
ENGINEERING STANDARDS UPDATE

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

Topics this month:

- **Dan Tepley is new LANL Building Official**
- **Training & Qualification**
- **LANL Standards Issued in July**
- **National Standards Action**
- **DOE Standards Action**
- **MSS Document Action**
- **When Good Conduct of Engineering Isn't Followed**

Note: This newsletter has hyperlinks all over but their formatting may not show, so please hover your cursor where you might expect one.

The LANL Standards [Homepage](#).

**DAN TEPLEY IS NEW LANL BUILDING OFFICIAL**

Dan completed the qual standard requirements, was authorized by ALDFO and, per NA-LA delegation memo is now performing the LBO duties in ESM Chapter 16. When Dan's absent, previous LBO Jason Apperson may act in his place. Congratulations to Dan and many, many thanks to Jason for serving in that role for the past two years.

TRAINING & QUALIFICATION
Courses, Seminars, Programs**Applying to Graduate School and for Graduate Fellowships, Mon, Aug 7, 1 p.m. MT Via WebEx**

Part of the Engineering Seminar Series from the LANL Engineering Leadership Council

Abstract

The talk will begin by motivating STEM students to consider graduate school. I will then give an overview of what to expect in terms of course work, exams, theses, and dissertations. Next, I will go over the application process including a detailed discussion about asking for letters of reference, which are a key component of student's application process. I will then discuss the various ways a student can pay for graduate school with particular emphasis on applying for National Science Foundation graduate fellowships. Although this talk was originally created for mechanical, aerospace, and civil engineering students, most of the material is applicable to students considering graduate school in any STEM field. I will identify portions of the talk where the material might not be generic to all STEM disciplines. snip

More details and to join: <https://int.lanl.gov/calendar/2023/August/0807-engineering-seminar-series.shtml>

Thanks to Sarah Hayes in the Research Library for the above news tip.

Editor's notes: Nat'l Security Education Center

<https://int.lanl.gov/science/partnerships-collaborations/national-security-education-center/engineering-institute/index.shtml>

Engineering@LANL; Eng Leadership Council:

<https://int.lanl.gov/org/ddste/engineering/index.shtml#ELC>

CoE: LANL Engineering Standards Overview 52693 -- Aug 7 (Mon), Sep 18, or Nov 6, 2:00-4:00 pm, Teams

If you're new, don't have 8-hour Course 24140 Intro to LANL Engineering Standards (see below) in your training plan, or just want to learn about the standards for 2 hours, then you can take this shortened course taught by Neha Gidwani.

Engineering Workbench Online Codes and Standards – Aug 8, 9, and/or 10 (Tu, We, Tr), 10:00 am – 10:30 am MDT Online

Accuris (nee IHS) offers 3 courses about the LANL library's subscription service should you want to take them:

Course 1, Aug 8: Quickly Connect with Critical Information; *Understand your subscription and access critical information quickly and easily*

Course 2, Aug 9: Ensuring Compliance and Productivity; *Ensure compliancy using tools like Watch List, Get Link and Smart Compare*

Course 3, Aug 10: Research with Smart Structure; *Understand the AI-powered semantic search and how to easily find solutions*

Follow this link, and when registering be sure to select “Americas” choice in upper right to get the right time.

<http://app.ihs.com/e/es?s=1770935282&e=1587680&elqTrackId=b694878bbd474c08aec3fb2a16f5daf7&elq=ad68fbe572854c4f9294f4ce9fa3b02a&elqaid=187134&elqat=1>

Master Certificate in Nuclear Systems Engineering from Texas A&M College of Engineering (act soon!)

The Texas A&M College of Engineering Master Certificate in Nuclear Systems Engineering develops leaders and big-picture thinkers that make sure systems of systems run smoothly from end to end. The program is designed for working professionals at LANL. The Program includes courses in systems engineering, technical leadership and management, and as well as nuclear engineering.

The 12-hour certificate is earned by completing four courses. Three courses and coaching will be offered online while the Technical Leadership will be offered on site. Limit is only 15 for the first cohort. Priority will be given to staff in Engineering Services (ES), Plutonium Infrastructure Engineering (PIE) and Plutonium Facilities Engineers (PFE). A committee chooses the best 15 for the initial offering.

