In The News

FHWA publishes document on field-cast UHPC connections

The Federal Highway Administration recently published *Design and Construction of Field-Cast UHPC Connections*, FHWA-HRT-14-084. This document provides guidance on the design and construction of field-cast ultra-high-performance concrete (UHPC) connections.

"UHPC is an emerging class of cementitious materials that has proved to provide new opportunities for advancement in infrastructure construction and repair," says Benjamin Graybeal, team leader of Bridge and Foundation Engineering Research for PHWA-TFHRC. "The use of UHPC as a field-cast grout between prefabricated bridge elements has gained traction across the U.S. and in other countries."

The document is available online at http://www.fhwa.dot.gov/publications/research/infrastructure/structures/14084/index.cfm.

—Source: Ben Graybeal

New OSHA reporting requirements in effect

Beginning January 1, 2015, there will be a change to what covered employers are required to report to the Occupational Safety and Health Administration (OSHA). Employers will now be required to report all work-related fatalities within 8 hours and all in-patient hospitalizations, amputations, and losses of an eye within 24 hours of finding out about the incident.

Previously, employers were required to report all workplace fatalities and when three or more workers were hospitalized in the same incident.

OSHA says that the updated reporting requirements are not simply paperwork but have a life-saving purpose: they will enable employers and workers to prevent injuries by identifying and eliminating the most serious workplace hazards.

Employers have three options for reporting these severe incidents to OSHA. They can call their nearest area office during normal business hours, call the 24-hour OSHA hotline at (800) 321-6742, or report the incident online at www.osha.gov/report_online. For more information and resources, including a new YouTube video, visit OSHA's webpage on the updated reporting requirements at https://www.osha.gov/recordkeeping2014/index.html.

—Source: OSHA

Beneficial use exempted in EPA's final rule on fly ash

On December 22, 2008, a large coal ash spill occurred at the Tennessee Valley Authority power plant in Kingston, Tenn., flooding more than 300 acres (120 hectares) of land and releasing coal ash into the Emory and Clinch rivers.

In response, the EPA proposed regulations on June 21, 2010, to address the risks from the disposal of coal combustion residues. This proposal contained two regulatory options. Under the first, the EPA proposed to list these residuals as special wastes subject to regulation under subtitle C of the Resource Conservation and Recovery Act of 1976 (RCRA) when they are destined for disposal in landfills or surface impoundments. Under the second option, the EPA proposed to regulate disposal of such materials under subtitle D of RCRA by issuing national minimum criteria.

Under both alternatives, the EPA proposed to establish dam safety requirements to address the structural integrity of surface impoundments to prevent catastrophic releases.

The EPA found that the risks posed to human health and the environment warrant regulation under subtitle D of RCRA of coal combustion residuals in landfills and surface impoundments.

However, certain facilities and uses are exempted from this regulation. Among the exemptions is that for beneficial uses of coal combustion residuals. The use of fly ash in concrete is one such beneficial use.

Gina McCarthy, the Environmental Protection Agency (EPA) administrator, signed the final rule "Disposal of Coal Combustion Residuals from Electric Utilities" on December 19, 2014. It has been submitted for publication in the *Federal Register*. A prepublication version of the final rule will be available at http://www2.epa.gov/coalash/pre-publication-version-coal-combustion-residuals-final-rule until the final version is published. The docket number for the rule is EPA-HQ-RCRA-2009-0640.

—Source: EPA

ANSI, ASHRAE, USGBC, IES 2014 building standard available

New requirements to further reduce energy and environmental impacts of buildings are contained in the 2014 version of the green building standard from ASHRAE, the U.S. Green Building Council, and the Illuminating Engineering Society.

ANSI/ASHRAE/USGBC/IES standard 189.1-2014, *Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings,* addresses the areas of site sustainability; water-use efficiency; energy efficiency; indoor environmental quality; and the building's effect on the atmosphere, materials, and resources.

The 2014 standard incorporates 67 addenda, reflecting changes made through the public review process since the standard was last published in 2011. Appendix H gives brief descriptions and approval dates of the addenda included in this new edition.

"The new standard updates all of its sections to reflect the latest information available to the committee," says Andrew Persily, chair of the Standard 189.1 committee. "Compliance with these updated provisions will help further reduce energy and environmental impacts through high-performance building design, construction, and operation while providing indoor environments that support the activities of building occupants."

