
ENGINEERING STANDARDS UPDATE

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

Topics this month:

- Training & Qualification
- LANL Standards Issued in August
- Engineering Processes News
- DOE Technical Standards Action
- National Standards Action
- When Good Conduct of Engineering Isn't Followed

The LANL Engineering Standards: <http://engstandards.lanl.gov/>

TRAINING & QUALIFICATION

Get in while you still can.

LANL Engineering Standards Intro Course [24140](#) – Tues/Wed, Sept 17+18, attend **both days, mornings only!** C-Div Auditorium TA-46-535

For the first time, we're going to deliver this course as **two half-days instead of one full day** and see how it goes. Course provides familiarity with national and LANL engineering standards for anyone performing, reviewing, or managing design activities. **Required** course for many LANL engineers, recommended for those at local AE firms. Don't wait for your slacker manager to assign it to you—bring it up! Presented 8 a.m.– noon by yours' truly. Next offering will be several months from now.

[ES-FP Assessment of Egress and Fire Doors \(Course 46507\)](#) Sept 24, 25, or 26 8:30-~3:00, at LAFD Fire Station 3 in White Rock

This course was developed by the Door Hardware Institute (DHI) and National Fire Protection Association (NFPA) for authorities having jurisdiction (AHJs), facility managers, and facility maintenance personnel to better understand the basic and critical features of doors and hardware that provide life and fire safety. The course is taught by a DHI credentialed Fire and Egress Door and Assembly Inspector (FDAI). Upon completion of this **five-hour session**, facility maintenance personnel will better understand the working components of fire and egress doors assemblies, how to properly assess and functionally test the condition of them, interpret inspection reports in order to conduct or oversee repair, and perform ongoing maintenance for continued compliance with code requirements. The session will include a walk-through of the facility to review existing opening assemblies as examples of possible non-compliance and deficiencies. Topics Include:

- The specific types of components required for the fire door assemblies.
- A review of the door frames, doors, and builder's hardware that must be utilized on fire door assemblies.
- Directions on how to review and determine if the products are installed correctly, and for the maintenance personnel, note how to repair products in conformance with NFPA 80 requirements.

- Walk the facility and conduct a mock inspection on a few of the fire rated door assemblies and conclude with a seminar wrap-up. Create a focus on maintenance for the facility personnel and awareness of the doors, frames and builder's hardware for the AHJ.
- This mock inspection will familiarize the attendees on how fire door inspections should be performed and what type of documentation will be required to be given to the AHJ who will be performing the formal inspections.

Sign up via U-Train using links above and then please email Keenan Dotson (667-5219) in ES-FP: kdotson@lanl.gov. Next offering probably years from now...

ESM Chapter 21 Software Overview and Owners Courses – Wed, Nov 13 RLUOB (TA-55-0400) Rm 4503

Perhaps a few of you are new “Owners” of nuclear safety or other ML-1, -2, or -3 software (installed in a system, or maybe for design/analysis). Most people in that situation are or soon will be subject to ESM Chapter 21 Software and need to take required training on the chapter. (Non-“Owner” tech staff in ES-Div may take the a live course such as the 38047 overview, but if they don't they must take UTrain Required Reading 38040, which should show up in their to-do list if so). So...if you, in fact, need live training, please enroll for the course(s) below. If you're not sure what you need, contact me (5-8475) or SME/instructor Joy Getha, 5-9586, jlgetha@lanl.gov. Next offering will be several months from now.

- [38047](#) ESM Chapter 21 Software Overview Course 9-11:30 a.m. (RLMs and Owners)
- [34048](#) ESM Chapter 21 Software Owner's Course 1-3 p.m. (just Owners return for this)

REGISTERING for UTrain Courses: Go to [UTrain](#), search on course, select and enroll. Disenroll if you have to bail. AEs can also register; use token (CryptoCard) or contact ES T&Q coordinator Yolanda Trujillo at 665-5696 or ytrujillo@lanl.gov with Z number.

LANL STANDARDS ISSUED IN AUGUST

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

ESM-Chapter	Section	Title	Rev.	Date	Summary of latest Revision
1 – General	Z10 Att E (Refs)	Life Cycle Cost Methodology Guidance		8/27	Added new Life-Cycle Cost Analysis (LCCA) Calculator and Resources subpage. Thanks to Monica Witt's student Matney Juntunen.
5 – Structural	III	Nuclear SSCs Design and Analysis Requirements	8	8/5	Added Hilti KB-TZ and HIT-RE 500 V3 to App A, KB-TZ as App. C. App C–D became D–E. Thanks to author Glen Pappas, POC Mike Salmon. (As noted last month.)
14 – Sustainable Design		References		8/27	See Ch 1 above.
17 - Pressure Safety	NASME	Reference: When listed components cannot be used, reputable manufacturers as discussed in NASME-1-a, b, etc. (xls) (LANL only)		8/26	Thanks to POC Ari Ben Swartz.

