

**ENGINEERING STANDARDS UPDATE
30th ANNIVERSARY
AND SEQUESTER SPECIAL**

Standards are serious business, but this newsletter isn't.

Topics this month:

- **Sequester**
- **LANL Standards 30th Anniversary!!!**
- **LANL Standards Issued in February**
- **Engineering Processes Changes**
- **DOE Technical Standards Actions**
- **When Good Conduct of Engineering Isn't Followed**

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

QUOTE

This quote may be about the psyche, or that many things about the world are entrenched, complex systems. I like to think it says something about change control and why Gurinder has rigorous APs for DCFs, design information reconstitution, critical characteristics, and the like.

"If you want to truly understand something, try to change it."

--Kurt Lewin, **German-American psychologist**

SEQUESTER

Communication science says sending an email on a Friday probably means lower readership than those sent midweek, but it's a bit longer Update this month and I thought I'd better get this out before any artificial limit on electron use might be imposed at midnight. ;-)

Why Engineers Earn More (Thomas.Net)

Year after year, engineers are ranked among the highest-paid professionals in the U.S., both in terms of starting salary and mid-career income. In honor of National Engineers Week (Feb. 17-23), we look at the reasons why engineers command top-tier compensation, and what recent graduates, as well as experienced engineers, can expect to earn...

LANL STANDARDS 30th ANNIVERSARY!!!

Which makes them older than some reading this.

When I took this job in 2000, the program's apparent father and previous champion Mike Nicolini told me the LANL Engineering Standards program began in 1983 as an in-house design and drafting standards effort with initial material developed by Holmes & Narver. Within a couple of

years, they produced nine volumes which eventually became the first seven chapters of today's 18-chapter ESM. There were many Standards Program enhancements and expansions in the years that followed; check out the [May 2010 Update](#) for some interesting highlights of the program's first 27 years.

So, where were you in March 1983? I was interviewing at DOE's Savannah River Site (then "Plant") for my first graduate position, and the Cold War was still on and in Reagan's massive buildup mode. Our govvie was a POS Dodge Omni. From Wikipedia mostly, I'm further reminded about 1983:

Culture

- [Flashdance](#), Tootsie, and [Star Wars Episode VI: Return of the Jedi](#) are box-office hits.
- On TV, M*A*S*H, Taxi, and [CHiPs](#) ended (M*A*S*H setting a new record for [most-watched television broadcast](#) in American history).
- [Michael Jackson](#) performs the dance move that will forever be known as the "[moonwalk](#)" and later in 1983 his music video for "[Thriller](#)" is broadcast for the first time. It becomes the most often repeated and famous music video of all time, increasing his own popularity and record sales of the album "Thriller".
- [McDonald's](#) introduces the [McNugget](#).
- Cabbage Patch Dolls are sold in shops and become a success
- The [De Lorean Motor Company](#) ceases production.
- [Chrysler](#) starts production on the first minivans: the [Dodge Caravan](#) and [Plymouth Voyager](#).
- [Vanessa Lynn Williams](#) becomes the first [African-American](#) to be crowned [Miss America](#)
- President [Ronald Reagan](#) signs a bill creating a federal holiday on the third Monday of every January to honor [American civil rights](#) leader [Martin Luther King Jr.](#)
- The first person to receive an artificial heart Barney Clark dies after 112 days

Tech

- [Apple Inc.](#) releases the [Apple Lisa](#) personal computer (and announces the Macintosh 12/31/83)
- [Lotus 1-2-3](#) is released for [IBM-PC compatible](#) computers.
- [IBM](#) releases the [IBM PC XT](#).
- [Microsoft Word](#) is first released.

Notable Geopolitical Events

- President [Ronald Reagan](#) makes his initial proposal to develop technology to intercept enemy missiles. The media dub this plan "Star Wars".
- [Korean Air Lines Flight 007](#) is shot down by a [Soviet Union](#) jet fighter when the commercial aircraft enters Soviet airspace. All 269 on board are killed.
- Soviet military officer [Stanislav Petrov](#) averts a worldwide nuclear war by correctly identifying a missile attack warning as a [false alarm](#).
- United States troops [invade Grenada](#) at the behest of [Eugenia Charles](#) of [Dominica](#), a member of the [Organization of American States](#).

