

## ENGINEERING STANDARDS UPDATE

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

### Topics this month:

- **Architectural POC**
- **Engineering Processes POC**
- **Saving the Planet – ES Wants You!**
- **Standards Intro Course June 29**
- **Variance Process Update**
- **Pressure Safety Training in May**
- **NFPA 13 Automatic Sprinkler Systems Course June 21-23**
- **LANL Standards Issued in April**
- **National Standards Changes**
- **DOE Technical Standards Actions**
- **Building Safety Month**
- **When Good Conduct of Engineering Isn't Followed**

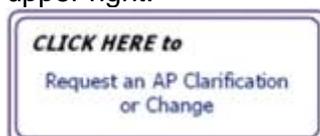
The Standards Homepage: <http://engstandards.lanl.gov/>

### ARCHITECTURAL POC

Scott Richardson is now the Architectural POC, a function he performed a few years back, and his alternate is David Carr.

### ENGINEERING PROCESSES POC

AP users reaching out to Gurinder know he isn't replying. That's because he went on vacation earlier this year and evidently decided complete retirement is nice. As such, those seeking CoE AP help should try to get answers from more experienced team members and/or engineering managers. Should that fail, I suggest contacting [Mel Burnett](#), CoE Office Director, which will have the collateral benefit of hurrying the position's hiring process. I may also be able to help you. Finally, as a reminder, to suggest improvements to APs (or potentially request help), users should create an entry into the database on the Processes [homepage](#). Look for this button in the upper right:



## **SAVING THE PLANET – ES WANTS YOU!**

Engineering Division is committed to doing what we can to minimize LANL's impact on the environment. We do this in many ways, and we drive ourselves through annual Environmental Management System (EMS) goalsetting. This year, one ES goal is simply to solicit input on identifying green opportunities within the Division's purview. So please consider me all ears on your ideas in this area now and at any time in the future. Calling is fine but if you reply by email, please include your boss if it's an action that would be handled at the local level. If it's something that's best handled centrally (e.g., ES-DO or CoE involvement), then I most definitely want to hear it.

## **STANDARDS INTRO COURSE JUNE 29**

Due to all the hiring, the next session will be soon -- Wed, June 29, from 8 a.m.– 4 p.m. in Canyon Complex (TA-00-199) Rm 172. Provides familiarity with national and LANL engineering standards for anyone performing, reviewing, or managing design activities. Many LANL engineers and designers are required to take it, and outside AEs are encouraged to attend. Typical of Los Alamos, there are many fine dining options nearby for lunch (but resist a liquid lunch at Bathtub Row Brewing).

To register: 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 Item Number 24140 as the "ID", then "search"
- Add-to-do-list
- Go to your to-do-list and click on 'register'

## **VARIANCE PROCESS UPDATE**

Last month's article on this offered VAR requestors use of the new SharePoint site for creation and processing. This is starting to take off, but I'm asking again users to choose this option since we'd really like some more feedback before we replace the familiar 2137 form with this method around the June timeframe. So, please, when a new 2137 is needed, check out a VAR number from the CoE Document Numbering [site](#) and then wait a bit for the magic to happen for you.



"THE STRESS ANALYSIS PROGRAM HAS TOLD HIM  
TO LIE DOWN FOR A WHILE"

## PRESSURE SAFETY TRAINING IN MAY

Two offerings:

PSO OVERVIEW – An introduction to pressure safety concepts that a pressure safety officer needs to perform the roles and responsibilities of being a PSO in an interim capacity. Tues, May 10.

ASME B31.3 – Will familiarize participants with ASME B31.3 Process Piping code as related to the duties of a PSO. Tues, May 24.

If interested, contact ESM Ch 17 POC [Ari \(Ben\) Swartz](#).

## NFPA 13, AUTOMATIC SPRINKLER SYSTEMS COURSE JUNE 21-23

Fire Protection Division is planning to offer courses on various NFPA standards on a quarterly basis for their staff and other SMEs. The next is NFPA 13, Automatic Sprinkler Systems (Course 31666, tentatively June 21-23) at Canyon Complex (TA-00, Bldg 0199, Rm 165). Future courses will include and NFPA 101 Life Safety Code Essentials (31667, tentatively Aug 23-25).