Master Specs [STD-342-200](#)

Spec Number	Rev.	Spec Title	Effective	Summary of latest Revision
01 2500	4	Substitution Procedures	8/26	Clarified post-bid process (1.2.A.1.a and 2.1.B), restored engineering-approved equal is implied (1.3.A.2); clarified forms of acceptance (1.4.A.3); other minor changes. Form 01 revised slightly, became Rev. 1. Thanks to Matt Brazil. POC Tobin Oruch.
05 0521	3	Post-Installed Concrete Anchors Purchase – Nuclear Safety	8/5	Added Hilti KB-TZ. Title Changed. Thanks to POC Glen Pappas. (As noted last month.)
21 1313	9	Wet-Pipe Sprinkler Systems	8/1	Provision for IBC or later NFPA 13 (1.3), added office trailer exceptions, clarified zoning requirements (1.3.B.) and submittals, added waterflow motor alarm and inspector's test connection, updated switch models, antifreeze requirements, and numerous other minor changes throughout. Thanks to POC Mark Rosenberger and his tech committee. (As noted last month.)
22 0529	5	Hangers and Supports for Plumbing Piping and Equipment	8/6	Updated for 2015 UPC/UMC. Thanks to Kevin Carter, POC Michael Ladach.

Can't let a plumbing code reference pass without a picture



"I'm just glad none of us were on the toilet," [she told WINK News](#). "That's the main thing."

Thanks to Matt Cover for the story on lightning hitting a septic system in Florida. Good reminder to stay away from plumbing in a thunderstorm. And landlines, if you remember those.
<https://www.foxnews.com/us/toilet-explodes-in-florida-home-after-lightning-strikes-septic-tank>
<https://www.winknews.com/2019/08/05/toilet-explodes-after-lightning-strikes-a-port-charlotte-home-septic-tank/>

ENGINEERING PROCESSES NEWS

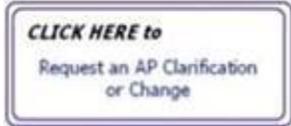
The following Administrative Procedure has been revised and posted on the [SharePoint site](#).

AP-341-405-R4	Identification and Control of Technical Baseline in Operating Facilities Course 54133	Issued: 8/12/19
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 Always ensure you are working to the latest revision being implemented by your facility.

For questions this AP, please contact [Jeff Fauble](mailto:jfauble@lanl.gov) at 665-5832. He's half-time-ish, more often at jfauble@lanl.gov; (if it bounces, click Outlook's "To" button and select him from the directory; after that the autocomplete will work). The Eng Processes program manager is Sarah Terrill sterrill@lanl.gov, 7-7788.

When ideas for AP change come, please enter them in the SharePoint database. Use the live button below, same one that's found in the upper right of the Processes [homepage](#).



DOE TECHNICAL STANDARDS ACTION

Tech Stds Program [postings](#) in the past month:

DOE-STD-1213-2014 Chg Notice 2, [Protective Force Contingency Planning Technical Standard](#)

DOE-STD-1112-2019, [Department of Energy Laboratory Accreditation Program for Radiobioassay](#)

NATIONAL STANDARDS ACTION

LANL's [IHS](#) online codes & standards subscription reports these changes. We generally follow latest edition unless it conflicts technically with IBC-2015 or is not in a project's code of record.

Note: AASHTO is not in LANL's IHS subscription, so FYI to those that use/buy individually.

Document number: **AASHTO LRFDLTS**

Publication Date: **1/1/2015**

Title: **LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals**

Type of Change: [2020 Interim Revisions issued. The 2020 Interim Revisions contain updated information to the *LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*, 1st Edition. It is necessary to have this and the 2017, 2018, and 2019 interims to have all current specification information.]

Document number: **AASHTO LTS**

Publication Date: **1/1/2020**

Title: **Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals**

Type of Change: **Complete Revision**

Document number: **ASME B31.3-2018**

Publication Date: **Date of issuance is 8/30/2019 (yes, a year delayed). For ASME codes, LANL ESM adoption follows ASME's practice of effectivity 6 months after.**

Title: **Process Piping**

Type of Change: **Complete Revision**

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED



We love our clients, but just sayin.’ Thanks to David Smith for this meme.

As long as my tongue is theoretically in cheek, I’d also point out that the people that complain about having to call inspectors are probably appreciative that NM State Fair rides like the Scrambler are inspected by the state before they put their kids on them (if they even realize that occurs).

CLOSING

This issue is dedicated to the suffering residents of the Bahamas. For anyone that didn’t remember that a Cat 5 existed, this is the result:



Andrew West, USA Today

There is a standards tie-in, too: According to the International Code Council, FEMA, in its most recent five-year strategic plan said, '[d]isaster resilience starts with building codes because they enhance public safety and property protection.' A recent report by the congressionally established National Institute of Building Sciences found that for every dollar invested, modern codes provide \$11 in mitigation benefits against flood, hurricane, and earthquake damage with \$4 in mitigation benefits against wildfire risk."

LAST MONTH'S UPDATE TOPICS

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

- Spotlight on Pressure Safety
- Training & Qualification
- LANL Standards Issued in July or so
- Engineering Processes News
- DOE Technical Standards Action
- National Standards Action
- When Good Conduct of Engineering Isn't Followed

The views expressed in this email are not necessarily those of my employer.
To request a change to this newsletter's distribution, please contact me.

Tobin Oruch, Engineering Standards Mgr
Los Alamos Nat'l Lab, Conduct of Eng Program Office
(505) 665-8475 oruch@lanl.gov <http://engstandards.lanl.gov/>
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