Major changes in the 2014 edition include:

- Significant updates are included to reflect the publication of standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, including revised building envelope provisions. Fenestration orientation requirements were updated based on new research, as well as changes and updates made to equipment efficiency tables, Energy Star references, and continuous air-barrier requirements.
- Changes and clarifications are included to reflect changes to standard 90.1. Carbon dioxide emission factors for different energy sources are updated.
- Lighting quality is added to the scope of indoor environmental quality, and requirements are added for lighting controls in specific space types. Requirements for air sealing of filtration and air-cleaning equipment are clarified, and new requirements for preoccupancy ventilation and building envelope moisture management are added.
- All site requirements are now mandatory, with prescriptive and performance options moved to the mandatory requirements. Requirements for stormwater management are enhanced, and new requirements are added for bicycle parking and for preferred parking for low-emission, hybrid, and electric vehicles. New requirements are added for predesign assessment of native and invasive plants.
- More stringent water use requirements are included for toilets, clothes washers, dishwashers, and green roofs.
- Requirements are updated for areas to store and collect recyclables, including batteries and electronics. Requirements also are updated for construction waste management and for life-cycle assessment. New requirements are added for multiple-attribute product declaration or certification and for maximum mercury content levels of certain types of electric lamps.
- Requirements related to environmental impacts associated with idling construction vehicles are updated. New requirements are added to reduce the entry of airborne contaminants associated with construction areas.

The cost of *Standard for the Design of High-Performance Green Buildings, Except Low-Rise Residential Buildings* is $109 for ASHRAE members and $128 for nonmembers.

To order, call (800) 527-4723 (United States and Canada) or (404) 636-8400 (worldwide), fax (678) 539-2129, or visit www.ashrae.org/bookstore.

—Source: ASHRAE

Seismic resistance research product released by Pankow Foundation

The Charles Pankow Foundation has made available, free of charge, the new research project *Unbonded Post-tensioned Cast-in-place Concrete Walls for Seismic Resistance*.

The principal investigator for the research was Stephen Pessiki, a professor at Lehigh University; Richard Sause, a professor at Lehigh, was the coprincipal investigator.

The project involved obtaining test data to confirm and codify a design protocol for a new type of cast-in-place concrete shear wall system that incorporates vertical posttensioned tendons. The product is a complete design guide ready to be employed on actual commercial building construction projects in all seismic zones.

To view the document, go to http://www.pankowfoundation.org/grants.cfm?grantid=1108.

—Source: Charles Pankow Foundation

Pankow releases latest version of design management guide

The Charles Pankow Foundation has released the latest version of the *Professional's Guide to Managing the Design Phase of a Design-Build Project* (version 2.0). The book was launched at the October 2014 Design-Build Conference and Expo hosted by the Design-Build Institute of America in Dallas, Tex.

The guide is intended to help owners, designers, and builders of design-build projects achieve greater success via the unique and relatively new role of the design-phase manager. The design-phase manager serves as the design-build team's single most important project participant, connecting the design team to the construction team.

The guide greatly expands and incorporates industry input into the first version of the book, *Design Management Guide for the Design-Build Environment*, also sponsored by the Charles Pankow Foundation. This improved resource offers better tools for target-based design and design-schedule monitoring as well as updates on building information modeling, legal considerations, and cloud-based file management. *The Professional's Guide to Managing the Design Phase* also distills new topics, such as specification management and fast-tracked delivery implications.

The guide may be ordered through the DBIA bookstore at www.dbiabooks.com.

—Source: Charles Pankow Foundation

PCA names Johnston VP of government affairs

Todd Johnston

The Portland Cement Association (PCA) named A. Todd Johnston vice president for government affairs. Based in the association's Washington, D.C., office, he will represent PCA and its members with the federal government.

Johnston comes to PCA with a strong record of experience and accomplishments in state government, industry, and Congress. Most recently, he served as staff director for the Subcommittees on Environment and Energy under the U.S. House Committee on Science, Space and Technology.

"It is vitally important that our industry maintain a practical working relationship with the various federal bodies that impact cement production, transportation and consumption, as well as the use of concrete," says James Toscas, PCA president and CEO. "We are very pleased to have someone with Todd's extensive experience leading this effort."

—Source: Portland Cement Association

Stull elected chairman of PCA

John Stull

The Portland Cement Association (PCA) Board of Directors elected John Stull, president and CEO of Lafarge North America Inc., chairman of the association at its fall board meeting in Scottsdale, Ariz. Karl Watson Jr., president of CEMEX USA, was named vice chairman.

Stull takes over the chairmanship from Cary O. Cohrs, president of American Cement Co. LLC.

In addition to being a long-standing member of the PCA Board of Directors, Stull also cochaired the Manufacturing Technical Committee. In his role as board chairman, he will also chair both the audit and compensation committees for PCA.

