

**Significant Legal/Legislative Policies/Activities**  
Prepared for the Engineers Joint Contract Documents Committee  
June 6-7, 2014 – Chicago, IL

*The following is a summary of recent legal/legislative activities of interest to the Engineers Joint Contract Documents Committee collected from information provided by EJCDC member organizations and other source material. For background material on each issue, please contact Art Schwartz, NSPE Deputy Executive Director & General Counsel ([aschwartz@nspe.org](mailto:aschwartz@nspe.org)).*

**STATE LEGISLATIVE/REGULATORY MATTERS**

**California Background Checks** – The first of the year ushered in a new regulation in California that clarifies the criminal history background check requirements for applicants seeking a professional license to improve public protection.

Applicants now must submit fingerprints to be verified by the Board for Professional Engineers, Land Surveyors, and Geologists before licensure can be approved. Prior language in the regulation waived the requirement if an applicant submitted fingerprints to the Department of Justice as part of a previous application.

California joins Texas, which amended the state's PE law to expand criminal background checks for licensees. New licensees and professional engineers renewing their licenses in Texas must submit fingerprints for a background check using a national database overseen by the FBI.

The California board believes the changes will enhance its efforts to protect the public health, safety, and welfare and will provide consumers with increased confidence and access to competent and ethical professionals.

In addition, a minor change to registration rules now requires all professional licensees to notify the board in writing within 30 days of any address change.

**Kansas Design Professionals Push to Protect Licensure** – The **Kansas Society of Professional Engineers** is backing legislation that would modernize licensure for technical professionals, including better identifying violations and carrying out enforcement.

The bill (S.B. 54) will allow the Kansas Board of Technical Professions to update the rules and regulations for architecture, engineering, geology, landscape architecture, and surveying licensees.

KSPE recently rallied its members to support the bill and oppose efforts to expand licensing exemptions that could allow unlicensed individuals to design facilities and jeopardize public safety. Current state law excludes the design of residential property (single family homes and duplexes) and agricultural buildings from licensing rules.

The bill includes the following provisions:

- Changes the membership requirements for members of the Board of Technical Professions by requiring the applicable members to be licensed in Kansas and specifies membership eligibility by requiring “responsible charge” experience in those professions;

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- Makes technical amendments regarding professional document seals for licensees and clarifies the penalty for allowing documents not prepared by the licensee to include the licensee's seal or name;
- Prohibits a licensee from practicing any technical profession after the expiration of a license and makes other changes to the law regarding the voluntary decision to no longer practice a technical profession;
- Clarifies that a certificate of authorization is required by any business practicing any of the regulated professions prior to doing any business in Kansas; and
- Provides immunity from liability to those individuals whose participation in disciplinary proceedings is in good faith and without malicious intent, regarding licensure, reissuance of a license, or criminal prosecution.

The legislation is also supported by state chapters of the American Council of Engineering Companies, the American Institute of Architects, the National Society of Professional Surveyors, and the Geological Society of America.

**[Michigan Governor Signs Bill Permitting Electronic Seals and Signatures](#)** – A bill written to allow licensed architects, professional engineers, and professional surveyors to use electronic seals and signatures when filing plans, specifications, plats, or reports with a public authority has been signed into law by Michigan's governor.

Sponsored by Republican Rep. Rob VerHeulen, H.B. 4585 was signed into law by Governor Rick Snyder on November 26 and took effect December 3.

"The bill is intended to modernize the submission process and provide greater efficiency," [Michigan Society of Professional Engineers](#) Executive Director Nancy McClain, P.E., told *PE Magazine* in November. "It is common practice for plans and reports to be prepared electronically, and allowing these professions to submit the plans using an electronic seal and signature, instead of requiring a handwritten signature and a seal affixed to a paper copy of the document, would modernize the business practices of many local units of government. Additionally, allowing the use of electronic seals and signatures would eliminate the need to store and maintain paper copies of documents and may lead to more efficient storage and retrieval of such documents."

The Michigan Bureau of Construction Codes is rolling out a new process for accepting electronically submitted plans, permits, and other documentation. The new law was written, in part, to assist in the implementation of that process.

The Architects, Engineers and Surveyors Legislative Committee, of which MSPE is part, worked to introduce and move H.B. 4585 through the legislature beginning in February 2013. Before that time, however, the American Institute of Architects Michigan, also a member of the AESLC, spent several years working with the Bureau of Construction Codes to determine the best way to implement an electronic seals and signatures law.

The new law does not require plans and other documentation to be submitted electronically. Local governments without the technology to accept and store documents electronically are still able to require paper copies.

[West Virginia Chemical Leak Leads To Storage Tank Inspections Bill](#) – The [West Virginia Society of Professional Engineers](#) is backing legislation that aims to protect the state’s water resources and the public by establishing a regulatory program for aboveground storage tanks that will require inspections by a professional engineer.

The bill (S.B. 373) was introduced after a chemical leak from an industrial storage tank contaminated a local water supply and water treatment plant near Charleston in January. More than 300,000 West Virginians lost access to safe drinking water.

