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## ENGINEERING STANDARDS UPDATE

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

This is the monthly newsletter for the LANL Conduct of Engineering program's Engineering Standards Program, and a bit more. The Standards define the minimum technical requirements for the design, fabrication, construction, commissioning, repair, and replacement of both new and existing equipment and facilities, including both maintenance and modification, for programmatic and facility work at LANL [[P342](#)].

### Topics this month:

- **QA Changes and You**
- **Engineering Ethics**
- **AWS Standards Availability**
- **Appendix G Changes are Booming**
- **LANL Standards Issued in October**
- **Engineering Processes Changes**
- **DOE Technical Standards Actions**
- **When Good Conduct of Engineering Isn't Followed**

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

### QA CHANGES AND YOU

In October, the Quality and Performance Assurance Division issued Revision 3 of [SD 330](#), LANL's QA Program. This is the mother of all LANL QA documents, the key to implementing DOE O 414.1D. For the nuclear facilities, it implements NQA-1 in a graded approach. QPA, CoE, and other organizations have worked to revise subordinate and complementary documents to implement these mandates, and are mostly there. So, the take-away for most readers is just general awareness of the policy hierarchy at LANL; trust that we policy wonks have or are getting all the working-level documents right. Where any gaps remain, compensatory actions such as project- or org-specific QA plans must be created to ensure compliance.

**[Embrace engineering change—or risk failure:](#)** Engineering firms that avoid change and cling to the status quo are destined to fail.

Click above for a Consulting-Specifying Engineer article some may find interesting, though perhaps not the independent AE parts.

### ENGINEERING ETHICS

For registered engineers needing ethics contact time for continued licensure in NM, the usual two year-end tips:

1. Heidi Hahn in ADE plans to update her 1 PDH online UTrain course with new scenarios before the end of the year. I'll advertise it next month if ready; otherwise, search for ethics later in December.
2. The NMSPE Albuquerque Chapter [website](#), such as it is, has an online course for \$75 near the bottom.

I'd make snide remarks about NMSPE lobbying for ethics education in the Licensing Act and then charging so much for it, but it's a good organization and improving ethics in NM is always a good idea. From that standpoint, non-PEs might take Heidi's course as well!

### AWS STANDARDS AVAILABILITY

LANL's [IHS](#) online codes and standards service has always included American Welding Society documents, but in recent years these have been subject to Digital Rights Management control. The effect of this was that downloaded pdfs had a 60-day life, and couldn't be opened after that -- as useless as a jack-o-lantern in November. The purpose was to reduce redistribution-driven copyright infringement.

The work-around was to download again, but that didn't help people locked into older revisions that were part of their project's code of record.

Now, thanks to Kelly Bingham's campaign to change this through Carol Hoover at the Research Library, AWS has removed expiration lockout from their codes & standards in our subscription. We hope this is permanent, but one never knows. So, this would be a good time to download the codes & standards you use regularly to have an unlocked version. You would also want to do this if you foresee a need for today's AWS editions even after they are revised because of code of record -- though that's always true (since our subscription only contains latest edition, except for ICC and IAPMO codes).

### APPENDIX G CHANGES ARE BOOMING

When LANS' contract with NNSA is modified in a way that might affect readers, I note it here. These changes are usually in Appendix G, our [contract's](#) main listing of required directives.

The most recent quarterly Appendix G [mod](#) substituted the new DOE-STD-1212-2012, *Explosives Safety*, in place of the superseded DOE M 440-1-1A, *DOE Explosives Safety Manual*, effective October 3. The STD is mostly about operational safety requirements, but is also a driver for design of high explosives facilities and systems (e.g., lightning protection). Now LANL can better avoid unplanned explosions and more safely conduct planned ones. What -- did you think those were sonic booms from military jets?

**LANL STANDARDS ISSUED IN OCTOBER**

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

Chapter 1 - Section 210 Att.1 Systems List Rev. 6	Addition of most RLUOB systems, other minor changes
Chapter 5 - Section II Rev. 7	Added TA-50/55 ground motion values at 1613.5, mass concrete at 1904, erection planning at 2205.1, drawing requirements in App A. Updated references.
Chapter 16 - IBC Program - IBC-TIA - Attachment B: Inspector Qualification Guidelines Rev. 5	Modified CR, CP, EF, and LP guidance
Chapter 16 - IBC-IP, App. B, Statement of Special Inspections Rev. 6	Minor clarifications on responsibilities, special cases, editing, bearing capacity verification; correction of title and references

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

03 3053 R6 Miscellaneous Cast-in Place Concrete	Minor changes at 3.4.A and 3.4.E
28 3100 R6 Fire Detection and Alarm	Incorporates latest compatible hardware information for the approved vendors and systems, and clarifies accessibility expectations for system equipment.
32 1216 R3 Asphalt Paving	Major changes. Comments from Civil Committee review and inspection group.
33 5100 R5 Natural Gas Distribution	Minor changes to 3.2.E to indicate the change in colors for above ground piping and appurtenances.

