

## ENGINEERING STANDARDS UPDATE

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

### Topics this month:

- Engineering Processes Changes
- Training & Qual
- LANL Standards Issued in July
- O&M Criterion Changes
- DOE Technical Standards Action
- National Standard Action
- When Good Conduct of Engineering Isn't Followed

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

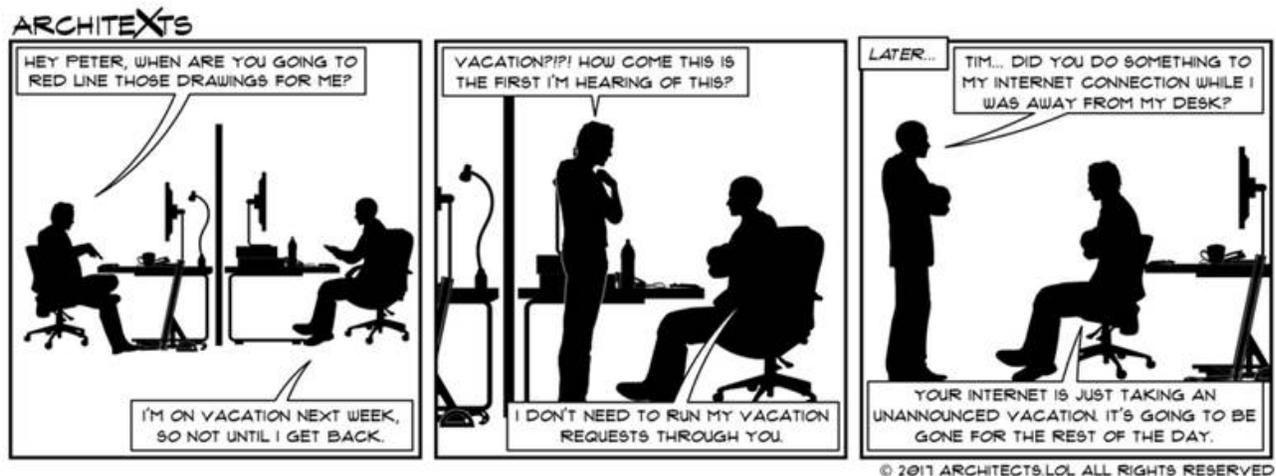
### ENGINEERING PROCESSES CHANGES

The following Administrative Procedures have been posted on the AP [SharePoint site](#):

AP-341-404-R2.1	<b>Master Equipment List</b> Various minor changes/corrections.	<b>Issued:</b> 07/27/17
-----------------	--	----------------------------

For questions about CoE processes, please contact Processes POC [Jeff Fauble](#) (5-0595).

## UNANNOUNCED VACATIONS



Apropos this time of year.

## TRAINING & QUAL

**To register for LANL courses**, sign up via [UTrain](#). Enter course number in search field, assign to yourself. Disenroll a similar way if you have to bail. AEs can also register; contact Yolanda Trujillo at 665-5696 or [ytrujillo@lanl.gov](mailto:ytrujillo@lanl.gov) with Z number

### **Standards Intro Course 24140 – Wed, August 23**

Don't miss this rare offering. Provides familiarity with national and LANL engineering standards for anyone performing, reviewing, or managing design activities. Also recommended for those at local AE firms. Given at TA-55 Building 0400 RLOUB Classroom 4502, runs 8 a.m.– 4 p.m. by yours truly. You'll need to print your own handout and bring it; we'll email the slides to print a few days prior. Waitlisters are already enrolled.

### **IFC and IEBC Code Courses – Sept 20, 21**

We're bringing in an Int'l Code Council trainer to teach two, all-day courses. If relevant to your job, please sign up ASAP to ensure a spot and so we order enough workbooks. Both courses will be in the MSL Auditorium, TA3-1698-A103, 8:30 a.m.-4:30 p.m. When you enroll, don't worry about 2017 being in the course title, that's training logic.

