



The Pittsburgh Professional Engineer
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November 2010

WHERE AND HOW DO I GET MY PDHS? SOURCES OF CLASSES AND COURSES For Engineers Licensed in Pennsylvania

The October meeting of the Pittsburgh Chapter was a presentation by Michel Sadaka, P.E., Southwest Region Vice President for PSPE, and covered the basics of the Act 25 law and some guidelines on determination as to whether classes/courses qualified for Pennsylvania PDHs. Future updates and information related to Act 25 will be posted on the Pittsburgh web page.

Many of you have asked, where do I go or what organizations provide qualified Pennsylvania PDHs? Here is where your NSPE/PSPE membership has one of its many benefits. Through your NSPE/PSPE membership, you have available from the NSPE and PSPE web sites (www.nspe.org and www.pspe.org), free PDH credit hours as part of your membership benefits. If you go to the NSPE web site and click on the "Member Benefits" tab, it will take you to the page showing up to 15 free credit hours. There is a list of the courses available for these hours. On the PSPE web page, there are several initiatives from PSPE. One is a calendar showing various local chapters across the state and their offerings for PDH courses/meetings. Another offering is that PSPE has teamed up with Red Vector, a national organization that offers online courses for PDHs. More information on the availability of courses through NSPE and PSPE will be presented in future newsletters.

Another option that is available through some engineering periodicals is free online seminars which have been certified, particularly by the State of New York, for qualified PDHs. As we learned during our October meeting, New York has one of the most stringent registration laws and criteria for courses being qualified/certified to receive credits. If a course is certified with credits for a New York professional engineers' requirements, then it will definitely qualify for Pennsylvania's requirements. One of the online periodicals that provides such free online courses is *Consulting Specifying Engineer*. Their web site www.csemag.com has many articles and seminars listed, all of which are free. Registration is simple, you can view the webinars when they are in session, or you can download the webinars as pdf files and view them later. Online tests for PDH credits are available at any time. There are other technical journals which provide a similar service. Check into the journals that you normally get electronically to see what they offer.

The November meeting of the Pittsburgh Chapter will be another in our series of meetings which qualify for one (1) PDH in Pennsylvania. The meeting topic has been reviewed and qualifies for New York accreditation too.

See the flyer insert in this newsletter for seminar registration.

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JANUARY CHAPTER MEETING

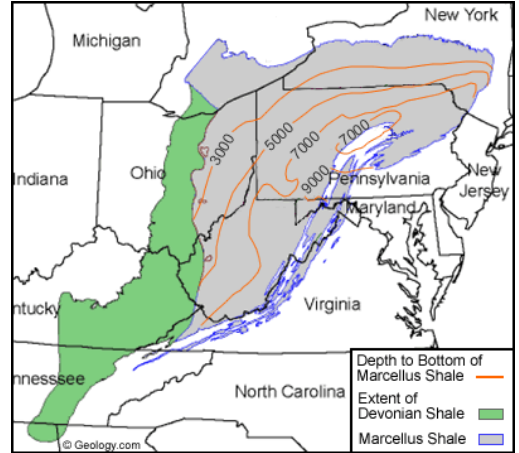
Impact of the Marcellus Shale Industry on Western PA

A few years ago every geologist involved in Appalachian Basin oil and gas knew about the Devonian black shale called the Marcellus. Its black color made it easy to spot in the field and its slightly radioactive signature made it a very easy pick on a geophysical well log.

However, very few of these geologists were excited about the Marcellus Shale as a major source of natural gas. Wells drilled

through it produced some gas but rarely in enormous quantity. Few if any in the natural gas industry suspected that the Marcellus might soon be a major contributor to the natural gas supply of the United States - large enough to be spoken of as a "super giant" gas field.

The Marcellus Shale Gas industry may likely touch all of our lives in one way or another. At our January Pittsburgh Chapter PSPE meeting, we hope to have a presentation about what the Marcellus Shale formation is, how it can be used to provide low cost energy for the Northeast, what it takes to drill a well into the Marcellus Shale, and what are the environmental issues associated with that operation. Watch for our next email flyer and Newsletter for details of our January meeting/presentation which should qualify for another PDH toward your PE registration renewal.



MATHCOUNTS

MATHCOUNTS 2011 – February 19

This year is the 28th year of the Pittsburgh Chapter sponsoring the local competition portion of the National Mathcounts Competition. For the third consecutive year, the competition will be held at Robert Morris University, Sewall Center. We are looking forward to another successful competition.