To protect the state’s water supply, the bill requires that the secretary of the Department of Environmental Protection establish a regulatory program for new and existing aboveground storage tanks that contain fluids other than water without additives. A critical component of the program requires certification and annual inspection of aboveground storage tanks, leak detection systems, and secondary containment by a qualified PE licensed in the state or a qualified person working under the supervision of a PE.

## **FEDERAL LEGISLATIVE/REGULATORY MATTERS**

[Federal Report Calls for National Tornado Guidelines and Standards](#) – Nationally accepted guidelines and standards for tornado-resistant buildings and infrastructure, public tornado sheltering strategies, and emergency communications are among the recommendations to come out of a study into the May 2011 tornado that struck Joplin, Missouri.

“The overarching conclusion of our two-year study is that death and destruction from tornadoes can be reduced,” says Eric Letvin, director of disaster and failure studies for the National Institute of Standards and Technology, which conducted the study. “Based on a significant body of research and observations from such events, our scientific understanding of tornadoes and their effects has matured substantially. It’s time to begin developing and implementing standards and codes that directly address tornado hazards.”

The study’s 16 recommendations are featured in a draft report issued for public comment in November. NIST will next issue a final report and then work with code development organizations to use the recommendations to improve model building codes and lay the foundation for nationally accepted standards. The institute also plans to encourage state and local governments to consider implementing the recommendations.

The report’s key recommendation, according to NIST, is the development and adoption of performance-based standards for the tornado-resistant design of buildings and infrastructure. These standards would require engineers and architects to design critical buildings and infrastructure, such as hospitals and emergency operations centers, so they could remain operational if hit by a tornado.

“Current U.S. model building codes include requirements to protect from many different types of hazards, including hurricanes, earthquakes, and flood,” Letvin says. “They do not include requirements to protect against tornado hazards, which include extreme wind speeds and impact from windborne debris.”

**Federal Agencies Name Top Engineers** – Each year, NSPE presents the Federal Engineer of the Year Award to honor achievement in government engineering. NSPE announced the engineers representing different federal agencies in the final 2014 selection process:

- **Scott Anderson, Ph.D., P.E.**, U.S. Department of Transportation, Federal Highway Administration
- **Jon Bergeron, P.E.**, U.S. Department of the Interior, National Park Service
- **James Boisseau, P.E.**, U.S. Department of the Interior, National Park Service
- **Timothy Callahan, P.E.**, U.S. Air Force, Air Force Institute of Technology
- **Commander Timothy Connors, P.E.**, U.S. Department of Homeland Security, US Coast Guard
- **Mehryar Ebrahimi, P.E.**, U.S. Department of Health & Human Services, National Institutes of Health
- **Subhrendu Gangopadhyay, P.E.**, U.S. Department of the Interior, Bureau of Reclamation
- **Brett Hamilton**, U.S. Department of the Navy, Naval Surface Warfare Center, Crane Division
- **Lieutenant Commander John Doug Herrin, P.E.**, U.S. Department of the Navy, Naval Facilities Engineering Command
- **Andrew Imperiale, P.E.**, U.S. Department of the Navy, Naval Air Warfare Center Aircraft Division, Lakehurst Station
- **Larry Lau, P.E.**, U.S. Department of Veterans Affairs
- **Dr. Donald Malloy, P.E.**, U.S. Air Force, Air Force Materiel Command
- **Gerald Roche, E.I.T.**, U.S. Department of the Navy, Naval Undersea Warfare Center Division, Newport Station
- **John Casey Scoggins, P.E.**, Tennessee Valley Authority
- **Rickey Shyne, Ph.D., P.E.**, National Aeronautics and Space Administration, Glenn Research Center
- **Bronson Smart, P.E.**, U.S. Department of Agriculture, Natural Resources Conservation Service
- **Wilbert Smith, P.E.**, U.S. Department of Health & Human Services, Food & Drug Administration
- **David Stroup, P.E.**, U.S. Nuclear Regulatory Commission
- **Michael Suffredini**, National Aeronautics and Space Administration, Johnson Space Center
- **Chandraika Sugrim, P.E.**, U.S. Department of the Navy, Naval Air Warfare Center Aircraft Division, Patuxent River Station
- **Laura Watson, P.E.**, U.S. Department of the Navy, Naval Undersea Warfare Center Division, Keyport Station
- **Joseph Woliver, P.E.**, U.S. Department of the Navy, Naval Facilities Engineering Command
- **Commander Edward Zechmann, P.E.**, U.S. Department of Health & Human Services, Centers for Disease Control & Prevention
- **Michael Zoccola, P.E.**, U.S. Department of the Army, U.S. Army Corps of Engineers

**Report Calls for More Research Into Integrated STEM Education** – While finding integrated K–12 science, technology, engineering, and math education has the potential to yield positive results, a new report by the National Academy of Engineering and the National Research Council also finds more rigorous research is necessary to determine whether it should replace K–12 education focused on individual STEM subjects.

