

ENGINEERING STANDARDS UPDATE
Trying to Make Standards Exciting Since 2001

This is the monthly newsletter of the LANL Conduct of Engineering Office's Standards Program. The Engineering Standards define the minimum design criteria, fabrication, construction, and installation practices to assure that the design, repair, and alteration of LANL facilities and the programmatic equipment associated with them satisfies requirements, needs, and customer expectations in a safe, secure, cost-effective, and environmentally responsible manner [[PD340](#)].

Topics this month:

- **Standards Training Aug 17**
- **Are you on a National Standard Committee?**
- **CoE Quotes of the Month**
- **Ethics Training for PEs**
- **LANL Standards Issued in July**
- **What Happens When Conduct of Engineering Isn't Followed**
- **DOE Technical Standards Actions**

The Standards Homepage: <http://engstandards.lanl.gov/>

STANDARDS TRAINING AUG 17

Engineering Standards Intro will be taught Tues, August 17, at the Canyon Complex 160. This is the July session rescheduled. Course 24140 has been expanded to 7-8 hours with yet more meat, videos, and a quiz (not that anyone slept previously). Goes from 8am to about 4 pm at Canyon Complex Rm 160. Provides familiarity with national and LANL engineering standards for anyone performing, reviewing, or managing design activities. Taught by yours truly. Enroll (or disenroll) online [here](#), or contact Yolanda Trujillo at 665-5696 or ytrujillo@lanl.gov

ARE YOU ON A NATIONAL STANDARD COMMITTEE?

That is, a LANS person doing committee work for ACI, ANS, ASCE, ASHRAE, ASME, ASTM, NFPA, etc?

We ask every year, then report this volunteer work to DOE-HQ; it's then sent to the OMB per public law. DOE also documents this work in "DOE-TSL-4, Directory of DOE and Contractor Personnel Involved in Non-Government Standards Activities" periodically, so it's publicized. LANL participation is among the highest of the DOE sites.

To fulfill this reporting requirement, please print this [form's](#) page 1, complete/sign, get your boss to sign, and send to oruch@lanl.gov, fax 7-5405, or M/S P948 by **August 20**.

Already known: Mark Anderson, Bill Atkin, James Baker, Sherri Bingert, David Bowman, David Bracken, Lowell Christensen, Harry Clifford, Robert Daley, David Fry, M. Isabel Cuesta Garcia, Marjorie Gavett, Heidi Hahn, Benito Jacquez, Robert Montsalve-Jones, Alan Justus, Douglas Kautz, Paul Leslie, Sheila Lott, Michael Mallett, Alexander Martinez, Thomas McLean, Murray Moore, Russell Mosteller, William Myers, Connon Odom, Glen Pappas, Donivan Porterfield, Craig Rasmussen, Christopher Romero, Scott Salisbury, Michael Salmon, Thomas Sampson, James Sprinkle, James Streit, Thomas Tierney, Laurie Waters, Tom Waters, Jeffrey Whicker, and James Ziemba.

COE QUOTES OF THE MONTH

It's been suggested that the Gulf spill doesn't have much in common with typical LANL work. We beg to differ. The explosion and spill was apparently all about poor Conduct of Maintenance, ConOps, and CoE. And perhaps engineers not exercising their professional responsibility to stop work when it's unsafe. Which brings us to the **COE QUOTES OF THE MONTH:**

"Man must cease attributing his problems to his environment and learn again to exercise his will – his personal responsibility."

--Albert Schweitzer, German philosopher, musician, theologian and physician

"Well, my beloved engineers-of-the-Gulf, it was not only HTH, Hapless Tony Hayward, who let us down. It was you engineers as well one at a time, name by name. In fact my fury at you is stronger than my fury at Hayward. After all, he was merely a corporate shill—you are professionals, the latest in a magnificent tradition that you have now sullied. For shame."

--Tom Peters, BSCE, best-selling author of "In Search of Excellence" and many other books, blogging at <http://www.tompeters.com/dispatches/011687.php>

Other excerpts from Peters' post were unprintable in a family oriented publication like this.

Another editorial condemning BP engineers: <http://enr.construction.com/opinions/editorials/2010/0602-GulfOilSpill.asp>

Response defending same: [Don't Blame Engineering For the Gulf Oil Spill](#)

ETHICS TRAINING FOR PEs

Speaking of ethics, LANSers were required to take EDS [49600](#) this year, lasting 30-45 minutes. Professional engineers need more – two professional development hours each year. For those in need, the NMSPE has posted their 2010 live and online [classes](#).

Cost: \$75.00 for Members; \$100.00 for Non-Members

Preliminary Dates: Fridays 1-3:00 pm; Sept 24 in Santa Fe; Oct 1 in Los Alamos

Topic: "Cases 3.0" (Case studies of actual ethical problems faced by practicing engineers); instructor: Dr. Charles Fleddermann.

Class sizes may be limited, so register early.

LANL STANDARDS ISSUED IN JULY

LANL Master Specifications <http://engstandards.lanl.gov/specs.shtml>

09 6900 R0 Access Flooring. Initial issue superseding 09 6919. Changes include wholesale replacement of section with commercial template material. LANL seismic specifics, references updated and sustainable design features added (thanks to Scott R, David C, Glen P)

09 6919 R1 Stringerless Access Flooring. Canceled, superseded by 09 6900 Access Flooring.

23 6200 R0 Packaged Compressor and Condenser Units. Initial Issue (thanks to Francisco Banea)

DOE TECHNICAL STANDARDS ACTIONS

New or Revised DOE [Tech Stds](#) this past month: None.

WHAT HAPPENS WHEN CONDUCT OF ENGINEERING ISN'T FOLLOWED

OK, uneven sidewalks didn't devastate the Gulf economy, but LANL has a problem with sidewalks that frost heave. It's unsafe and embarrassing when they're the ones leading to our ship-shaped, flagship building (S. S. NSSB?).

About sidewalks, some loyal readers wrote me this:

One or more of the following is the cause: improper compaction of the subgrade; improper base for drainage under the sidewalk; concrete mix not quite right; sidewalk not at 4" thickness (most contractors use a wood 2x4 as a form which is actually 3.5"), sidewalk placed during a rain or snow storm which adds excess water-cement ratio...

This is a great, simple case example of the need for participation across the board: standards, design, construction, weather, etc. It's a topic that everyone notices, it's a horrible tripping hazard, slips/trips/falls are one of the biggest safety issues, and it's a relatively simple engineering issue that most people can relate to...Why should we believe we can implement effective COE at LANL if we can't even pour a decent sidewalk? To put it another way, if the obvious things we can see aren't done right, why would we think the things we can't see are done right?

All that I can add to the above is that we've been doing a night-and-day better job inspecting work since the contract change. This has resulted in hundreds of deficiency notices and NCRs, and a sea-change (pun intended) in quality of work.



Speaking of poor grading:



LAST MONTH'S UPDATE TOPICS

Miss an issue? The archive is at "[Monthly Update](#)" on the Standards [homepage](#). Last month's topics:

- **Training on Standards**
- **New Component Testing Procedure**
- **Projects Underway -- Download IBC-2006 this Month**
- **CoE Quote of the Month**
- **Help for the Gulf**
- **LANL Standards Issued in June**
- **What Happens When Conduct of Engineering Isn't Followed**
- **DOE Technical Standards Actions**

To request a change to this newsletter's distribution, please contact me.

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