

ENGINEERING STANDARDS UPDATE

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

Topics this month:

- **Standards as Pizza Topping!**
- **Safety, Quality, Productivity Leadership Workshops**
- **SpecText Webinars**
- **Hot Rocks**
- **Hot Docs**
- **LANL Standards Issued in March**
- **Engineering Processes Changes**
- **QA Process Changes**
- **DOE Technical Standards Actions**
- **When Good Conduct of Engineering Isn't Followed**

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

STANDARDS AS PIZZA TOPPING!

The Research Library is hosting an IHS online standards training following a pizza luncheon on Tuesday, April 16, from 11:30-1:30 in the MSL Auditorium.

IHS Standards Expert is the world's largest file of active and historical standards, specifications, codes, drawings, handbooks, and related technical documents, containing over 568,000 technical standards, integrated with more than 350,000 U.S. military and Federal specs and related documents.

LANL's subscription portal is [here](#).

Trainer Keith Dorrell will provide an overview on searching IHS Standards Expert, and in-depth training and Q&A on:

- tips for improved search and results display
- customize account settings/user preferences
- advanced filters

RSVP not required, but for planning purposes please email Daniel Alcazar dalcazar@lanl.gov if you hope to attend or have any questions.

Speaking of IHS, ASME **NQA-1-2012** is now the latest edition. This makes the SD330-mandated 2008+2009 Addendum historical in IHS lingo, and therefore unavailable to us with our latest-only ASME subscription. Luckily, most Labbies need only mind their Ps and Qs (APs and QA

processes!) to get the job done, so don't need the source document. Luckily, QPA downloaded the 2008/9 pdfs before the changeover.

Note: On the other hand, for the IBC, IEBC, and IECC, we subscribe only to the 2009s even though 2012s are out, so unselect "Most Recent Revision" when searching for these I-Codes. That's because we follow the state on code edition, and it's clinging to the 2009's like a tiger to a lifeboat.

SAFETY, QUALITY, PRODUCTIVITY LEADERSHIP WORKSHOPS

These half-day workshops began as a joint ESH & QA initiative at CMRR, and Paul Henry requested that they continue and be offered to anyone interested; Paul typically participates in the workshop for 15 to 30 minutes. I've been told they're valuable.

Sign up for UTrain course 14636. U.O.S., sessions are at the Canyon Complex, 8 AM to 12:30 PM.

Agenda

- Leadership
- Zero Accident, Zero Incident Philosophy
- Cost of Accidents
- Cost of NCRs
- Accident/Incident Causation Flow
- Utilizing Leading Indicators
- People/Behavioral Based Safety & Quality Management
- Personal Communications

WHY Talk About Correlation of "Safety, Quality & Productivity"?

- Analysis of historical loss information (Zurich Ins. Corp. 2010) found that the safest construction contractors have the fewest construction defect claims
- Better-managed construction companies with robust safety and quality management programs also are more likely to deliver projects on schedule and on budget.
(Rajendran, Clarke & Andrews: "Quality Management in Construction" *in Journal of Professional Safety, November, 2012*)

SPECTEXT WEBINARS

LANL has a site license for both MasterSpec and SpecText guide specs. These are useful to designers when a LANL Master doesn't exist for a work result needed.

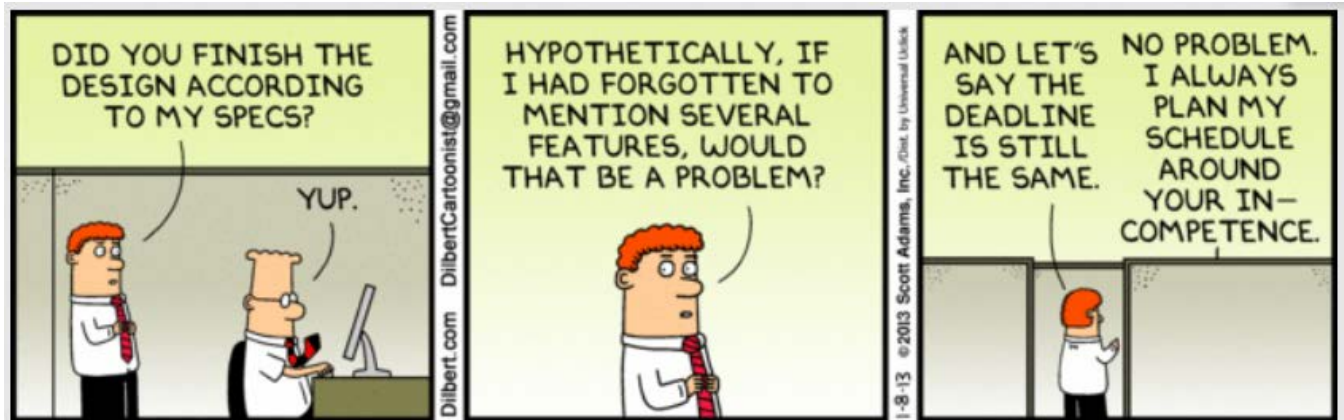
If anyone in LANS produces a lot of spec packages, they may wish to take a free orientation webinar to get an overview of SpecText, Masterworks productivity tools, and SpecAgent. Topics covered in this 60-90 minute overview include the following:

- Delivery and Installation [Oruch can arrange for access to server]
- SpecText Editing
- Masterworks Productivity Tools
- SpecAgent

Register for one of the upcoming webinars by clicking on the link below.