One thing that does not change is the Chapter's need for volunteers and companies who are willing to donate time and financial support for the competition. We would like to send out a request for individuals and engineering firms in the Pittsburgh area to consider financial support for this wonderful opportunity. There are many needs for this support. If you or your company would like to make a donation to MATHCOUNTS, please contact Virginia Dailey at dailey@ddengr.com.

2010-2011 Chapter Officers

President – Joe Garlicki, P.E.	Executive Secretary – Jon Drosendahl, P.E.
President Elect – Brian Schull, P.E.	Treasurer - John Broschious, P.E.
Vice President – Kirk Thompson, P.E.	Financial Secretary - Reyman Branting, P.E.
State Director - David Briskey, P.E. 2008-2011	Immediate Past President – Dave Samek, P.E.

2010-2011 Chapter Directors

Virginia Dailey, P.E. 2009 - 2011	Tom Weber, P.E. 2011 - 2013
Doug Beitko, P.E., 2010 - 2012	



**PITTSBURGH CHAPTER
PENNSYLVANIA SOCIETY OF PROFESSIONAL ENGINEERS**

Invites all current and prospective members to the

Thursday, November 18, 2010 Meeting

***U.S. Coast Guard – Deep Water Horizon Incident
Response Summary***

(Seminar attendance qualifies as 1.0 PDH- Pennsylvania & NY)

***At the Engineers Society of Western Pennsylvania Building
337 Fourth Ave., Pittsburgh, PA 15222***

On Thursday, November 18, 2010, the Pittsburgh Chapter is proudly sponsoring a seminar on the topic of the Deepwater Horizon Incident. The seminar leader will be Commander Richard Timme, Deputy Incident Commander, Alabama. Commander Timme is also Captain of the Port and Officer-in-Charge of Marine Inspection for Western Pennsylvania, Eastern Ohio and Northern West Virginia. Commander Timme's presentation will cover the National Incident Command and the Federal On-scene Coordinators, and the overall Concept of Operations as well as many more details in these areas.

Cocktails: 6:00 PM Social (Cash Bar)

Dinner: 6:30 PM

Presentation by Commander Timme: 7:30pm

Dinner Choice: Choose one of the following (if more than one attendee, indicate the number of each choice):

___ **Blackened Sea Bass Fillets**, with Baby Shrimp and sauce Creole

___ **Chicken Abruzzese**, Spinach, Artichoke, and Mushroom Mousse with Tomato Basil Cream

___ **Tenderloin of Beef Di Saronna**, with sautéed Peppers and Amaretto Cream Sauce

You may make your reservation by filling in the form below and mailing or faxing it to Tracy Devlin, ESWP. You may also phone in all of this information to ESWP. If you choose to make your reservation via e-mail, do not e-mail your credit card info. Payment may be made by calling in your credit card info, faxing this filled in form, or mailing this form with credit card info or enclosing a check.

Phone: (412) 391-0615 Fax: **(412-261-1606)** e-mail: t.devlin@eswp.com

U.S. Mail: Pittsburgh Chapter, PSPE, 337 Fourth Ave., Pittsburgh, PA 15222

Name : _____ Contact Info: _____

Name : _____ Contact Info: _____

Reservations including payment must be received by November 15, 2010. Cost per attendee \$35.00

Payment Options:

Credit Card: ___ MASTERCARD ___ VISA ___ AMEX

Card Number: _____ Expiration Date: _____ CVV Code _____

Name (as it appears on the credit card): _____

Billing Address: _____

___ Check enclosed payable to Pittsburgh Chapter PSPE & mailed to 337 Fourth Ave., Pittsburgh, PA 15222



**PITTSBURGH CHAPTER
PENNSYLVANIA SOCIETY OF PROFESSIONAL ENGINEERS**

ANNUAL CHRISTMAS DINNER PARTY



Date: **Saturday** Evening, **December 4**, 2010
Place: **Amici's Restaurant (formerly Tambellini's Rt. 51)**
860 Saw Mill Run Boulevard, Pittsburgh, PA 15226 (**Free Parking**)
Time: 6:30 p.m. Cash bar (with Free Hors D'Oeuvres)
7:00 p.m. Dinner
9:00 p.m. – Raffle and Door Prizes Awarded!

You may make your reservation by filling in the form below and mailing or faxing it to the Chapter office. You may also phone in all of this information to us. If you choose to make your reservation via e-mail, do not e-mail your credit card info. Payment may be made by calling in your credit card info, faxing this filled in form, or mailing this form with credit card info or enclosing a check. **Cost of Dinner is \$40.00/person if reservations are made by November 22, 2010.** After that, the cost is \$45.00/person.

