In The News

EPA issues evaluation of beneficial use of fly ash in concrete

In February, the U.S. Environmental Protection Agency (EPA) issued its evaluation of the beneficial use of fly ash in concrete, "Coal Combustion Residual Beneficial Use Evaluation: Fly Ash Concrete and FGD Gypsum Wallboard" (available at http://www.epa.gov/epawaste/conserve/imr/ccps/pdfs/ccr_bu_eval.pdf). The EPA used its previously established, independently reviewed, five-step methodology, "Methodology for Evaluating Encapsulated Beneficial Uses of Coal Combustion Residuals," in its evaluation.

Step 1, literature review and data evaluation, identified four possible types of releases of constituents of potential concern from fly ash in concrete:

- generation of dust
- emanation to air
- leaching to ground
- decay of naturally occurring radionuclides

The literature review also found several high-quality studies pertaining to fly ash concrete. Based on these, the EPA was able to eliminate radioactive decay from further consideration and to identify the constituents of potential concern from the remaining types of releases.

In step 2, comparison of available data, the EPA compared releases from fly ash concrete with those from portland cement concrete during use by the consumer. It found that concentrations of silver and manganese in dust from fly ash concrete were comparable to or lower than those in dust from portland cement concrete and that concentrations of arsenic, cadmium, lead, molybdenum, and thallium in leachate were comparable. For this reason, the EPA did not further consider these constituents of potential concern.

In step 3, exposure review, the EPA reviewed the releases retained from step 2 to identify exposures that may occur during use of the concrete. No additional releases or associated constituents of potential concern were eliminated in this step.

In step 4, screening assessment, each exposure pathway carried forward from step 3 was evaluated using conservative environmental, fate-and-transport, and exposure data to estimate exposures that may occur during use. These exposures were then compared with relevant screening benchmarks to determine whether more detailed evaluation was warranted. The EPA found that all remaining constituents of potential concern were below the relevant screening benchmarks. Therefore, this evaluation did not proceed to step 5, risk assessment.

The evaluation concluded that environmental releases of constituents of potential concern from fly ash concrete during use by the consumer are comparable to or lower than those from portland cement concrete or are at or below relevant regulatory and health-based benchmarks for human and ecological receptors.

The EPA supports the beneficial use of fly ash in concrete. Such use reduces greenhouse gas emissions, the need for disposal of fly ash in landfills, and the use of virgin resources. It also may result in economic benefits such as job creation in the beneficial use industry, reduced costs associated with disposal, increased revenue from the sale of fly ash, and cost savings when fly ash is substituted for more costly materials.
—Source: EPA

Pankow Foundation releases seismic and reinforcement research products

The Charles Pankow Foundation (CPF) has released *Seismic Design Methodology Document for Precast Concrete Diaphragms* and *Determination of Yield Strength for Non-prestressed Steel Reinforcement* for download at no cost at the CPF website at http://www.pankowfoundation.org.

Seismic Design Methodology Document for Precast Concrete Diaphragms is part of a new seismic design methodology for precast concrete diaphragms. The design methodology and procedure are the products of a large multiuniversity research project initiated and guided by PCI and cofunded by PCI, the National Science Foundation, and the Charles Pankow Foundation, termed the Diaphragm Seismic Design Methodology project.

This final report is the supporting document for a major code effort under way under the leadership of S. K. Ghosh to integrate the research

Khaled Soudki

Khaled Soudki. Courtesy of University of Waterloo Department of Civil and Environmental Engineering

Khaled Soudki, PhD, PEng, died September 17, 2013, after a long battle with cancer. He was 48.

A graduate of the American University of Beirut, Cornell University, and the University of Manitoba, he held a postdoctoral position at Queens University in Kingston, ON, Canada. Soudki joined the Department of Civil and Environmental Engineering at the University of Waterloo in Ontario, Canada, as an assistant professor in 1996. A prolific and well-respected researcher, he quickly progressed to associate professor in 2001 and professor in 2006. He was appointed Canada Research Chair in Innovative Structural Rehabilitation in 2003 and was reappointed in 2006 for a further five-year term. He was also the founding dean of Engineering at the American University in Dubai, UAE, and a visiting scholar at the Swiss Federal Laboratories for Materials Testing and Research in Saint Gallen. He was active on many international scientific committees and was a Fellow of the American Concrete Institute.

Soudki was an internationally distinguished researcher in the field of reinforced and prestressed concrete structures with emphasis on the use of advanced fiber-reinforced polymers for the repair of structures. His research on the repair of corrosion-damaged reinforced concrete structures led the field and significantly advanced the application of fiber-reinforced polymers. His work in prestressing of fiber-reinforced polymers was similarly groundbreaking, including the development of an anchorage system that is now widely used. He leaves a legacy of scientific research in Canada and around the world. His research contributions resulted in more than 300 publications, including patents, book chapters, and many journal and conference publications. His publications have been cited more than 1000 times. He supervised 20 PhD students, 25 master's students, and 10 postdoctoral fellows; 15 of his former students and postdoctoral fellows have gone on to careers in academia in universities around the world.