[April 02, 2013, 11:30 p.m. MT - Tuesday](#)

[April 16, 2013, 11:30 p.m. MT - Tuesday](#)



HOT ROCKS

Eric MacFarlane of ES-DE is presenting "Los Alamos Seismic Rupture Directivity Study of PF-4." He'll initially discuss historic evidence of earthquakes, geological investigations performed at LANL, and inputs to the seismic hazard at LANL. The concluding portion of the talk will focus on a near source rupture directivity study performed on the PF-4 superstructure (this is concerned with how earthquake rupture direction can influence the frequency content of earthquake ground motion).

It's today, April 2, from 3:30 - 5:00 PM in the Los Alamos Research Park, Conference Room 203A (2nd floor, west of elevators). So it's kind of about hot rocks, and kind of above them, too. Full [abstract](#) in the ADE Prof Dev Events Calendar.

HOT DOCS

Heidi Hahn just posted all-new, draft Implementation Guides for R&D engineering performed under [PD370/P371](#), plus docs on requirements management (aka systems eng), to the ADE Systems Eng Resource Center's SharePoint Shared Docs [folder](#) in these categories:

- Design
- Project Review
- Requirements (analysis, needs, requirements)
- Risk Management
- Transition to Operations
- V and V (of design solutions)
- Systems Eng Handbook (INCOSE)

Please send any comments on the IG drafts to Hahn@lanl.gov

(In the facility/nuclear engineering worlds, one follows Gurinder's APs, learning guides, etc. under P341 -- not the above).

LANL STANDARDS ISSUED IN MARCH

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

Chapter 1 - General	Summary of Changes
Section 210 Attachment 1, Systems List	Clarifications and list expansion for RLUOB, TA-55, WETF.
Section 230 Attachment 1, Equipment/Component Functional IDs	Update and expansion of list

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

11 5311.19 r0 Chemical Resistant Coatings for Gloveboxes	NEW!!! Thanks to Wayne Smyth, POC David Carr, Ramona Biggs, etc.
Updated Exhibit I input template	Tx to Christina Salazar-Barnes.

ENGINEERING PROCESSES CHANGES

The following Administrative Procedure has been posted on the SharePoint site.

AP-341-519-R2	Course #44245	Design Revision Control (issued 3/21/13)
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For questions about the contents of any AP, please contact Eng Processes Program Manager Gurinder Grewal at ggrewal@lanl.gov or 667-3667. For a listing of all APs, visit the [Engineering Processes](#) page.

QA PROCESS CHANGES

P 330-6	Nonconformance Reporting	03/28/2013	Revised
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Summary of Changes: Sections 3.8.1 and 3.8.2 updated to reflect Facility Design Authority Representative (FDAR) review and concurrence for use-as-is and repair dispositions. Added Section 3.8.6, Nonconformance Suspension, which explains the process and introduces Form 2035, Nonconformance Report Suspension Form...Attachment A revised to reflect process updates. Updated language throughout to reflect new electronic NCR System. Clarified receipt inspection notifications, product acceptance, software, and S/CI requirements throughout.

SD 330	[LANL] Laboratory Quality Assurance Program	03/28/2013	Quick Change
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Summary of Changes of eng interest IMHO: Added ref to QPA docs on source verification for the control of purchased items and CGD, another doc on CGD surveys, and added PD370/P371. For others see history section 10.0 (pdf sht 22).

DOE TECHNICAL STANDARDS ACTIONS

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

DOE-HDBK-1130-2008 (Chg 2/r2013) Radiological Worker Training (260 pages) [HTML](#)

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

“Measure twice, cut once.”

My grandfather, who made wooden patterns and jigs for the Enola Gay and other B-29s in the 1940's and was a skilled wallpaper hanger in his later years, liked this popular carpenters' expression. (He also liked “busier than a one-armed paperhanger” and a lot of other off-color expressions and jokes, which may partially explain some of Update's questionable content). But double-checking before cutting is a wise concept applicable to a lot of work. To wit:

Wrong

[2 piling augers pierce rail-tunnel wall in London](#)

Two large piling drills broke through a tunnel wall on a major rail route in London. "Our engineers are on site assessing the damage and we will restore the railway as soon as possible," said Phil Verster, Network Rail route managing director. Engineers have since plugged the hole with a concrete plug about three feet thick. [The Guardian \(London\)/The Press Association \(U.K.\) \(3/8\)](#), [BBC \(3/8\)](#), [Evening Standard \(London\) \(3/11\)](#)

Right

[Engineers to face technically challenging project in Hong Kong](#)

The Xiqu Centre, a complex planned for Hong Kong that will include two theaters and a tea house, is a technically challenging project since it will be located within a "cramped urban site" with the city's rail metro tunnels and a station directly beneath the structure. Structural engineering firms Buro Happold and Atkins will need to ensure work does not affect the stability

of the station and the tunnels. "There are several hurdles, including making sure the Centre's foundations are clear of the metro and the structure spreads its load in a way that does not add additional load to the MTR tunnel," said CK Chan, Atkins' director for structure in Asia Pacific. [DesignBuildSource.com.au \(Australia\)](http://DesignBuildSource.com.au) (3/8)

LAST MONTH'S UPDATE TOPICS

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

- **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**

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

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