

## ENGINEERING STANDARDS UPDATE

[Standards are serious business](#), but this newsletter isn't.

### Topics this month:

- **Report National Standards Work**
- **Training**
- **Engineering Processes Changes**
- **LANL Standards Issued in August**
- **Project Management Procedures Moved to EDMS**
- **National Standards Changes**
- **I-Code Errata**
- **DOE Technical Standards Actions**
- **When Good Conduct of Engineering Isn't Followed**

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

### REPORT NATIONAL STANDARDS WORK

If you're a Lab employee serving on a committee maintaining or writing a national code or standard for which I am not aware, please contact me (same when work stops). Examples are ASME, ASTM, NFPA, etc. About 50 employees do such committee work which we must report to DOE-HQ per the contract. Those in last year's submission:

Mark C. Anderson	David P. Harvey	Glen J. Pappas
Michael E. Bange	Vladimir Henzl	Donivan R. Porterfield
Luiz Bertelli	Jon E. (Rick) Hinckley	Jose E. Rodriguez
Ramona Biggs	Patrick W. Hochanadel	Christopher Romero
Sherri A. Bingert	George M. Hrbek	Mark S. Rosenberger
David A. Bingham	Daniel A. Javernick	Scott R. Salisbury
Kelly L. Bingham	Alan L. Justus	Michael W. Salmon
Roger W. Brewer	Douglas D. Kautz	James K. Sprinkle
Paul J. Contreras	Brett R. Krueger	James R. Streit
Shannan D. Diffey	Paul O. Leslie	Ari Ben Swartz
Scott W. Doebling	Benjamin R. Lopez	Leah A. Tietjen
Donald J. Dudziak	Sheila A. Lott	Taunia S. Van Valkenburg
Ernest P. Elliott	Michael W. Mallett	Tom L. Waters
David A. Fry	Thomas D. McLean	Joni L. Weamer
David P. Fuehne	Murray E. Moore	Jeffrey J. Whicker
Milan S. Gadd	William L. Myers	Ning Zhang
Lloyd B. Gordon		

I said nice things about our summer students with the July Update's cartoon. Here's the darker side (let's hope not here):

## INTERNS LAST DAY 2016

ARCHITEXTS



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To be continued...

## TRAINING

Please, for all of these, remember to dis-enroll if you can't make it after enrolling.

To register for LANL courses, sign up via [UTrain](#) (AEs without cryocard via Yolanda Trujillo at 665-5696 or [ytrujillo@lanl.gov](mailto:ytrujillo@lanl.gov) with Z number).

- On [UTrain](#) click on the "catalog" tab and select "advanced catalog search"
- Enter course number as the "ID", then "search"
- Add-to-do-list
- Go to your to-do-list and click on 'register'

### **Standards Intro Course this Thursday, Sept 8 – NEW LOCATION, OPENINGS AVAILABLE!!!!**

This is the rescheduled date for the 24140 course I couldn't teach in June, and those folks were booked into this one. **Now being held at C-Division auditorium (TA-46, Building 535, Room 103)**, runs 8 a.m.– 4 p.m. Provides familiarity with national and LANL engineering standards for anyone performing, reviewing, or managing design activities. **You'll need to print your own handout and bring it; contact B. "Mike" Brazile for the file and instructions.**

I'd like to think we needed a bigger room because people like me, but really it's because many LANL engineers and designers are required to take it, and outside AEs are encouraged to attend.

**IBC 2009 to 2015 Transition Training Friday, Sept 9 (NON-LANL)**

For those that missed this course here last summer and need it, you can pay to go to an AIA-hosted course in ABQ on September 9 (info [here](#)). This course reviews the changes from the 2009 edition to the 2015 International Building Code. The background behind many of the changes will be discussed to provide the participant with an understanding of the intent of the changes and how to apply it to their everyday work. Subjects covered will include the code change process, mixed occupancies, atriums, accessible means of egress and many more.

**CGD Courses Thurs, Sept 15 -- NEW DATE, PLACE**

A schedule of last month's date, and registered folks were booked into this one. **Now being held at White Rock Training Center (TA-00, Building 1308), Classroom 112.** For those that do work for nuclear facilities, the Commercial Grade Dedication Overview course (30726) runs from 8 to 10 a.m. is for those who require just an overview of the new CGD Process – plus those who will perform as CGD Preparers. The CGD Preparers' course (30727) is for those who will perform that role and runs from 10:00 a.m. to 5:00 p.m. Thus, CGD Preparers must attend both the CGD Overview and CGD Preparers courses to serve as CGD Preparers. Primary Instructor: Marshall Bullock, Lead Procurement Engineer.

