. - RAY DURAZO

Don Johnson, Historian

JANUARY 2009 MEETING ATTENDANCE

The following list of individuals attended the January 2009 meeting of the ASPE Chicago Chapter. In accordance with ASPE Society policy, these individuals are entitled to 0.75 RU's towards the required 24 RU's needed every two years to maintain CPD registration. Meeting attendance is also recognized by the Illinois Department of Professional Regulation to count as 1 PDH towards the required 30 PDH's needed every two years to renew Professional Engineering licenses.

Steven Adams Sean Allard Dave Anelli Tom Babcock Judie Ballanco Julius Ballanco **Bill Bauer** Brian Baxter Mike Belczak Matt Bell Brian Berg Erik Bacher Tom Brown **Rick Butler** Jeremy Cantor **Brian Carlos** Mitch Clemente Todd Cooper Mike Cusack Ken Cutler Natalia Dankanich

Ralph Dantino Dave DeBord Francisco DeHoyos Jamie Diamond Greg Farmer Jim Feeney Joe Ficek Jerry Fields Otton Finiewicz Jasen Ginalski Reid Goodrich Berit Herdman Jamie Heinz **Bill Hughes** Mike Imaoka Jeff Ingertson Bob Jackson Scott Jagodzinski Mark Kaulas E.J. Kedzie Richard Klaess

Steve Krock Phill Kroll Terry LeBeau Joe Leonard Ed Lichner Mark Loth Charlie Loth Gary Mahoney Jim Majerowicz Mark Mannarelli Paul McLaffertv Harold Miller Bob Miodonski Greg Nagrant Jim O'Neil John Panek Frank Paulette Mark Petrosius Tracy Price Kerbie Reader Steve Roche

Ben Rubach Frank Sanchez Chris Sbarbaro **Keith Schreiner** Craig Shannon Tim Smith **Billy Smith** George Sobyra Jim Sommers Jeff St. Onge George Swietczak Robert Thompson Bob Turk Bruce Weiss Michael Whiteside **Diane Wingard** Chris Wisinski Dave Wolniak Peter Wu Kevin Zaleski

This printing constitutes our record of who was in attendance. We apologize for any misspelling of names and ask that for future sign-ins, please print legibly. Thank You!



"I should've been a plumber." - Albert Einstein

AS I KNOW IT - THE BASIC PRINCIPLES OF PLUMBING

The following is from ANSI A40-1993. It outlines the "Basic Principle of Engineering", beyond the usual "To Protect the Health of the Nation".

Principle 1: Consumer Protection

The keystone of all good plumbing design is consumer protection. Protection of the consumer's health and safety, as well as the financial interests of the project. The primary objective of the Principle (taken from ANSI A40-1993), is that each component of the plumbing system shall be durable material free from defective workmanship and designed and constructed to give satisfactory service for it's reasonable life. Under normal usage, non-accessible components of the plumbing system manufactured in compliance with required standards, when properly designed, installed, and maintained, should have a useful life of 20 years. I personally believe that this is a rather low expectation.

Principle 2: Potable Water

All premises intended for human habitation, occupancy or use shall be provided with a supply of potable water. Such water supply shall not be connected directly to unsafe water sources and shall be protected from the hazards of back-flow and back siphonage.

• Principle 3: Hot Water

Hot water shall be provided for every dwelling intended for human habitation.

• Principle 4: Plumbing Fixtures

Each family dwelling unit shall have at least one water closet, one lavatory, one kitchen-type sink, and one bathtub or shower to meet the basic requirements of sanitation and personal hygiene. All other structures for human habitation shall be equipped with sanitary facilities in accordance with this Code. The plumbing fixtures provided shall be made of durable, smooth, non-absorbent, and corrosion-resisting material, and shall be free from concealed fouling surfaces.

• Principle 5: Structural Safety

Plumbing shall be installed with due regard to preservation of the strength of structural members and prevention of damage to walls and other surfaces from fixture usage.

(continued on page 11)

AS I KNOW IT - THE BASIC PRINCIPLES OF PLUMBING (continued)

• Principle 6: Safety Devices

Devices for heating and storing water shall be so designed and installed as to guard against dangers from explosion or overheating.