## LANL STANDARDS ISSUED IN APRIL

<b>ESM <a href="#">STD-342-100</a></b>	
Ch. 17, ADMIN-2, Unlisted Components Approval Process Forms	Added additional forms 3C, 5C, & 9C here and under ASME. Thanks to POC A. Ben Swartz.

<b>Master Specifications <a href="#">STD-342-200</a> (Div 05 sections thanks to POC Glen Pappas.)</b>	
05 5000 R6 Metal Fabrications	Added metal floor plate which, along with creation of 05 5315 Bar Gratings [r0], allowed for canceling 05 5350 Gratings & Floor Plates [r4], all of which aligns with latest MasterSpec work breakdown.
05 5213R3 Pipe and Tube Railings	Rewritten and updated for compliance with latest revision to ESM Ch. 5 Sect. II (which was revised to comply with DOE O 420.1C, DOE-STD-1020, 2015 IBC, etc.) Also, unlike previous version, this revision is based on MasterSpec.
05 5313 R0 Bar Gratings	Initial issue. Creation of this section and revision of 05 5000 Metal Fabs (to Rev. 6 to include metal floor plate) allowed cancelation of 05 5350 Gratings and Floor Plates (r4). Grouping of work in this new way follows the MasterSpec templates upon which these sections are now based.
05 5350 R4 Gratings and Floor Plates	<b>Canceled.</b> Superseded by revised 05 5000 Metal Fabs (to Rev. 6, to include metal floor plate) and creation of 05 5313 Bar Gratings. Grouping of work in this way follows the MasterSpec templates upon which these sections are now based.

## NATIONAL STANDARDS CHANGES

Here's a selection of updates. While the edition to be used by projects is set by its code of record per ESM Ch. 1 Section Z10, Z10 also says that any relevant errata must be followed.

ASHRAE 55, Thermal Environmental Conditions for Human Occupancy -- Errata/Erratum, April 7, 2016

## DOE TECHNICAL STANDARDS ACTIONS

DOE Tech [Stds](#) activity in the past month: None.



## [Promoting Awareness Through Building Safety Month](#)

Building Safety Month (BSM), founded by the ICC, is celebrated by jurisdictions worldwide during the month of May.

Building Safety Month is a public awareness campaign to help individuals, families and businesses understand what it takes to create safe and sustainable structures. The campaign reinforces the need for adoption of modern, model building codes, a strong and efficient system of code enforcement and a well-trained, professional workforce to maintain the system.

The campaign is presented by the ICC and its 57,000 members worldwide along with a diverse partnership of professionals from the building construction, design and safety community. Corporations, government agencies, professional associations, nonprofits and more come together to support Building Safety Month because they understand the need for safe and sustainable structures where we live, work and play.

This year's theme is ***Building Codes: Driving Growth through Innovation, Resilience and Safety***. Each week of Building Safety Month spotlights a specific area of building safety.

## Weekly Themes

[WEEK ONE // May 2–8, 2016](#) *Building Solutions for All Ages*

[WEEK TWO // May 9–15, 2016](#) *The Science Behind the Codes*

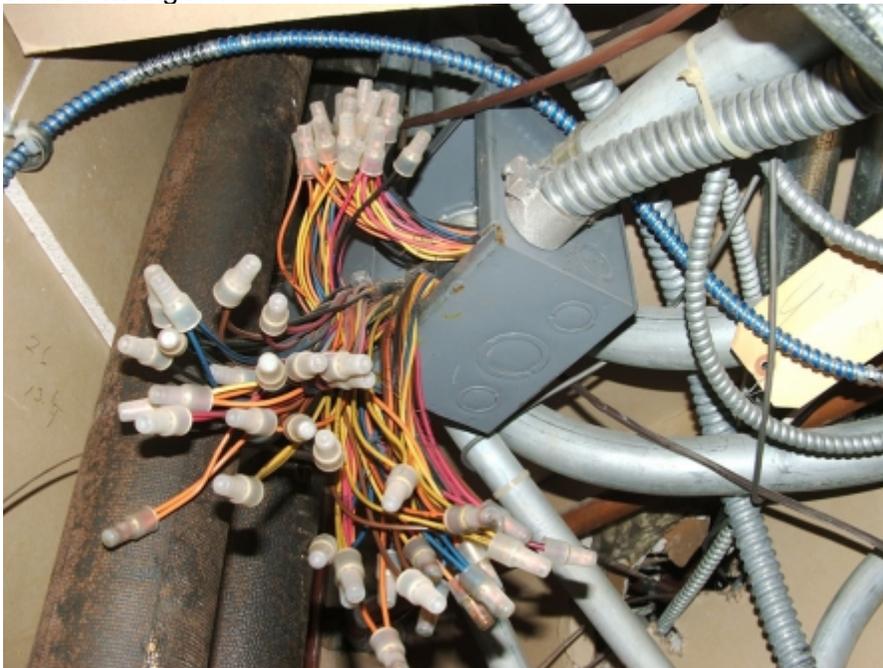
[WEEK THREE // May 16–22, 2016](#) *Learn from the Past, Build for Tomorrow*

