



ASPEnewsletter

Southwestern Ohio Chapter

January 2011 Volume 29 Issue 6

Chapters are not authorized to speak for the Society

**AMERICAN SOCIETY OF
PLUMBING ENGINEERS
SOUTHWESTERN OHIO CHAPTER**
140 E MONUMENT AVENUE
DAYTON, OH 45402-1267
Tel 937-224-8513
Fax 937-224-0644
Internet www.swoaspe.com

President

Al Fike, PE
Afike2@woh.rr.com
Cell 937-602-2898

Vice President, Technical

Brandt Junker
KLH Engineers
bjunker@klhengrs.com
Tel 859-442-8050
Fax 859-442-8058

Vice President, Legislative

Ronald K Bartley, PE, CPD, CPI
Caregivers-R-Us
bartleyrk@att.net
Tel 937-220-9700
Fax 937-220-9702H

**Vice President, Membership/
Affiliate Liaison**

Ronald Cobb, PE, CPD
SHP Leading Design
rcobb@shp.com
Tel 513-381-2112

Treasurer

Matthew Sciarretti, PE, CPD, LEED-AP
Heapy Engineering, LLC
sciarretti@heapy.com
Tel 937-224-0861
Fax 937.224.5777

Administrative Secretary

Robert McGinnis
Heapy Engineering, LLC
rmmcginnig@heapy.com
Tel 937-224-0861
Fax 937-224-5777

**Corresponding Secretary/
Newsletter Editor**

James N Miller, PE, CPD
Herndon Engineering Services, Inc
jmiller@herndoneng.com
Tel 513-248-1313
Fax 513-248-2869

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ASPE January Meeting

Date: TUESDAY, January 18^h

Location: Location: RAMADA INN, 6147 W St Rte 122, Middletown, Ohio. 513-424-1201. From I-75, take the Middletown Exit and go east to the Ramada Inn.

Schedule: 11:30-12:00 PM Lunch
12:00-12:45 PM Program

Speaker: "Hydro Powered Self Generating Powered Flush Valves",

Cost: \$20 at the door Engineers/Designer/Contractor/Code Official
\$140/Year Meal Assessment. \$25 at the door Mfg. Rep./Vendor or
\$160/Year Meal Assessment

Reservations: Contact Bob McCain of BSE at (e-mail) rlmccain@bseltd.biz, (phone) 937.312.0217 or (fax) 937.438.0195 before **MONDAY January 17th** so that a head count can be established. As always, guests are welcome. Bring a friend.

FUTURE MEETING SCHEDULE

Dec 16, 2010 Joint Meeting /Dinner Ohio Society of Professional Engineers

Jan 18, 2011 HYDRO POWER Self Generating Powered Flush Valves

Feb 15, 2011 Grease Trap Sizing and Installation

March 22, 2011 Pex Piping Plant Tour

April 19, 2011 City of Cincinnati Water Works Tour

May 17, 2011 Fire Systems Design Considerations, Dayton Fire Department

June 3, 2011 Dayton Dragons

June 4, 2011 ASPE Regional Chapter Pres. Meeting Hosted by SWOASPE

**All meetings held in Middletown unless noted otherwise
All meeting topics subject to change without notice**

Technical jargon...

- When going green is the objective for a project, there are given legal risks when the Owner's LEED certification expectations are not met. But there are **other, more obscure, risks** that lie beneath the surface, such as...

The acceptance of the higher standard of care that a green building presents may mean that what are now best practices may become the new standard of care. Most insurance underwriters will exclude anything that exceeds the normal standard of care.

The failure of the design team to recognize or anticipate the unknowns in cost and schedule that a green building may possess.

The failure of new, green-friendly products to meet their promoted performance claims, which is more likely with new, untested materials compared to proven materials found in traditional construction. Contractors often have no experience with these products and design professionals typically do not have the time to fully research each material.

Vegetative roofs, which are more risky than conventional roofs due to the almost constant presence of moisture requires they be carefully designed, constructed and monitored after construction.

Improved energy performance from increased insulation and the use of new materials, which could change the dew point location in walls, resulting in damaging condensation and a reduced drying potential for wall assemblies.

The reuse of existing structures or recycled materials, which could cause compatibility problems with new components.

Increased ventilation to satisfy indoor air quality goals that may result in increased humidity levels in hot, humid climates.

Building startup procedures (such as a 'flush out') that could increase humidity levels resulting in the increased likelihood of mold growth.

-Casper the Friendly Ghost-writer

Legislatively speaking...