Financial

- Year End Close Dow Jones Industrial Average 1258 (now 10x that)

- Interest Rates Year End Federal Reserve 11.00% (now 1/70 that)
- Average Cost of new house \$82,600 (now 2-3x that)
- Median Price of an Existing Home \$70,300
- Average Income per year \$21,070.00 (now double that)
- Average Monthly Rent \$335
- Dodge RAM 50 mini-pickup \$5665

LANL STANDARDS ISSUED IN FEBRUARY

Engineering Standards Manual [STD-342-100](#)

Ch.13, Vol.6, 6-02, Att.3 Rev.1 Written Practice for Qualification & Certification of NDE Personnel	Para. 7.B.1: Changed Level I&II recert frequency from 5 to 3 years to meet SNT-TC-1A.
Ch. 16, Listing of LBO-Approved IBC Testing Agencies, Fabricators, and Products	Revised 2/27/13; removed Atomic Inspection Labs, other minor updates

Master Specifications [STD-342-200](#)

05 1000 R6 Structural Metal Framing	Changed basis from UFGS to MasterSpec; made more user friendly. Thanks to Glen Pappas et al.
05 3000 R2 Metal Decking	Changed basis from UFGS to MasterSpec, clarified overlap w/roofs in Div. 07, and made more user friendly. Thanks to Glen Pappas et al.
11 5311.10 R2 Glovebox Fabrication	QA changes include addition of ASME NQA-1 requirements throughout. Reference to Section 11 5311.19 Chemical Resistant Coatings for Gloveboxes added. Many name changes to reflect the changes made in the standards; ASTM A588 added. Submittals article changed to make more stand-alone. Fabrication hold points changed to align with LL from RLUOB and other recent projects. Windows article aligned with DOE-STD-1099-99. Weld Inspection article modified to include RT. Att 2 Submittals updated to match body. Thanks to Ramona Biggs et al.
Updated Exhibit I input template	Thanks to Christina Salazar-Barnes.

[Where Are America's Women Engineers?](#) (and U.S. lagging in STEM, also from [Thomas.Net](#))

Although women have made great strides in formerly male-dominated professions in the last few decades, engineering remains one of the occupations where female employees are severely underrepresented. Why is the gender divide still so wide in technical fields?

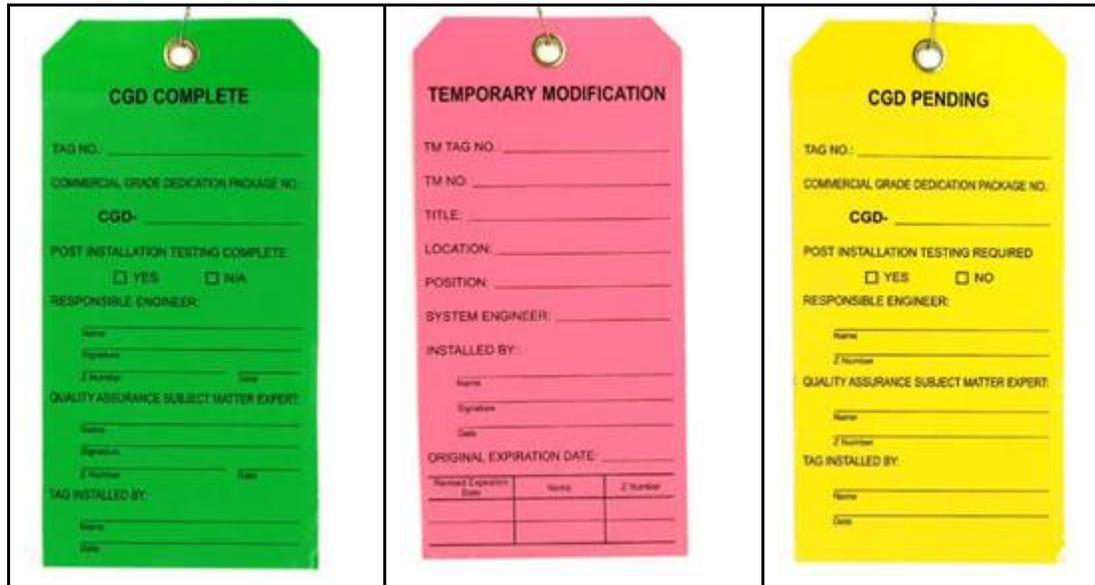
ENGINEERING PROCESSES CHANGES

Engineering Services now has the following tags available for immediate use in facilities. These self-laminating tags come with wire and self-adhesive backing for attachment to the item.

Request the tags by contacting:

Christina Salazar-Barnes, 667-7786, clsalazar@lanl.gov

The tags will be sent by interoffice mail unless you arrange to pick up from TA-03-216, Rm. 47.