[WEEK FOUR // May 23–29, 2016](#) *Building Codes: A Smart Investment*

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

Given that May is [National Electrical Safety Month](#), and that the Lab Director's [message](#) on 4/26 was titled "Energized System Safety," choosing a topic was a no-brainer.

What's wrong here?



From [http://ecmweb.com/whats-wrong-here/best-worst-2015-s-most-interesting-what-s-wrong-here-photos#slide-13-field\\_images-131111](http://ecmweb.com/whats-wrong-here/best-worst-2015-s-most-interesting-what-s-wrong-here-photos#slide-13-field_images-131111) (don't take as gospel):

Whether the wires in this box are power, control, or fire alarm doesn't really matter when it comes to the requirement that a cover needs to be installed on this box. Section 314.25 requires each box to have a cover, faceplate, lamp holder, or luminaire canopy installed in order to be considered complete and Code compliant. Obviously, that's not the case here. The amount of wires stuffed into this box suggests the box fill requirements of Sec. 314.16 may have been violated too. Another problem is that the flexible metal conduit (FMC) is being supported by the electrical metallic tubing (EMT) with a cable tie. Securing FMC to the EMT is a violation of the

general requirements of Sec. 300.11(B). In the background of the photo, you can see wires running through a huge hole that was blasted through the sheetrock. Leaving this gaping hole is a violation of Sec. 300.21, which requires openings to be firestopped using an approved method of maintaining the fire-resistance rating of this wall.

### ***What is National Electrical Safety Month?***

The Electrical Safety Foundation International (ESFI) is a non-profit organization dedicated exclusively to promoting electrical safety in the home, school, and workplace. To commemorate National Electrical Safety Month, ESFI spearheads an annual campaign to educate key audiences about the steps that can be taken in order to reduce the number of electrically-related fires, fatalities, injuries, and property loss. ESFI's National Electrical Safety Month 2016 campaign features a comprehensive collection of new and updated resources to help facilitate an effective electrical safety awareness campaign for your community, organization, school, or family. Included is an extensive collection of useful fact sheets and related safety tips, plus templates and tools you can use to promote electrical safety and National Electrical Safety Month in your home, school, community, or workplace. We have even provided media outreach materials and social media content to further spread our life-saving campaign messages.

Raising awareness about electrical hazards is the key to reducing home electrical fires, injuries and death, which is why we developed ESFI's 2016 National Electrical Safety Month Electrical Safety Advocate Guide. Together, we can reduce the number of electrically-related deaths and injuries – one home, one school, and one workplace at a time.

### ***National Electrical Safety Month 2016 Campaign Overview***

In celebration of Electrical Safety Month 2016, ESFI is excited to announce the launch of the third installment of its National Electrical Safety Month publication, *Electrical Safety Illustrated*. This year's theme is "At Home and at Work: Make Electrical Safety Everyone's Priority." This magazine will inform readers about common electrical hazards present at home and in the workplace.

### **LAST MONTH'S UPDATE TOPICS**

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

- Variance Process Changing
- Welding POC
- Lightning Protection SME
- Hilti KB3 Problem
- Standards Intro Course Apr 20
- IHS Standards Expert Training/Pizza Tues, April 19
- Restriction on use of Distributors on the IESL; B-Line Issues
- NFPA 13 Automatic Sprinkler Systems Course June 21-23
- LANL Standards Issued in March

- 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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