### ENGINEERING PROCESSES CHANGES

The following Administrative Procedures have been revised, approved and posted:

AP-341-405-R2	Course #54133	Identification and Control of Technical Baseline in Operating Facilities
AP-341-521-R0	Course #15625	Identification and Control of Critical Spare Parts (Issued April 24, 2012, but is now assigned to all CSEs)
AP-341-701-R1	Course #44225	Evaluation of Vendor Information
AP-341-703-R3	Course # withheld	Commercial Grade Dedication -- provisional document effective Feb 4, 2013. Training will be delivered by Bill Kerley Nov-Jan so that selected CSEs, DEs, and QA folks (eventually others) can become qualified to create CGD packages by that date. Managers controlling signup.
AP-341-519, 605, 608, and 627	n/a	Interim change notices posted, see SharePoint or 10/30 Salazar-Barnes email

Training Requirements for APs: Disregard course info if you are not assigned to a given AP. Those assigned to an AP may show delinquent in [UTrain](#), but this will not affect CSE qualifications. For training questions, contact [Yolanda Trujillo](#) at 5-5696.

For questions about the contents of any of these documents, please contact Eng Processes Program Manager Gurinder Grewal at [ggrewal@lanl.gov](mailto:ggrewal@lanl.gov) or 667-3667. For a listing of all APs, visit the Conduct of Engineering Office [Engineering Processes](#) page. Always ensure you are working to the latest revision being implemented by your facility.

### DOE TECHNICAL STANDARDS ACTIONS

New or revised DOE [Tech Stds](#) this past month: DOE-STD-1210-2012, Incidents of Security Concern (41 pages)

### WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

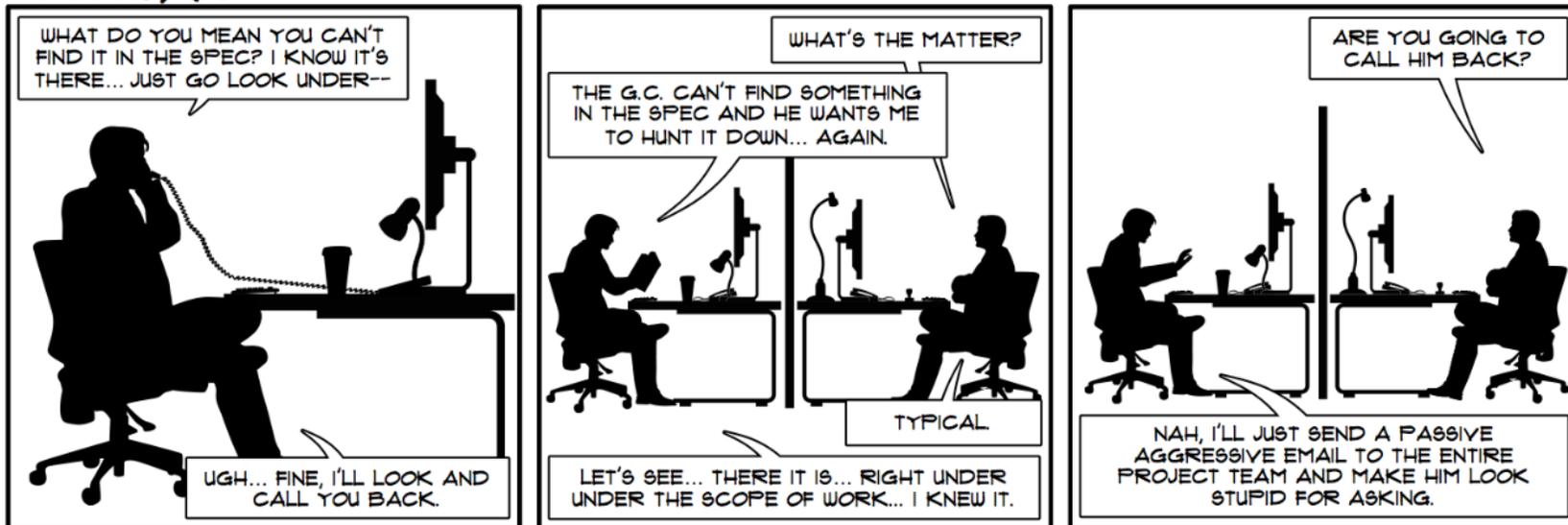
This month, I've listed a few problem areas we're seeing and resolving. Don't get on the list!

- A building renovation project and several MSS jobs not requesting the inspections required by our IBC program, ESM Ch 16
- A system modification design that didn't use the standard equipment acronyms in ESM Ch 1 Section 230
- Reduced QA oversight on major projects

Finally, here's a cartoon to which many can relate. Not endorsing the AE's approach, but appreciate the frustration.

## CONSTRUCTION ADMINISTRATION: SPECIFICATIONS

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## LAST MONTH'S UPDATE TOPICS

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

- **Standards in Retrospec(t)**
- **FY13 Standards Goals**
- **Suspect/Counterfeit Courses This Week**
- **Systems Engineering Webinar – Free PDUs!**
- **October is Fire Prevention Month**
- **Engineering Processes Changes**
- **LANL Standards Issued in September**
- **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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