Office Phone number (412) 391-0615 e-mail: t.devlin@eswp.com
Office fax (412-261-1606) Mailing Address: PSPE, 337 Fourth Avenue, Pittsburgh PA 15222

Name: _____ Guest: _____

Phone: _____ Email Address: _____

Payment Options:

MASTERCARD VISA AMERICAN EXPRESS

Card Number _____ Expiration Date _____ CVV Code _____

Name (as it appears on the credit card): _____

Billing Address: _____

Check enclosed payable to Pittsburgh Chapter, PSPE and mailed to 337 4th Ave., Pittsburgh, PA 15222

Dinner Choice: Choose one of the following (if more than one attendee, indicate the number of each choice):

___ **Veal Vincenzo**, Veal with sweet sausage, peppers, onions, mushrooms in Damiano sauce

___ **Crab Stuffed Tilapia**, Tilapia topped with shrimp and crab finished with Chardonnay cream sauce

___ **Chicken Sorrentino**, Breast of Chicken topped with mozzarella, sliced tomatoes and balsamic glaze

The dinner entrees are served with house salad, assorted rolls & butter, coffee, decaf, tea & iced tea and Chef's choice of starch, vegetable and dessert – "Death by Chocolate Cake".

Please bring your favorite Christmas CD with you to the party for your listening pleasure during the evening!

Please Note: Amici's requires a minimum of 30 attendees. The Pittsburgh Chapter greatly wishes to keep this tradition alive. Please do come, and make your reservations early. Thank you!

PITTSBURGH CHAPTER APPRENTICESHIP PROGRAM STARTS ITS YEAR OFF WITH GREAT MEETINGS

Historic New Bridge Reaches Completion

Allegheny River Bridge Brings I-76 up to the Future of Construction

By Nick Kachur

HARMARVILLE - The new I-76 connection between Harmar and Plum will be completed by the end of this month. After having been in the works for more than two years, the \$190 million project replaces the former Allegheny River Bridge making access to the Turnpike much easier.

The bridge was designed by Figg Engineering Group and then contracted to Walsh Construction. The whole project was managed for the Turnpike by McTish, Kunkel and Associates of Pittsburgh.

The project is one of the largest that the Turnpike Commission has ever completed, and updates the connection from two lanes each way to two larger three lane bridges in either direction. This allows each bridge to have a much larger shoulder than the former bridge, and will dramatically reduce congestion.

The bridge was built using the balanced cantilever method, especially remarkable because it's the first of its kind to be so built in the state. This method utilizes two large form carriers which start at each end of a pier. One form carrier pours a sixteen foot segment of concrete and then the second follows suit; the two alternate, gradually working out from either end of the bridge, until the spans from each pier connect.

Once the spans connect through the concrete, cables are run throughout the bridge to strengthen its resistance to tension. After this the contractors move on to paving the road surface and getting the bridge ready for use.

Because the bridge passed over Freeport Road, the Allegheny River, and train tracks, access to the build was limited. The use of the cantilever method allowed the contractors much easier access to than other methods by allowing them to construct the bridge above the ground without having to disturb local roadways.

The method also allowed for longer spans between piers, decreasing the number which had to be built on land and in the well-used river.

Besides the bridge, several other smaller projects were completed. A little less than half of the project included road extensions which required some excavation into the surrounding hillsides. The excavations were followed by decorative work on their respective retaining walls.

The entire project is scheduled to be completed by the end of October into early November.



MEDRAD VISIT

By Christine Serwon



The visit to Medrad was very rewarding because I got to see how a few types of engineers work every day. I knew that engineers solve problems, but I had no idea what they did every day when they went to work. From John Ravnon and a few other engineers, I got to hear what type of problems they have to solve. It was interesting to hear how solutions to problems in a company are solved in such an organized group setting. I liked how there were project managers and then sub-groups from the main groups. There is a software group, a mechanical engineers group, and many others that all work simultaneously to create a product.

I enjoyed the presentations on software engineering and electrical engineering. Those two subjects appeal to me more, and I could see myself possibly going into one of these subjects. The room that we saw for the electrical engineering was very interesting. They use a room that blocks radiation from outside sources, so they can test how the equipment responds and reacts to radiation. They have to do this so they can change the machine, so that it meets regulations set up for medical equipment. They have to make sure that a machine that will go right next to an MRI machine does not skew the results. If the machine is emitting sound then it will make the MRI results almost impossible to read.