• Principle 7: Ground and Surface Water Protection

Sewage or other waste shall not be discharged into surface or subsurface water unless it has been subjected to an approved form of treatment.

• Principle 8: Water Conservation

Plumbing shall be designed and adjusted to use the minimum quantity of water consistent with proper performance and cleaning.

• Principle 9: Public Sewer and Water

Sewage or other waste shall not be discharged into surface or subsurface water unless it has been subjected to an approved form of treatment.

• Principle 10: Sewer Flooding Prevention

Where a plumbing drainage system is subject to backflow of sewage from the public sewer, suitable provision shall be made to prevent such backflow into the building.

• Principle 11: Vent Terminal

Each vent terminal shall extend to the outside air and be so installed as to minimize the possibility of clogging and the return of foul air into the building.

• Principle 12: Drainage System

The drainage system shall be designed and installed to prevent fouling, deposit of solids, and clogging and shall be provided with cleanouts so arranged that they be readily cleaned and maintained as required by code.

• Principle 13: Pressure and Volume

Plumbing fixtures, devices, and appurtenances shall be supplied with water in sufficient volume and at adequate pressures to enable them to function properly under normal conditions of use.

• Principle 14: Fixture Traps

Each plumbing fixture directly connected to the drainage system shall be equipped with a liquid seal trap.

• Principle 15: Trap Seals Protection

The drainage system shall be provided with ventilation to guard against self-siphonage, induced siphonage, or forcing of trap seals under normal conditions of use as specified in this Code.

• **Principle 16: Light and Ventilation** No water closet or similar plumbing fixture shall be installed in a room or compartment which is not lighted or ventilated.

• Principle 17: Fixture Accessibility

All plumbing fixtures shall be so installed with regard to spacing as to be accessible for their intended use, cleaning, and maintenance.

• Principle 18: Private Sewage Disposal Systems

When plumbing fixtures are installed in a building having no public sanitary sewer available, provision shall be made for private sewage disposal by an approved method.

• Principle 19: Tests

The plumbing systems shall be subjected to such tests as will disclose any leaks and defects in the work or the material. Tests on innovative systems shall be made to demonstrate adequacy or performance regarding sanitary function, health and safety.

• Principle 20: Maintenance

Plumbing systems shall be designed and installed as to facilitate repair and maintenance and shall be maintained in a safe and serviceable condition from the standpoint of both operation and health.

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DATE	PRIMER	TECHNICAL PRESENTATION	LOCATION
September 18	Zero Power Fixtures; Repco Associates	Plumbing Fixtures and LEED; Kohler Company	LaVilla 3638 N Pulaski Chicago
October 16	Water Heater Controls; Luczak Sales	High Efficiency Water Heaters - When is the Proper Application?	The Parthenon 314 S Halsted Chicago
November 20	Medical Gas Inlets/Outlets; Ohio Medical	Booster Pumps - Variable Speed Drives and their Implications on Booster Pumps; Advanced Mechanical Technologies	Rosewood Restaurant 9421 Higgins Rosemont, IL
December 18	Booster Night; Special Entertainment		LaVilla 3638 N Pulaski Chicago
January 15	Acid Waste and High Purity Piping; Zurn Acid Waste Piping	Alternative Venting Methods; George Swietczak, Village of Villa Park Plumbing Inspector	Rosewood Restaurant 9421 Higgins Rosemont, IL
February 19	Sprinkler Heads and Cover Plates; Viking	Clean Agent Fire Systems and Proper Room Design; Reliable Fire Equipment	The Parthenon 314 S Halsted Chicago
March 19	Point-of-use Water Heaters; Chronometer & Deery- Pardue	Solar Water Heating; Bornquist	LaVilla 3638 N Pulaski Chicago
April 16	Technical Seminars	38th Annual ASPE Chicago Product Show	White Eagle 6839 Milwaukee Ave Niles
May 21	Elections	Vacuum Plumbing Systems; Deery-Pardue	The Parthenon 314 S Halsted Chicago
June 19	Annual ASPE Chicago Golf Outing		Hilldale Golf Club 1625 Ardwick Drive Hoffman Estates
July 18	ASPE RI	de to the Rock	Chicagoland to Starved Rock