Soudki was highly respected by his students and colleagues, who remember him as an outstanding researcher, talented professor, knowledgeable scholar, successful colleague, mentor, and devoted husband, father, and friend.
—Source: Raafat El-Hacha

findings into the *International Building Code*. The Foundation recognizes the efforts of Robert Fleischman, Dichuan Zhang, Clay Naito, Richard Sause, José Restrepo, and their graduate students for the dedicated efforts put into this project. Also, thanks to the PCI Advisory Committee for their very intense efforts to guide this project: Tom D'Arcy, S. K. Ghosh, Ned Cleland, Harry Gleich, Dave Dieter, Doug Sutton, Joe Maffei, Susie Nakaki, Neil Hawkins, and Pavel Kravets.
—Source: Charles Pankow Foundation

CPCI launches new website

The Canadian Precast Prestressed Concrete Institute has launched its newly redesigned website. CPCI's new website is designed to assist architects, engineers, students, and other construction industry professionals in finding pertinent information about the precast concrete industry and the products and services offered. The website features extensive content, including CPCI technical resources, technical helpdesk, and information on precast concrete solutions and its contribution to sustainability along with an interactive map locating all CPCI members.

CPCI's other three portals (sustainableprecast.ca, precastcertification.ca, and precastsearch.com) will be updated over the course of the next two years to reflect the new style and functionality of the new website. You can view the new website at http://www.cpci.ca/.
—Source: Canadian Precast Prestressed Concrete Institute

Anderson named group VP of public affairs at PCA

The Portland Cement Association (PCA) named Mark J. Anderson group vice president of public affairs, effective February 17, 2014. He will be the key PCA government affairs representative, responsible for the overall direction and execution of legislative and regulatory initiatives in support of the association's advocacy and promotion.

Anderson brings with him extensive experience with advocacy activities, especially in the areas of trade, manufacturing and energy, and communicating those messages to members of Congress and the Executive Branch. Most recently, he served as chief of staff for Representative Lee Terry, chairman of the House Energy and Commerce Subcommittee on Commerce, Manufacturing and Trade.

—Source: Portland Cement Association

CRSI announces new ANSI standard at World of Concrete press conference

The Concrete Reinforcing Steel Institute has a new American National Standards Institute standard. CRSI made the announcement at a World of Concrete press conference on January 21. "Supports for Reinforcement Used in Concrete" is a mandatory-language document appropriate for citation in or adoption by reference in building codes or project specifications.

ANSI recently approved CRSI as a Standards Development Organization. The scope of CRSI's standards activities includes the development and maintenance of consensus standards for design, detailing, fabrication, placement, and construction of assemblies consisting of steel reinforcement and associated products used in concrete and masonry construction.

CRSI is also producing two standards related to its certification programs for epoxy-coated reinforcing bars, "Standard Practice for Epoxy Coating Facilities: Straight Bar Lines" and "Standard Practice for Epoxy-Coated Reinforcing Bar Fabrication Facilities," following the same schedule.

—Source: Concrete Reinforcing Steel Institute

Concrete Conference to be held in May at the Missouri University of Science and Technology

The Missouri University of Science and Technology will host the annual Missouri Concrete Conference May 6–7, 2014, in the Havener Center on its Rolla campus.

Conference presentation topics will include Type I-L cement, concerns about fly ash, roller-compacted concrete, full-depth reclamation, what's new in admixtures, improving the durability of bridge decks and pavements using internal curing, new concrete labs at Missouri S&T, recycled concrete aggregate for paving, fast-track bridge rehabilitation, Stoddard County train wreck bridge replacement, unbonded overlay, MDNA Spin-Cell Facility, nondestructive evaluation of bridge decks, determining loss of pavement slab support and verifying improvement with the falling weight deflectometer, and American Concrete Pavement Association website programs and applications.

Certificates to document Personal Development Hours will be provided. Additional information, including a complete listing of presentations, is available online at concrete.mst.edu. For registration information, contact Missouri S&T's office of distance and continuing education at (573) 341-4200 or macet@mst.edu. For technical information, contact David Richardson at (573) 341-4487 or richardd@mst.edu. Conference registration is $135 per person.

—Source: Missouri University of Science and Technology

Compiled by K. Michelle Burgess (mburgess@pci.org)

Events

For the most current information on events, visit http://www.pci.org/events.

American Concrete Institute Convention Concrete Endures	**March 23–27, 2014**
Grand Sierra Resort, Reno, Nev.	
Structural Engineering Institute Structures Congress	**April 3–5, 2014**
Sheraton Boston Hotel and Hynes Convention Center, Boston, Mass.	
Missouri Concrete Conference	**May 6–7, 2014**
Havener Center, Rolla, Mo.	
Society of American Military Engineers Joint Engineer Training Conference & Expo	**May 20–23, 2014**
Orlando/Orange County Convention Center, Orlando, Fla.	
International Conference on Piling and Deep Foundations	**May 21–23, 2014**
Stockholm, Sweden	
International Parking Institute Conference and Expo	**June 1–4, 2014**
Gaylord Texan Resort & Convention Center, Grapevine, Tex.	
Concrete Innovation Conference	**June 11–13, 2014**
Hotel Royal Christiania, Oslo, Norway	
ASTM International C-9 Spring	**June 22–29, 2014**
Toronto, ON, Canada	
American Institute of Architects	**June 26–28, 2014**
Chicago, Ill.	
Society for College and University Planning	**July 12–16, 2014**
Pittsburgh, Pa.	
International Code Council Annual Conference	**September 28–October 1, 2014**
Greater Fort Lauderdale Broward County Convention Center, Fort Lauderdale, Fla.	
Deep Foundations Institute 2014 Annual Conference	**October 21–24, 2014**
Marriott Marquis, Atlanta, Ga.	
Greenbuild	**October 22–24, 2014**
New Orleans, La.	
NPCA Annual Convention	**October 22–25, 2014**
Montreal, QC, Canada	
ACI Convention Spanning the Globe	**October 26–30, 2014**
Hilton Washington, Washington, D.C.	
ASTM International C-9 Fall/Winter	**December 7–10, 2014**
New Orleans, La.	