#### International Fire Code 2015 Essentials, Wed, Sept 20, UTrain 37744

This course will introduce 2015 IFC administrative requirements, occupancy classification, general precautions against fire, emergency planning and preparedness, fire service features, interior finish, decorative materials and furnishings, fire protection systems, means of egress, and provide an introduction to hazardous materials. Activities and discussions will further enhance participant learning. 6 PDHs. Upon completion of this seminar, participants will be better able to:

- Explain the fundamental provisions of the IFC
- Describe the intent and scope of the IFC
- Identify common fire hazards and understand how the IFC addresses correction, or elimination, of the hazards
- Identify how life safety and fire protection issues are addressed in building design and construction
- Identify how the IFC applies to maintenance of building design and components to maintain fire and life safety
- Identify how the IFC addresses hazardous materials

#### International Existing Building Code 2015 Overview, Thurs, Sept 21, UTrain 37738

This course will introduce critical concepts of the 2015 IEBC. It will provide a basis for the correct use and application of the code. It will build an understanding of the intent of the code through detailing basic tables, categorizations, and a case study. 6 PDHs.

Upon completion of this seminar, participants will be better able to:

- Recognize the limitations and extent of the codes related to existing buildings.
- Recognize the classifications of work associated with existing buildings.
- Identify fire protection systems that need to be upgraded.
- Recognize vertical openings that need partial or complete enclosure.
- Identify unsafe interior finishes that need to be replaced.
- Determine adequate means of egress.

- Identify needed accessibility improvements.
- Identify improvements to structural systems.
- Describe the compliance alternative tabular method of evaluating existing buildings.

For AEs, ICC courses above subject to space available and can't buy workbooks.

## LANL STANDARDS ISSUED IN JULY

Thanks to SI-DC's Christina Salazar-Barnes for another busy month of document work.

<b>ESM <a href="#">STD-342-100</a></b>	
Ch. 1 Section 100, App. A Rev. 9, Approval/Signature Sheet	Updated form to improve signature blocks for electronic signatures
Ch. 16 IBC Program references	For the IEBC link/note, new errata file posted

<b>Master Specifications <a href="#">STD-342-200</a></b>	
<b>Thanks to Architectural POC Scott Richardson for these:</b>	
09 6500 R4, Resilient Flooring	Updating/correcting of references, updating to current manufacturer's standards and products, and formatting.
10 1410 R3, Interior Signage	Minor revisions include updating/correcting of references, updating to current manufacturer's standards, and general formatting.
10 2113.13 R2, Metal Toilet Compartments	Major revision to this section is based in part on AIA MasterSpec in addition to updating/correcting of references, updating to current manufacturer's standards and products, and general formatting.
<b>Thanks to Electrical POC Eric Stromberg:</b>	
26 4300 R1, Surge Protective Devices	Allow the use of Type 2 SPDs. Removed some hard requirements and changed them to 'manufacturer's recommendations'.
<b>Deleted Specs:</b>	
07 5316, Chlorosulfonate-Polyethylene Roofing	Cancelled and archived. CSPE has only one supplier who has only committed to supplying for a limited time. Proven alternatives (APP, SBS) are readily available and are more easily repaired. Patching CSPE is only possible with CSPE so must continue, but does not require a specification
09 3013, Ceramic Tiling	Cancel and archive-Section was outdated and, since so many variables and options exist for this finish, standardization is not really practical. Future need can be met by an edited version of a commercial master or the archived section updated for a specific use.

<b>Std Drawings &amp; Details <a href="#">STD-342-400</a></b>	
<b>Mechanical</b>	Thanks to Mech POC Michael Ladach, CAD by Scott Richardson, Ed Seawalt, Emily Crook...
D30GEN-1-R3, Sheet 1 of 2 Open Cooling Tower Water Treatment Flow Diagram	Admin. changes to CAD STD Rev.5 format
D30GEN-1-R3, Sheet 2 of 2 Open Cooling Tower Water Treatment Notes Schedule	

D30GEN-4-R3, Sheet 1 of 7 End Suction	
D30GEN-4-R3, Sheet 2 of 7 End Suction with Suction Diffuser	Admin. changes to CAD STD Rev. 5 format and sheet number was 1 of 8
D30GEN-4-R3, Sheet 3 of 7 Horizontal Split Case, Double Suction	Admin. changes to CAD STD Rev. 5 format and sheet number was 2 of 8
D30GEN-4-R3, Sheet 4 of 7 Vertical Split Case, Double Suction	Admin. changes to CAD STD Rev. 5 format and sheet number was 3 of 8
D30GEN-4-R3, Sheet 5 of 7 Vertical Split Case, Double Suction with Suction Diffuser	Admin. changes to CAD STD Rev. 5 format and sheet number was 4 of 8
D30GEN-4-R3, Sheet 6 of 7 In-Line	Admin. changes to CAD STD Rev. 5 format and sheet number was 5 of 8
D30GEN-4-R3, Sheet 7 of 7 Design Notes	Admin. changes to CAD STD Rev. 5 format and sheet number was 6 of 8
D3020-1-R2, Sheet 1 of 2 Steam Unit Heater Piping	Admin. changes to CAD STD Rev. 5 format and sheet number was 7 of 8
D3020-1-R2, Sheet 2 of 2 Design Notes and Controls	Admin. changes to CAD STD Rev. 5 format
D3020-4-R2, Sheet 1 of 2 2" - 8" Size	
D3020-4-R2, Sheet 2 of 2 1/2" - 1 1/2" Size	
D3040-1-R4, Sheet 1 Fume Hood Air Flow Indicator	
D3040-2-R4, Sheet 1 Return Air Sound Trap	
D3040-3-R3, Sheet 1 Stackhead	
D3040-5-R4, Sheet 1 Air Filter Pressure Drop Gage	
D3040-6-R2, Sheet 1 HVAC Duct Security Bars Installation Detail	
D3040-6-R2, Sheet 2 HVAC Duct Security Bars SCIF	