**New Refrigerants, Tues, Sept 27, 10:30 -12:00, White Rock Training Center, Room 107**

SW Trane personnel will give a presentation on new refrigerants that are coming into the market. Not a LANL-credit course. Questions to Kathleen Gorman, Title VI Air Quality Compliance, 665-1338; [refrigerants@lanl.gov](mailto:refrigerants@lanl.gov)

**Pressure Safety Officer Training Oct (dates TBD)**

Two course offerings are being planned; if interested, contact ESM Ch 17 POC [Ari \(Ben\) Swartz](#):

**PSO Overview** – Pressure safety concepts needed to perform the roles and responsibilities of being a PSO in an interim capacity.

**ASME B31.3** – Will familiarize participants with ASME B31.3 Process Piping code as related to the duties of a PSO.

## **ENGINEERING PROCESSES CHANGES**

### **OHC vice OEITS**

For the nuclear facilities: Posted [VAR-016-011 Rev 1](#) “ML-3 for SSCs Identified as Other Hazard Controls” against AP-341-101 (designating VSS and CSE), -502 (MLD), and P341. The VAR also covers all other CoE documents that have the old OEITS term.

### **Engineering Judgement**

As discussed in the ES-Div all-hands by Doug Volkman and Larry Goen, we added engineering judgement memos where one accesses [AP-341-605 Calculations](#). It's a document with this [link](#) to a SharePoint library of examples of memos written around the

notion of engineering judgement in lieu of a formal calc. These are allowed per this note in 605:

“Note: For simple designs with low technical, economic, and safety risk, an experienced engineer may perform an intelligent design evaluation without generating a formal calculation. The application of this AP is not required in such cases as long as the Responsible Manager approves the informal approach. The Responsible Manager may be the Engineering Manager, the Functional Group Leader (e.g. Safety Basis Technical Services, Fire Protection, Security, etc.), or the Discipline Team Leader, as appropriate.”

### Gurinder

Speaking of engineers with good judgement, Gurinder Grewal is retiring for good in two weeks. Until then, he can be reached by [email or phone](#). He’s been mostly working from home these past months, and we’ll miss him terribly when he’s gone. Given no replacement for him is in place just yet, I’ll be auctioning his personal cell number on eBay, and guessing he’ll pay more than anyone to keep it private.

### Delta (δelta) Design Revision Control Tool Launched (delta meaning change, but it’s all Greek to me)

Paraphrasing a Joni Weamer email:

- Delta is the tool EPD and Construction will use to produce, review, and approve FCRs/FCNs/DRNs. Transition to full usage for new FCRs/FCNs/DRNs by September 1, 2016.
- Keep Joni or Doug Volkman posted if there are issues.
- Access from the [ES homepage](#). If you have a role in the preparation of an FCR you’re probably in the system already. If others need to be added, send a note to Kay Jackson.
- It is annotated well and it follows the same process as the current procedure dictates.
- Note that at the end of the cycle when the document is approved, the document transitions to EDMS. If the affected documents are not in EDMS, there will be trouble. You will not be able to print the approved document from the tool – only from EDMS. (This is intended to ensure we are only working to approved documents.) And it will not be in EDMS if the affected documents are not issued and can’t be linked. Think hard about this.

### [Italy probes whether negligence played role in quake toll](#)

AMATRICE, Italy (AP) — Italian authorities are vowing to investigate whether negligence or fraud in adhering to building codes played a role in the high death toll in last week’s earthquake in Italy... Investigations are focusing on a number of structures, including an elementary school in Amatrice that crumbled despite being renovated in 2012 to resist earthquakes at a cost of 700,000 euros (\$785,000)...Questions also surround a bell tower in Accumoli that collapsed, killing a family of four sleeping in a neighboring house, including a baby of 8 months and a 7-year-old boy. That bell tower also had been recently restored with special funds allocated after Italy’s last major earthquake, which struck nearby L’Aquila in 2009...

## LANL STANDARDS ISSUED IN AUGUST

Busy month.

<b>ESM <a href="#">STD-342-100</a></b>	
Ch. 5, <a href="#">Section II</a> : Posted Clarification CIR-16-004 Clarify Design Approach of Commercial Fab Bldgs in Multi-State Jurisdictions	Thanks to Doug Volkman, Larry Goen, and others.
Ch. 13, Welding, Joining, & NDE, <a href="#">Vol. 6 NDE</a> , ITM-1306-NDE-PT-101 - Visible, Solvent-Removable, Penetrant with Non-aqueous Wet Developer Rev. 0	Supersedes KSL PT 16-30-007. Thanks to Kelly Bingham, David Harvey, and POC David Bingham.
Ch. 13, Welding, Joining, & NDE, Vol. 3 WPS, WPS 3-01 App. A, Welding Specs: <a href="#">3002-xxxx-HY80/HSLA100</a> r2	Added more impact data from PQR run for Welder Qual. Thanks to Kelly Bingham and POC David Bingham.
Ch. 16 IBC Program <a href="#">Organization Chart</a>	Updated personnel names (Volkman vice Weamer, Foster vice Bodnar)

