

ENGINEERING STANDARDS UPDATE

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

Topics this month:

- **Self-Perform Specs**
- **Variance Process Changing June 22**
- **ESM Software Chapter 21**
- **Training, Training, and More Training**
- **LANL Standards Issued in May**
- **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/>

SELF-PERFORM SPECS

To help reduce paperwork and churn involved with construction work by LANL craft, a new spec master was developed and issued last month. It's Section 01 1117 R0 Work by Owner--Self Perform.

The paperwork reduction comes through submittal reduction for a defined subset of ML-4 projects, since the requirement to whittle down submittals that was added to Z10 Att F Specifications a year ago didn't have enough effect (heck, we still have some thick-headed AE folks that have worked here for years and still think that they aren't supposed to tailor specs at all, despite clear direction otherwise). The churn reduction will come through some term redefinitions in the self-perform context.

VARIANCE PROCESS CHANGING WED, JUNE 22

We're replacing the old 2137 form with a new SharePoint site method for creation and processing on or about June 22. At that time, when a new 2137 is needed, you'll need to check out a VAR number from the CoE Document Numbering [site](#) and then wait a bit for the system admin to get back to you. The old 2137 forms that are in-process (no emergent issues) will continue to be accepted for one month -- through July 22.

ESM SOFTWARE CHAPTER 21

A new ESM chapter on software is planned to be released for provisional use later in June. Software QA starts with completing just-revised Form 2033: [Safety Non-Safety Software Determination, Categorization, and Software Risk Level \(SRL\)](#), but then the chapter will tell software owners the other specifics needed. Its initial provisional nature will mean its use is optional until changed to mandatory (a few months from now), so you can pay us now or pay us later if you wait...

TRAINING, TRAINING, AND MORE TRAINING

For all except non-LANL courses, to register: Sign up via [UTrain](#) (AEs without cryocard via Yolanda Trujillo at 665-5696 or yitrujillo@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’

NFPA 13 Automatic Sprinkler Systems Course June 21-23

This 3-day program covers NFPA 13 requirements and teaches participants to verify proper installation and use of sprinkler systems. Participants will also learn about new and revised requirements reflecting the latest developments and safety practices in the field and how to incorporate them on the job. It is Course 31666 and will be at White Rock Trng Center, TA-00-1308 Rm 118, 8:30 a.m. – 5 p.m. Taught by NFPA. **Register soon so you get a workbook.**

Standards Intro Course Wed, June 29

Many LANL engineers and designers are required to take it, and outside AEs are encouraged to attend. The next session of Course 24140 is 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. Typical of Los Alamos, there are many fine dining options nearby for lunch (but resist a liquid lunch at Bathtub Row Brewing). **Register soon so you get a seat.**

Electrical Standards Course Wed, July 6

Four-hour course 17998 covers the electrical engineering standards in Chapter 7 of the LANL Engineering Standards Manual and discusses mandatory requirements and good practices for those involved in electrical design. Strongly suggested for electrical designers, electrical engineers, electrical safety officers, and facility managers. AEs are also encouraged to attend. **Taught by Electrical Standards POC Eric Stromberg on Wednesday, July 6, 8am-12pm, White Rock Training Center (TA00-B1308-112). Register soon so Eric gets a quorum.**

NFPA 101 Life Safety Code Essentials, Aug 23-25

Course 31667, WRTC.

CGD Courses Wed, August 24

For those that do work for nuclear facilities, the CGD 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. Happening at TA-00 Building 0199 Canyon School Complex Classroom 172.

IBC 2009 to 2015 Transition Training Sept 9

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](#), early bird by Aug 18). 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.

LANL STANDARDS ISSUED IN MAY

Eng Standards Manual STD-342-100	
Ch. 13, GWS 1-03 Rev. 7 Welding and Brazing Material Procurement & Control	Clarified longstanding practice of stocking ML-1 material and allowed ML-3/4 under specific conditions (5.1.A.1-2), updated definitions. Thanks to alt POC Kelly B.
Ch. 17, ADMIN-1-3 Existing (including Legacy) System Documentation Requirements Rev. 0.1	Reference correction in Table ADMIN-1-3-1, Documentation Requirements for Existing (including Legacy) Systems, 9. Piping System Documentation. Thanks to POC Ben Swartz.

Master Specifications STD-342-200	
01 1117 R0 Work by Owner--Self Perform	Initial issue.
01 2500 R3 Substitution Procedure	Added NEW FM01 Substitution Request form
27 1000 R5 Structured Cabling	Reduced the editing and customizing workload for individual projects. Eliminated the TIA reference which in some cases are different requirements than are needed for NIE design at LANL. Distinguished the parameters of Cat 5E or 6A cabling requirements. Clarified training requirements for installers. Adjusted the cabling quantities required per outlet. Thanks to Dave Schlegel and POC Pete Lowe.

CAD Standards Manual STD-342-300	
CAD Manual Templates - Sketch, Titleblock, and Titlesheet	Corrected an AutoCAD issue with "Extents" which was negatively impacting "Zoom Extents" and "Plot Extents". Thanks to Ed Seawalt and POC Scott Richardson.

NATIONAL STANDARDS CHANGES

Here's a selection of updates.