I also found the demonstration of how indicating fluid and saline are cycled throughout a person to find problems intriguing. It was also interesting to see how much they have to focus on eliminating air in the machines. They have to constantly check to make sure they are not putting air into a person because they could die then.

I enjoyed the visit and learning about the products that Medrad creates. I liked how cooperative the many types of engineers are to create and improve machinery for hospitals.



DAILY DESIGNS – BUSINESS NEWS for PEs

The following are copied excerpts from various *Daily Designs* e-newsletters.

Federal Funds For Research Could Fall Under New Congress

The [New York Times](#) (11/4, B5, Chang) reports, "Federal financing of science research, which has risen quickly since the Obama administration came to power, could fall back to pre-Obama levels if the incoming Republican leadership in the House of Representatives follows through on its list of campaign promises. In the Republican platform, Pledge to America, the party vows to cut discretionary nonmilitary spending to 2008 levels," and as a result "research and development at nonmilitary agencies...would fall 12.3 percent, to \$57.8 billion, from the Mr. Obama's request of \$65.9 billion for fiscal year 2011." An analysis by the AAAS of this scenario found that "the National Institutes of Health would lose \$2.9 billion, or 9 percent, of its research money. The National Science Foundation would lose more than \$1 billion, or almost 19 percent, of its budget, and the National Oceanic and Atmospheric Administration would lose \$324 million, or 34 percent."

LaHood Announces \$2.4 Billion For High-Speed Rail

[Bloomberg News](#) (10/28, Norton, Keane) reports that Secretary LaHood announced in Iowa City that "high-speed rail projects in 23 US states will share \$2.4 billion in federal aid." In a statement, he said, "Demand for high-speed rail dollars is intense and it demonstrates just how important this historic initiative is." The aid will go to 54 projects, with California receiving "\$901 million, including \$715 million for lines in the Central Valley in projects announced on Oct. 26 by state officials, and Florida will get \$800 million to build a high-speed corridor from Tampa to Orlando." The Northeast received \$198 million.

[CNN](#) (10/28, Smith) reports, "Chicago is also being established as a major connector for the high-speed rail project. Iowa received \$230 million to build a rail connecting Chicago to Iowa City and the Quad Cities along the Illinois-Iowa border. Michigan received \$161 million to connect Chicago with Detroit." However, CNN adds, "a lot more money is needed to make the project a reality."

[AFP](#) (10/28, Smith) reports that the Department of Transportation said that over "30 rail manufacturers and suppliers, both domestic and foreign, have agreed to establish or expand their bases of operations in the United States if they are hired to build the country's next-generation high-speed lines."

Hoover Dam Bridge Opens After Eight Years



The [AP](#) (10/15, Garcia) reported, "A soaring bridge that will let drivers bypass Hoover Dam - and steer clear of its security checkpoints and gawking tourists - is set to open after nearly eight years and \$240 million worth of work. The 1,900-foot engineering wonder perched 890 feet above the Colorado River is expected to drastically cut travel time along the main route between Las Vegas and Phoenix, as motorists will no longer have to make their way across the dam's winding two-lane road." "I know that the Hoover Dam is one of the wonders of the world," US Transportation Secretary Ray LaHood said at a dedication ceremony Thursday. LaHood added that the bypass is one of 15,000 transportation projects that include updating 4,000 miles of road. It took about five years and 21,000 workers to build the dam, with a cost estimate of \$165 million. The last of its more than 5 million barrels of cement was poured in 1935.

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2010-2011 CALENDAR

MEMBERSHIP EVENTS & MEETINGS

Date	Time	Description	Location
November 18, 2010`	5:30pm	Board of Directors Meeting	ESWP
November 18, 2010	6:00pm	U.S. Coast Guard – Deep Water Horizon	ESWP
December 4, 2010	6:30pm	Christmas Party	Amici's Restaurant
December 9, 2010	5:30pm	Board of Directors Meeting	ESWP
January 5, 2011	6:00pm	Basic Engineering Mini Review Course	TBD
January 20, 2011	5:30pm	Board of Directors Meeting	ESWP
January 20, 2011	6:30pm	Marcellus Shale in Western PA	ESWP
January 26, 2011	6:00pm	PE and EIT/FE Review Course	TBD
February 10, 2011	5:30pm	Board of Directors Meeting	ESWP
February 19, 2011	8:00am	MATHCOUNTS	RMU/Sewall Center
February 26, 2011	6:30PM	National Engineers' Week Banquet	TBD
March 10, 2011	5:30pm	Board of Directors Meeting	ESWP

All BOD meeting are to held @ 5:30PM @ the ESWP Building pending further notice.