—Source: PCA

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

Michael John Nigel Priestley

Nigel Priestley, emeritus professor of the University of California at San Diego (UCSD), died December 23, 2014, in Christchurch, New Zealand. He was 71. His work in earthquake engineering influenced structural design in seismic zones around the world.

Priestley obtained a bachelor's degree in civil engineering from the University of Canterbury in Christchurch in 1963 and completed his PhD three years later at the same institution.

From 1966 to 1976, Priestley served as head of the Ministry of Works Central Laboratories in Lower Hutt, New Zealand, where he carried out pioneering research in structural concrete involving complex laboratory and full-scale field testing of both bridges and buildings. During this time, he also worked as a consultant, mainly on railroad bridges.

From 1976 to 1986, Priestley was on the faculty at the University of Canterbury, where he performed acclaimed research work on prestressed concrete focusing on thermal and seismic design of prestressed concrete tanks, ductility-based design of masonry structures, thermal and seismic design of bridges, and seismic design methods incorporating rocking foundations. A number of his research papers on the behavior of reinforced concrete columns are now recognized as the basis for current understanding on the topic.

In 1986 Priestley joined the Department of Applied Mechanics and Engineering Sciences at UCSD, where he was a founding faculty member of the Department of Structural Engineering. Among his many achievements, Priestley led the way to the seismic design and retrofit of bridges in California. Today, the California Department of Transportation follows many of the recommendations that stemmed from his research. He was also instrumental in the development of performance-based seismic design methods, which were first used to design container wharves for the ports of Los Angeles and Long Beach and form the basis of the American Society of Civil Engineers/Coasts, Oceans, Ports, and Rivers Institute code for the design of container wharves. He was also instrumental in the development of innovative precast, prestressed concrete seismic systems for the PCI–National Science Foundation Precast Seismic Structural Systems (PRESSS) project.

Priestley retired from UCSD in 2002 and went on to cofound the postgraduate European ROSE School at the University of Pavia, Italy. At the ROSE School, he advised MS and PhD students, taught courses in earthquake engineering, and worked with other ROSE School faculty members to set the curriculum for the unique program; he remained there until 2007.

Following the 2010 and 2011 Canterbury earthquakes in New Zealand, Priestley was appointed deputy chair of the Department of Building and Housing to study the collapses of the CTV and Pyne Gould Corp. buildings and damage to the Forsyth Barr building and the Hotel Grand Chancellor. He gave evidence to the Royal Commission of Enquiry held there to formulate recommendations for future developments. In recognition of his contribution, Priestley was made an officer of the New Zealand Order of Merit in 2014. He said at the time that his biggest contribution to the field was in the best way to design structures for earthquake response.

—Sources: José I. Restrepo, New Zealand Society for Earthquake Engineering, *New Zealand Herald*, and *The Press*

Events

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

The Precast Show Rosen Shingle Creek and Orange County Convention Center, Orlando, Fla.	March 5–7, 2015
Society of College and University Planning Mid-Atlantic Conference Norfolk, Va.	March 8–10, 2015
Virginia Energy and Sustainability Conference Greater Richmond Convention Center, Richmond, Va.	March 17, 2015
ACI Convention: Fountains of Concrete Knowledge Marriott and Kansas City Convention Center, Kansas City, Mo.	April 12–16, 2015
SEI Structures Congress Portland, Ore.	April 23–25, 2015
2015 PTI Convention Royal Sonesta Hotel, Houston, Tex.	April 26–28, 2015
57th Annual IEEE-IAS/PCA Cement Industry Technical Conference Toronto, ON, Canada	April 26–30, 2015
International Cement Microscopy Association Conference Crowne Plaza Seattle–Downtown, Seattle, Wash.	May 3–7, 2015
2015 AASHTO Spring Meeting Little America Hotel, Cheyenne, Wyo.	May 13–15, 2015
AIA Convention Atlanta, Ga.	May 14–16, 2015
International Parking Institute Conference and Expo Las Vegas, Nev.	June 29–July 2, 2015
14th AASHTO/TRB Conference on Transportation Infrastructure Maintenance and Operations Des Moines, Iowa	July 2015
CONCREEP-10 Vienna, Austria	September 21–23, 2015
2015 AASHTO Annual Meeting Sheraton Chicago Hotel and Towers, Chicago, Ill.	September 24–28, 2015
SEI Electrical Transmission and Substation Structures Congress Branson, Mo.	September 25–27, 2015
ASCE 2015 Convention New York, N.Y.	October 11–14, 2015