<b>Master Specifications <a href="#">STD-342-200</a></b>	
11 5311.12 R4 Glovebox Installation	Clarified skirting requirements at 3.3.A.4.c. per LANL memorandum ES-DO-15-292, PF-4 Fire Skirting Design and Anchorage. Thanks to Larry Lamsa, Jason Cardon, and POC Michael Ladach.
32 1216 R5 Asphalt Paving	Graded requirements for testing, inspection, and acceptance based on "Minor Asphalt Paving" for under 1,500 tons and "Major Paving" for 1,500 tons or more. Thanks to Alternate POC Donald Yardman, Carl Sowers, Grant Stewart, Doug Volkman, Natalie Romero-Trujillo, Larry Velasquez, John Bradley, Mike Olson, Ed Lucero, Jeremy Nowell, POC Crystal Rodarte-Romero, and probably others—like a Cecil B. DeMille movie.

<b>Drawings &amp; Details <a href="#">STD-342-400</a></b>	
<b>Civil</b>	
ST-G2010-1-1 R4 Typical Road Sections	Admin. changes to new format CAD STD Rev.#5. Minor design changes. Thanks to Ed Seawalt, Marisol Alvarez-Torres, Scott Richardson, and POC Crystal Rodarte-Romero. And the retired Mell Smithour.
ST-G2010-1-2 R2 Typical Parking Lot Sections	
ST-G2010-2 R3 Curb & Gutter	
ST-G2020-1-1 R4 Parking Layout	
ST-G2020-1-2 R3 Parking Layout (Accessible and Motorcycle)	
ST-G2030-1 R4 Sidewalk	
ST-G2040-1.1 R5 Typical Fence	
ST-G2040-1.2 R4 Pedestrian Gate	
ST-G2040-1.3 R4 Vehicle Gate	
ST-G2040-1.4 R4 Gate Latching	
ST-G2040-1.5 R4 Hill Side Fence	
ST-G2040-1.6 R4 Embankment Fence	
ST-G2040-1.7 R4 Top of Embankment	
ST-G2040-1.8 R4 Bottom of Embankment	
ST-G2040-1.9 R4 Fence Manproofing	
ST-G2040-2.1 R3 Fence - Smooth 3-strand Typical Details	

ST-G2040-2.2 R3 Fence- Smooth Strand Single or Double Gate	
ST-G30GEN-1 R5 Bollard [currently use is optional and not for use as a vehicle barrier]	
ST-G30GEN-2 R3 Thrust Blocks	
ST-G30GEN-3 R3 Tracer Wire	
ST-G30GEN-4-1 R4 Single Trench	
ST-G30GEN-4-2 R4 Earthwork Utilities Tables	

**PROJECT MANAGEMENT PROCEDURES MOVED TO EDMS**

This is only important if you need procedures for large projects -- initiation, management, or the like. Project engineers need this and are to be given permission to the ADPM docbase in early Sept; others will need to request of Debi per below.

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Subject: Migration from ADPM SharePoint to EDMS Documentum

To All ADPM/ADMIS Document Library Users:

The ADPM/ADMIS Document Library (SharePoint) has transitioned to the Electronic Document Management System (EDMS). All Manager of Functions (MOF) Division documents are now available through EDMS.

Who's affected: All personnel using, creating, or revising technical or non-technical documents within the MOF Division.

When effective: The ADPM/ADMIS Document Library will be discontinued 8/29/16. All documents are currently available in EDMS.

How to access EDMS: EDMS may be opened from the [LANL Inside](#) page under Top Tools.

When accessing EDMS for the first time, be sure you are looking in the correct repository – adpmdocs - after logging in.

snip

For more information on EDMS access, setting preferences, viewing documents, and more, see the [EDMS General User Overview](#) presentation. If you are unable to access documents in EDMS, please contact Crystal Lucero by phone at 665-7186, or by email at [crystallee@lanl.gov](mailto:crystallee@lanl.gov), or Doug McCabe by phone at 665-9524.

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Manager, Document Control & Records Management  
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**NATIONAL STANDARDS CHANGES**

A selection of updates:

NFPA 70-2017 (NEC). Access on IHS [here](#).

Remember, the license for most standards is for single simultaneous user access. Users are reminded to close the document and log out of IHS once they have completed a download, print, save or other use of the item. This will release the license for the next user. Please contact [library@lanl.gov](mailto:library@lanl.gov) with any questions on IHS.

### I-CODE ERRATA

As a follow-on to last September's article, errata lists (correction of errors) for the I-Codes are published periodically by the ICC. Then the next printing usually incorporates them.