- During the 2010 Annual Business Meeting in Charlotte, International Code Council (ICC) voting representatives ratified the Board of Director's **Emergency Amendment to the fuel gas purging requirements** of the 2009 *International Fuel Gas and Residential Codes*. US Chemical Safety Board (CSB)

Chairman Rafael Moure-Eraso applauded the efforts as a means to increase safety in facilities. "The CSB believes these new requirements are urgently needed to prevent future tragedies resulting from unsafe purging practices at industrial, commercial and public facilities," Moure-Eraso said. Under the new code requirements, fuel gas piping systems in industrial, large commercial and large multifamily buildings may not be purged indoors. They also require that purging activities be monitored using appropriate combustible gas detectors to prevent significant releases of flammable fuel gases.

- The ICC has launched **Version 2.0 of the International Green Construction Code** for use as a jurisdictional tool to regulate green construction, and as a document for comment leading into the 2011 Code Development and Final Action hearings. You may access IGCC PV 2.0, including excerpts of the code's Water Provisions as free downloads, on the Code Council's website at www.iccsafe.org/igccv2. Public Version 2.0 reflects the work of the IGCC Public Hearings Committee, which conducted a review of 1,500 comments and nearly 120 hours of testimony during eight days of public hearings during August 2009 in Chicago.

The IGCC applies to new and existing, traditional and high-performance commercial buildings. It includes ANSI/ASHRAE/USGBC/IES Standard 189.1 as an alternative compliance requirement. Coordinated with the ICC family of codes, the IGCC is designed to go beyond traditional code requirements for those communities who are aggressively pursuing a sustainable goal.

- The ICC serves as the publisher and convener for the standard that makes buildings accessible to people with disabilities. The Code Council's process **has resulted in an update of this standard with essential new requirements.** ICC A117.1 *Accessible and Usable Buildings and Facilities* contains technical accessibility requirements for both new and existing buildings. Released alongside the updated standard are a new guide and seminar spotlighting significant revisions.

"The Code Council is proud of its leadership role in shepherding the development of ICC A117.1 over the years. These critical updates represent a consensus approach from advocates and industry to promote a more accessible built environment," said Code Council CEO Richard P. Weiland.

The *ICC A117.1-2009: Accessible and Usable Buildings and Facilities* includes many new or revised requirements such as:

clarification of requirements for dwelling units, addition of Type C dwelling unit requirements for use by jurisdictions adopting visitability ordinances for dwellings not regulated by Fair Housing, a series of revisions for restroom requirements, a new chapter for recreational facilities and a new section addressing variable message signs.

- During the annual International Association of Plumbing and Mechanical Officials (IAPMO) convention, some **revisions to the Uniform Plumbing Code (UPC)** were debated by the membership. Of the various proposed changes voted upon, one that was denied approval was a proposal to include siphonic drain systems for storm water drainage. However, approved for possible inclusion to the UPC was the requirement that the use of air admittance essentially be an engineered system and the addition of the new ASPE design standard for rainwater catchment systems.

- There are established procedures for the commissioning of various building systems and components, but there is no clear-cut definition of a procedure for fire protection and life safety systems. NFPA is in the process of addressing this in the development of *NFPA 3, 'Recommended Practice on Commissioning and Integrated Testing of Fire Protection and Life Safety Systems.'* Without delving too deeply into the proposed standard, the following procedures related to commissioning will be recommended during the development of a project:

Planning Phase: Establishing the fire protection and life safety commissioning team, developing the Owner's project requirements, selecting the fire commissioning agent, identifying the scope of the commissioning, developing the

preliminary commissioning plan, reviewing/revising the plan as necessary during this phase, developing a regulatory code analysis and initiating the commissioning plan.

Design Phase: Developing the basis of design (BOD), reviewing /approving the sequence of operations, reviewing/approving the Contract Documents and calculations affecting the fire protection and life safety systems, verifying the Contract Documents comply with the requirements of the BOD, documenting the scope of commissioning activities and procedures, developing a commissioning schedule, identifying qualified specialists for testing and their responsibilities, coordinating and documenting fire protection and life safety team meetings and progress reports, documenting issues and changes, updating the commissioning plan and developing construction checklists.

Construction Phase: Verify the commissioning schedule remains valid and revise it as necessary, verify all submittals have been received and reviewed, verify that materials and installation conform to the BOD, confirm that qualified specialists are performing commissioning activities per the commissioning plan, coordinate and document team meetings and progress reports, document any issues and changes to the project and update the commissioning plan, complete the commissioning checklist, perform the required observations or verify they have been performed by others, update related documents to the record and revise for any changes, verify the sequence of operations is correctly reflecting the final, as-built condition and perform and document the final acceptance tests, verifying proper functionality and integration.