NFPA 15, Standard for Water Spray Fixed Systems for Fire Protection - Effective Date: 06/02/2016, Publication Date: January 01, 2017

NFPA 80A, Recommended Practice for Protection of Buildings from Exterior Fire Exposures - Effective Date: 05/13/2016, Publication Date: January 01, 2017

Above accessible from the library ([IHS subscription](#))(external, use Firefox).

SJI LOAD TABLES, Standard Specifications and Load and Weight Tables for Steel Joists and Joist Girders - 43rd Edition; Includes ERTA 1: October 12, 2011; ERTA 2: April 12, 2012, Publication Date: January 01, 2010. May be accessible from <https://steeljoist.org/product-category/publications/free-downloads/>

DOE TECHNICAL STANDARDS ACTIONS

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

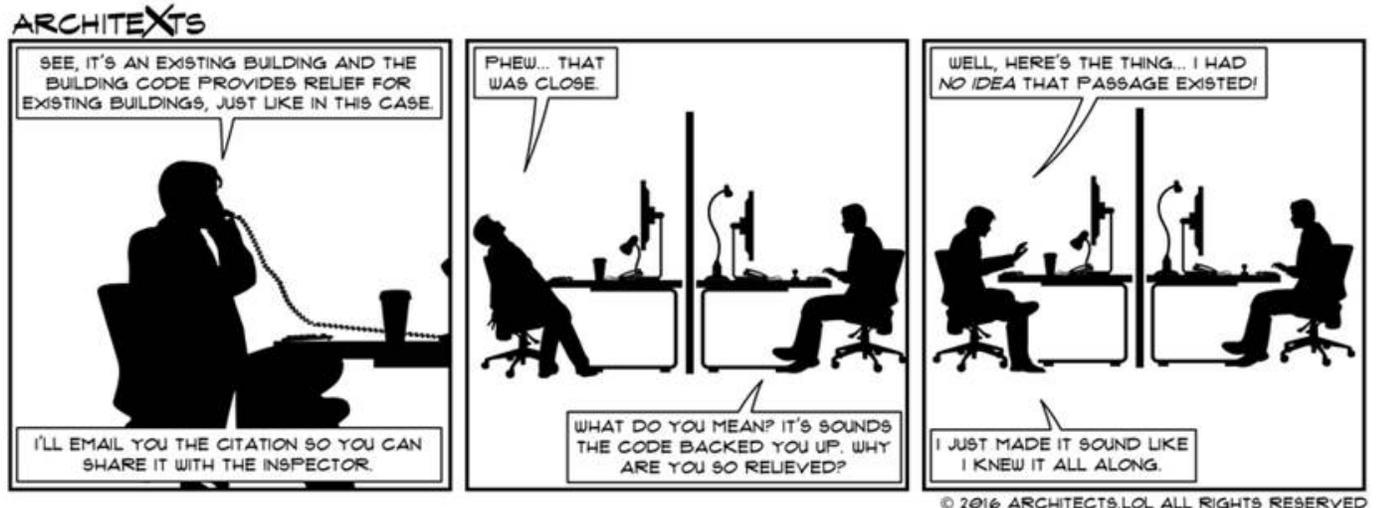
[DOE-STD-3020-2015](#), Specification for HEPA Filters Used by DOE Contractors. This was added to the Lab contract's Appendix G effective April 25, 2016. Incorporation into institutional documents is underway. "...establish specifications and quality assurance (QA) requirements for the procurement, packaging, shipping and storage of high efficiency particulate air (HEPA) filters."

[DOE-STD-6004-2016](#), Clearance and Release of Personal Property From Accelerator Facilities. "...to provide accelerator facilities or modules thereof an acceptable approach for managing and dispositioning personal property that may be radiologically impacted (mainly by activation) by accelerator operations. This Standard facilitates implementation of requirements in DOE Order 458.1 Radiation Protection of the Public and the Environment (hereafter O458.1 or the Order) [DOE2013], by providing criteria and guidance for DOE accelerator facilities to develop and implement site-specific programs (including management, technical, and operational aspects) for the radiological clearance and release of personal property."

[DOE-STD-1026-2016](#), NNSA Package Certification Engineer Functional Area Qualification Standard [meant for Feds]. "...establishes common functional area competency requirements for all NNSA Package Certification Engineers who provide assistance, direction, guidance, oversight, or evaluation of contractor technical activities that could impact the safe operation of NNSA packaging and transportation activities."

[DOE-STD-1219-2016](#), Analysis and Evaluation of the Operability and Reliability of the Intrusion Detection and Assessment Systems. "...provides an understandable process and methodology of the analysis and evaluation sites should consider conducting as required by Department of Energy (DOE) Order (O) 473.3A, Attachment 3, Section A, Chapter IX, 1.i.(1). In addition, the intent of this standard addresses the protective force equipment needs as outlined by DOE O 473.3A Appendix A, Section C, 2. Equipment and Attachment 2, Section C.3. Equipment."

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED CONSTRUCTION ADMINISTRATION: CODE QUESTION



At LANL, it would be the 2015 International Existing Building Code that governs this.

LAST MONTH'S UPDATE TOPICS

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

- 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
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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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