PDF users, if you have the very latest printing available from IHS, known errors are probably fixed in that pdf. Those with older pdfs should check the edition notice (aka copyright page, which is on the back of the title page) against the latest printing info in table below. If you don't have the latest pdf, you should download it (then log out, then dump the old pdf).

Affected I-Code	This info also posted under ESM Chapter:
IFC-2015 errata: As of 8/17/2016, Fourth Printing is latest. PDF users, download from <a href="#">IHS</a> . Older hardcopy users, errata are <a href="#">here</a> (from ICC errata site <a href="#">here</a> ).	2 - Fire Protection
IECC-2015 errata: As of 8/17/2016, Second Printing is latest. PDF users, download from <a href="#">IHS</a> . Older hardcopy users, errata are <a href="#">here</a> (from ICC errata site <a href="#">here</a> ).	14 - Sustainable Design
IBC-2015 errata: As of 8/17/2016, Third Printing is latest. PDF users, download from <a href="#">IHS</a> . Older hardcopy users, errata are <a href="#">here</a> (from ICC errata site <a href="#">here</a> ).	16 - IBC Program
IEBC-2015 errata: As of 8/17/2016, Fifth Printing is latest. PDF users, download from <a href="#">IHS</a> . Older hardcopy users, errata are <a href="#">here</a> (from ICC errata site <a href="#">here</a> ).	16 - IBC Program

Print users (older, bound books from ICC or homemade printings) should download the errata from table above (and possibly print any/all pages you'd use and keep stuffed in the book).

Much of this hassle is because we were basically forced to adopt the 2015 I-Codes before anyone else in the entire world.

Anyway, for other codes and national standards there are also errata that must be managed at times in a similar way. ESM Ch 1 Section Z10 notes that "Errata (correct errors) to any document...are mandatory regardless of contract award date or code of record."

### DOE TECHNICAL STANDARDS ACTIONS

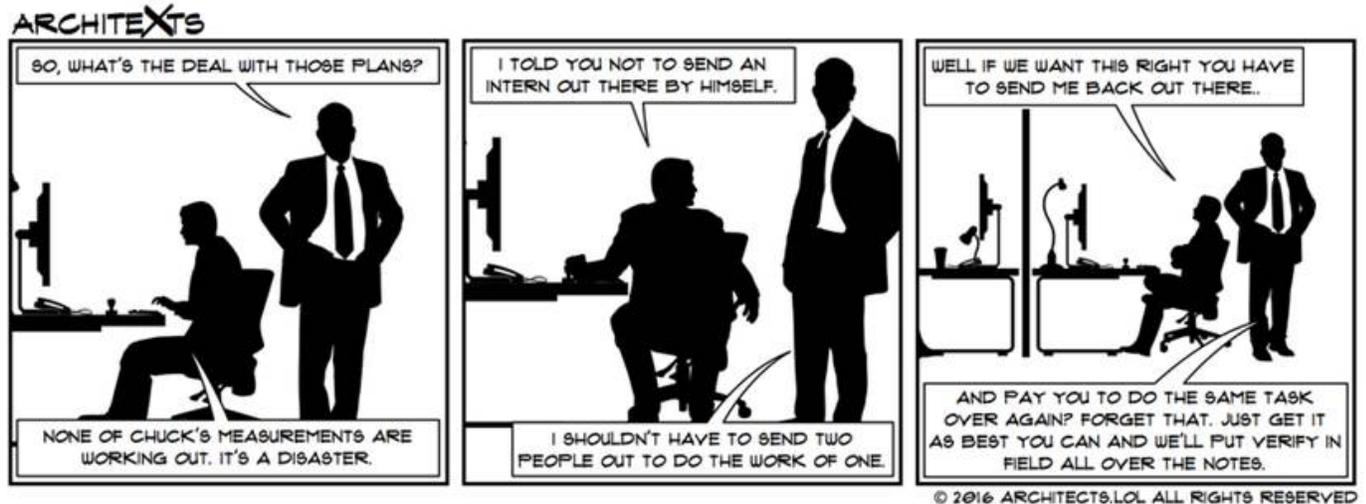
DOE Tech [Stds](#) activity in the past month:

[DOE-HDBK-1221-2016](#) Suspect/Counterfeit Items Resource Handbook. Provides information to assist the DOE sites in preventing suspect/counterfeit (S/CI) items from entering the DOE complex. Specifically, it provides information on identifying, reporting, and dispositioning S/CIs.

## WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

Here's the follow-on to cartoon above. "Field verify" has its place, but...

### SHODDY INTERN WORK



## LAST MONTH'S UPDATE TOPICS

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

- **PE Ethics CEU Credits Aug 18**
- **Training**
- **LANL Standards Issued in July**
- **Engineering Processes Changes**
- **National Standards 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.  
The views expressed in this email are not necessarily those of my employer.

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