Occupancy Phase: Documentation and completion of any remaining acceptance tests, additional testing due to any changes in the construction phase commissioning, testing deferred for seasonal considerations, submission of operation/maintenance manuals, training on the fire protection/life safety systems, delivery of the record set of drawings, delivery of the test and inspection records for the fire protection/life safety systems, delivery of project-specific

software (which is representative of the final as-built condition), delivery of warranties for systems and equipment, submission of the required preventive maintenance program for the systems and delivery of a list of required inspections, tests and maintenance procedures for the systems.

Certainly, NFPA 3 will contain more specific criteria for these and other tasks necessary for commissioning activities. The Report on Comments to the document will be released by the organization in February. The final document is expected to be released in about a year.

- The US House of Representatives recently voted 226-109 in favor of the "**Reduction of Lead in Drinking Water Act**," which the Senate also approved on a voice vote. The bill would set federal standards for levels of permissible lead in plumbing fixtures that carry drinking water, with the allowable lead content going from the current federal level of as much as 8 percent to 0.25 percent. If signed into law by President Obama, the bill will become effective 36 months later, and it then would prohibit manufacturers and importers from selling plumbing fixtures that don't meet the new standards.

-Ronald K Bartley PE, CPD, CPI

Through the pipes...

- In case you missed the email, Zurn has announced that (pardon our French) **BIM, Revit and 3D models** of many of their products are now available for downloading at www.zurn.com.

Also, files for Wilkins Backflow Preventers, Zurn Floor and Shower Drains, Carriers, Fixtures, Flush Valves and Faucets are now available in RFA, DWG, and DXF formats at www.zurn.com.

- With the Certified in Plumbing Design (CPD) designation after your name, you instantly will be recognized as an expert in the plumbing engineering field. **The 2011 CPD Exam will be offered in electronic format on April 15 or**

April 16 at 200 testing facilities across the country. Full ASPE members are automatically approved to sit for the exam. Visit the ASPE website at www.aspe.org or contact Stacey Kidd at 847.296.0002 or skidd@aspe.org for additional information.

- These tough economic times don't have to negatively affect your ASPE membership. ASPE offers a **compassionate dues waiver for members having financial difficulties**. Maintaining your membership can help you stay in touch with your peers to learn about new job opportunities, so contact Membership Director Stacey Kidd at 847-296-0002 or skidd@aspe.org now to discuss your options.

Other voices...

In a recent edition of the ASPE Pipeline, the subject of Contract Documents and how they were interpreted and applied by Contractors was discussed, with opinions from the membership sought. What follows is the opinion of two Society members. Their names have been withheld by request.

Specifications and plans are intended to complement each other. Drawings provide details and specifics as to what the Owner has a legal right to construct (and therefore the Contractor must follow the design) relative to their project. The specifications provide guidance as to the quality and material make-up of the various components that go into the designed systems (not to mention the traditional means-and-methods of installation). It should never be the intent that one part of the Contract Documents (drawings/specifications) takes precedence over the other.

This becomes a discrepancy that should not exist. However, it has become the accepted practice of Contractors' to use discrepancies in the Contract Documents to justify change orders once the project is underway. Many times, this allows Contractors' to maximize their profits while not providing to the Owner that for which they contracted. Contractors should always ask questions during the bidding phase should they

believe a discrepancy exists within the Contract Documents. This would eliminate the issue or at least minimize potential conflicts.

But, having once been a Contractor, too many in the profession believe that doing so might put them at a competitive disadvantage. This is an uneducated and poorly informed approach, but prevalent amongst contractors. The better approach is to address such perceived discrepancies and get everyone to bid the (same) documents. This makes for a better process, gets the Owner what they contracted to receive and moves the Contractors' performance more rapidly ahead during construction. The quicker the Contractor completes his work, the greater his profit potential. Failing to address these discrepancies early, during the bidding process, only causes conflict. The reality is that a Contractor may get a change order, but really does not increase or maximize his profit. These disputes and delays cost the Contractor money and bring dissention and distrust amongst the whole building team.

And the design community bears some responsibility in this as well. Too many times, poorly prepared documents with inaccurate, incomplete or even missing information are released. This does no service to insuring the Owner gets what he is paying for and that the Contractors will be able to ask the proper questions up front.

The engineering/design community needs to apply professional ethics and accept responsibility for being the Owners' advocate. This should be true even when the Owner waivers on what he/she desired and contracted to obtain.

And Contractors need to act in a like professional manner and be pro-active during the bid process and bring forth any questions/concerns they may have so that a proper response can be delivered in a timely fashion by the Design Professional. This maintains a level playing field for all interested parties.

Parting thought...

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January/February 2011						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9	10	11	12	13	14 Last call for your reservations	
15	17 MLK Day	18 SWO ASPE Chapter meeting	19	20	21	
23	24	25	26	27	28	29
30	31	1	2	3	4	5



▶ What do the Beach Boys, Mickey Mouse, and T&S low-lead faucets have in common?

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