## O&M CRITERION CHANGES

Below are recent [O&M Criterion](#) and related Preventative Maintenance Instruction (PMI) changes issued by MSS-MP, the Maintenance Programs Group of Maintenance and Site Services Division. Implementation is required 30 days from issue date for non-nuclear facilities, 60 days for nuclear facilities.

It's best to use Internet Explorer to access them on the SharePoint site to avoid authentication issues.

The PMIs listed below have been revised to show only the Checklists. You must refer to the associated O&M to obtain the administrative portion. Any questions, please contact the document author.

Also, Work Orders that reference the below PMIs shall also reference the below forms such that it is included in the work package:

700-A R0, Fire Alarm Control Panel Disable/Enable and In/Out of Service  
700-A.001 R0: Fire Alarm Control Panel Disable Methods  
700-A.002 R0: Fire Alarm Control Panel Disable/Enable Data Sheet

\* See Sub-Function: O&M Criterion/PMI: [Series 700](#): Fire Protection

700-A.003 R0: Fire Alarm Control Panel In/Out of Service Checklist	
PMI 725-G R2: Deluge Automatic Sprinkler Systems Five-Year Inspection and Testing – See O&M Criterion 725: Deluge Sprinkler Systems	Periodic review, greatly condensed steps in <a href="#">Section 5.0</a> , minor change.

### DOE TECHNICAL STANDARDS ACTION

There's been a partial lifting of January's new requirements ban at HQ, so revised DOE Tech Stds can now be posted! [Activity](#) in the past month:

DOE-STD-5002-2017	<a href="#">Disposal Authorization Statement and Tank Closure Documentation</a>	EM - Office of EM	Jul 20, 2017
DOE-STD-1136-2017	<a href="#">Good Practices for Occupational Radiological Protection in Uranium Facilities</a>	AU - Office of EHS&S	Mar 21, 2017
DOE-STD-1098-2017	<a href="#">Radiological Control</a>	AU - Office of EHS&S	Jan 31, 2017

Cancelled: DOE-HDBK-1140-2001, *Human Factors/Ergonomics Handbook for Design and Ease of Maintenance*. Just do your best.

### NATIONAL STANDARDS ACTION

Of possible interest, LANL's [IHS online standards service](#) reports:

ICC A117.1-2017, Accessible and Usable Buildings and Facilities - First Printing: May 2017 now available

ASHRAE 55 Thermal Environmental Conditions for Human Occupancy Errata/Erratum issued July 18, 2017

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

This isn't CoE in the formality of engineering sense, more about life at LANL. This is for those that sometimes take heat for wanting to do things right, which can take a little longer.

Interesting reading at the following website, earliest known customer complaint: [An Ancient Babylonian Customer Service Complaint Inscribed on a Clay Tablet Around 1750 BC](#)

Then there's this...



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

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

- **Mel Burnett—18 Days and a Wake Up**
- **Engineering Processes Changes**
- **PC and NPH Category – Get on the 'Bus**
- **Training & Qual**
- **LANL Standards Issued in June**
- **DOE Technical Standards Inaction**
- **National Standard Actions**
- **NM Code Action**
- **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.

---

Tobin Oruch, Engineering Standards Mgr  
Los Alamos Nat'l Lab, Conduct of Eng Program Office  
ph (505) 665-8475 [oruch@lanl.gov](mailto:oruch@lanl.gov) <http://engstandards.lanl.gov/>  
*Please consider the environment before printing this or any email*