Despite saying current research needs to be interpreted cautiously for a number of reasons, including but not limited to the small number of studies and generally small sample sizes, the report is careful not to discourage connecting STEM disciplines in K–12 education. In fact, the report explicitly encourages the design, implementation, and study of integrated STEM education programs.

“STEM disciplines are vital for a thriving economy and provide a foundation for successful employment, but in K–12 education, most STEM teaching and learning focuses on science or mathematics, while comparatively little attention has been paid to technology and engineering,” says New York Hall of Science President and CEO Margaret Honey, chair of the committee that wrote the report. “In addition, K–12 STEM standards and assessments have tended to focus on the individual subjects, which, for the most part, have been taught in isolation. So, the potential for fostering the natural connections among the four STEM subjects for the benefit of students is exciting.”

Cognitive psychology, learning sciences, and educational psychology findings of the report suggest disciplinary integration can have both positive and negative effects. So the report also calls for research to include studies into determining the conditions most likely to generate positive results, such as greater student retention and achievement, improved college-readiness skills, and increased interest in pursuing a STEM-related career.

Integration can support an individual’s ability to transfer understanding to new or unfamiliar situations because the basic qualities of cognition favor connected concepts, but integration can also impede learning because it can place high demands on resource-limited cognitive processes, such as attention and working memory.

The report goes on to suggest federal agencies such as the Department of Education and the National Science Foundation should support assessments appropriate to measuring the various learning and affective outcomes of integrated STEM education, and presents a descriptive framework for a common perspective and vocabulary for identifying, discussing, and investigating integrated STEM education.

The report also points out that the expertise of educators is important if disciplinary connections are to be made, so additional training to prepare classroom and after-/out-of-school educators is needed.

Regardless of the outcome of any future research, the report says knowledge in individual STEM disciplines must continue to be supported because connecting ideas across disciplines would be challenging if students have little or no understanding of the individual disciplines. Additionally, students do not always or naturally use their disciplinary knowledge in integrated contexts.

## **COURT DECISIONS**

***Mingo Logan Coal Company v. U.S. EPA*** – In March, 2014, the U.S. Supreme Court declined to review whether the Environmental Protection Agency exceeded its powers when it retroactively withdrew parts of a permit for a large mountaintop coal mine, a victory for the Obama administration and environmental groups. Mingo Logan was asking the Supreme Court to grant certiorari and review the D.C. Circuit decision on the merits.

As background, in this Clean Water Act (“CWA”) case, Mingo Logan was asking the Supreme Court to grant certiorari and reverse a D.C. Circuit decision holding that CWA section 404(c) authorizes EPA to nullify a CWA 404 permit issued by the Corps of Engineers years after the permit has been issued and despite the permittee’s Compliance with the permit. *Mingo Logan v. EPA*, 714 F.3d 608 (D.C. Cir. 2013). The D.C. Circuit’s decision had significant implications for anybody who seeks and must rely upon section 404 permits issued by the Corps of Engineers.

Mingo Logan’s predecessor applied for a section 404 permit for the Spruce No. 1 coal mine in West Virginia in 1997. After 10 years of environmental review, in which EPA participated fully, EPA announced, “we have no intention of taking our Spruce Mine concerns any further,” and the Corps issued a permit. The permit noted specifically the Corps’s authority to revoke or modify the permit under 33 C.F.R section 325.7, but did not suggest in any way that EPA could alter or revoke it. Over the next two years, Mingo Logan spent several million dollars preparing the site and commencing operations in compliance with all requirements of the permit. Then, in 2009, claiming new information, EPA asked the Corps to exercise its revocation authority. The Corps reviewed the request in light of its longstanding regulatory criteria, and concluded that no new information justified revocation. The State of West Virginia also objected to EPA’s request.

A year later, in 2010, EPA took matters into its own hands, claiming that EPA’s “veto” authority under section 404(c) empowered it to modify or revoke an issued permit. Citing this purported authority, it issued a Final Determination revoking 88 percent of the mining activity the Corps had authorized in the permit. This was the first time since the CWA was passed in 1972 that the Agency attempted to use section 404(c) to revoke an active permit after it was issued.

Mingo Logan sued on several grounds, and on March 23, 2012, the U.S. District Court for the District of Columbia held that the “stunning power” claimed by the Agency “is not conferred by section 404(c)” and is “contrary to the language, structure, and legislative history of section 404 as a whole.” The court held that CWA section 404(c) does not authorize EPA to act after the permit has been issued. EPA must act, if at all, before the Corps issues the permit. *Mingo Logan v. EPA*, 850 F. Supp. 2d 133 (D.D.C. 2012).

On April 23, 2013, a panel of the United States Court of Appeals for the District of Columbia Circuit reversed the district court’s decision. The court held that the Act “imposes no temporal limit” on EPA’s authority to use its section 404(c) “veto” authority. Instead, EPA may modify or revoke a 404 permit “whenever” it determines that the Corps permit will have an “unacceptable adverse effect”—even, as here, years after the permit has issued, and despite the permittee’s compliance with the permit.

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