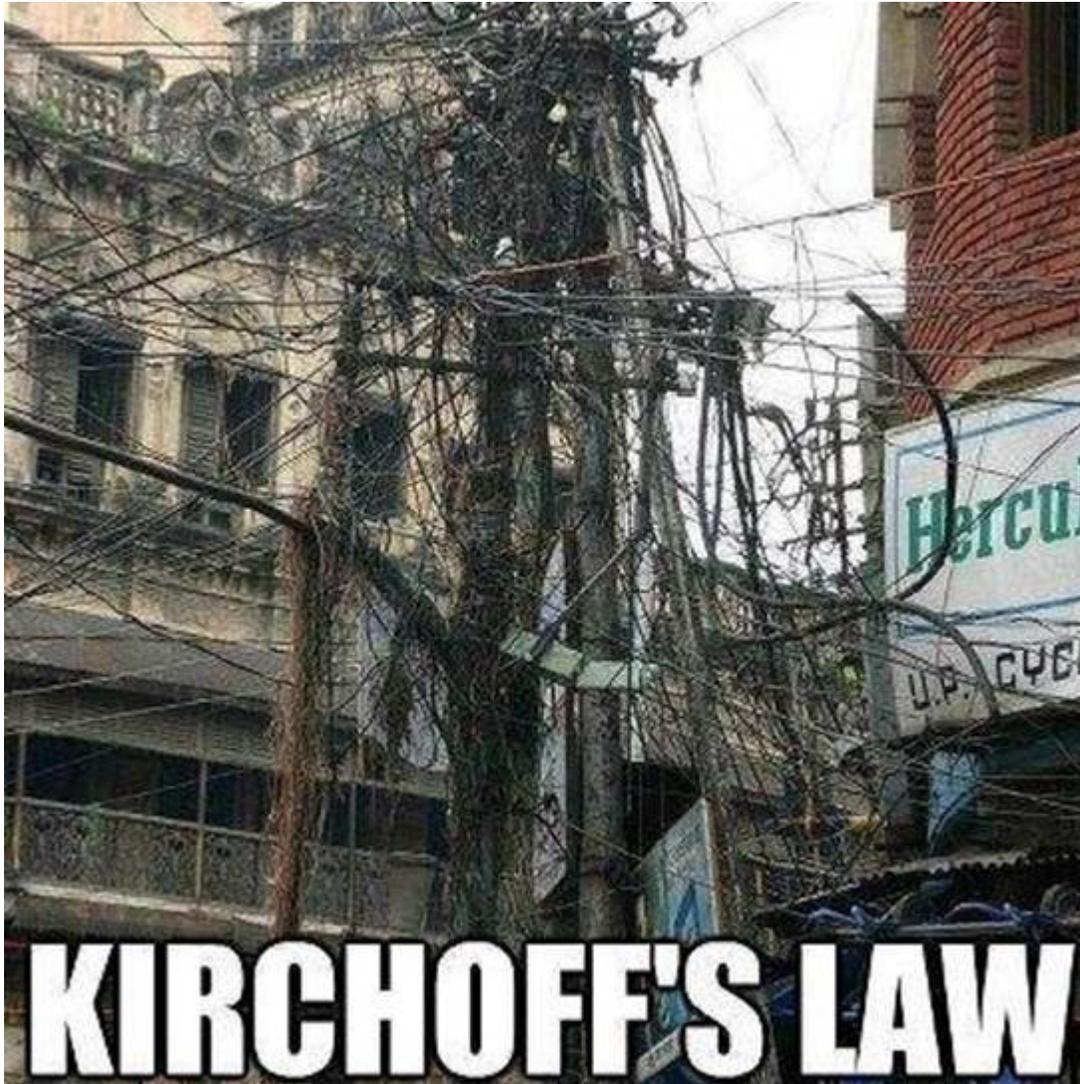


DOE TECHNICAL STANDARDS ACTIONS

DOE [Tech Stds](#) activity this past month:

DOE-HDBK-1131-2007 (CN1) (Reaffirmed 2013) [General Employee Radiological Training](#).

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED



I'm not a sparkhead (electrical engineer) and 30+ years beyond a basic EE course as noted above, so I had to refresh on this caption. It's apparently referring to Kirchhoff's current law, which says that the current entering any junction is equal to the current leaving that junction. Wikipedia also said that this law is also called Kirchhoff's first law, Kirchhoff's point rule, or Kirchhoff's junction rule (or nodal rule). The principle of conservation of [electric charge](#) implies that:

- At any node (junction) in an [electrical circuit](#), the sum of [currents](#) flowing into that node is equal to the sum of currents flowing out of that node, or
- The algebraic sum of currents in a network of conductors meeting at a point is zero.

To extent that people have surely sucked all the potential out of the feeder, looks like an apt photo label – and a dangerous mess that clearly lacked any conduct of engineering – or conduct of construction, maintenance, operations, or training!

LAST MONTH'S UPDATE TOPICS

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

- **Engineers Week Talk, Posters**
- **Engineer-Ring**
- **Engineering Services Boss**
- **Engineering Continuing Ed**
- **Engineering Special Ed**
- **Electrical Standards Course**
- **LANL Standards Issued in January**
- **Engineering Processes Changes**
- **O&M Criterion Changes**
- **DOE Technical Standards Actions**
- **When Good Conduct of Engineering Isn't Followed**

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

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