Courses may provide credit towards a graduate program at Texas A&M with instructor permission and/or continuing education units to maintain a Professional Engineer License. Additional details will be provided by ALDFO shortly. In the meantime, please connect with Arnold Eng (Arnold.eng@lanl.gov) and TAMU Professor Ben Zoghi (zoghi@tamu.edu) with any inquiries.

Thanks to Arnold for the above. Note -- systems engineering (the plural) is an entirely different discipline from the physical-system support function that cognizant system engineers, system engineers, process engineers, and plant engineers perform. At LANL, the implementation of SE in facilities is governed by ESM Chapter 20, which will give you an idea of it https://engstandards.lanl.gov/ESM_Chapters.shtml#esm20

ESM Chapter 21 Software -- Overview and Owners Courses – series begins Tues, Nov 7, Teams

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). If you follow ESM Chapter 21 Software then you need to take training on the chapter. The managers (including FDARs) of Owners only need the overview.

So...if you, in fact, need training, please register in Utrain for the course(s) below. If you're not sure what you need, contact SME/instructor Jared Harris or Neha Gidwani.

- **38047 ESM Chapter 21 Software Overview**, 3 hours. (RLMs and Owners): Tuesday, Nov 7, from 9 am - noon.
- **34048 ESM Chapter 21 Software Owners**, (3 additional hours, just Owners return for this): Thursday, Nov 9, also from 9 am - noon.

Intro to LANL Engineering Standards, 24140 – Nov 13-16 (M-Tr, must attend all 4 days), 2:00-4:00 PM Teams

Attend each day to receive credit (it's 8 contact hours, despite what UTrain may say. Also, ignore UTrain showing 7/15/2020 11:20 AM America/Denver, that's just an establishment date). You'll need to block your own calendars. 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, and only taught a few times a year -- so try to attend.**

Professional Development Opportunities from IEEE

Research Library [blog post](#).

T&Q Admin matters

E-mail for COE Training: es-do-tng@lanl.gov

Click addy above for help with COE training issues like getting registered, missing credit, etc. Goes to the whole team: Stan Hayes, Nick Jones, Sadonna Tapia, Santana Quintana, and Chris Martinez. Alternatively, visit the Engineering Services Training and Qualifications webpage at: <https://int.lanl.gov/org/ddops/aldfo/nuclear-safety/engineering-services/conduct-of-engineering/training-qualifications/index.shtml> by clicking the button "Email The Training Team". The Training and Qualifications webpage contains information and tools on training requirements and copies of the various Qualification Standards maintained by the COE office.

E-mail for COE Qual Program: COEQuals@lanl.gov

Click addy above for any help with COE quals such as CSE, PrE, Design, Project, PSO, FDAR, and other qualified positions (and also SHR matters for CSEs). Goes to Deb Cushner, Jess Blea, and Barb Dela Cruz.

Instructor-Led Course Request/Registration Guide

For live courses without a session in UTrain, there's a step-by-step guide posted to the CoE T&Q "Resources" page <https://int.lanl.gov/org/ddops/aldfo/nuclear-safety/engineering-services/conduct-of-engineering/assets/resources/instructor-led-course-registration-FAQ.pdf>



It's been scorching and I'm extra worried about the climate.

LANL STANDARDS ISSUED IN JULY <http://engstandards.lanl.gov/>

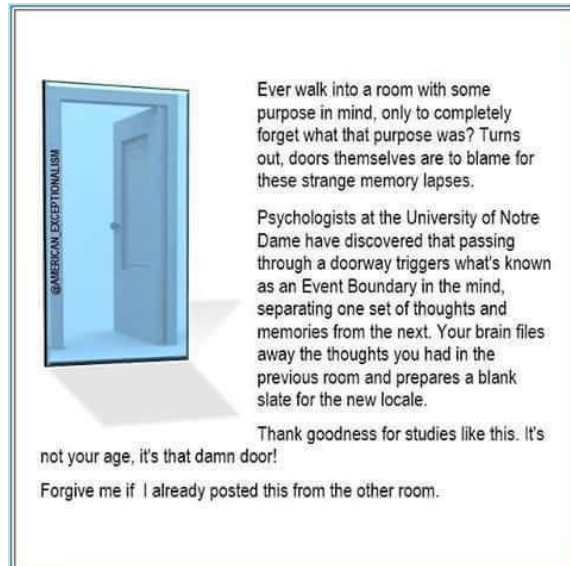
Engineering Standards Manual ESM [STD-342-100](#)

Chapter	Section	Title	Rev.	Date	Comments
Chapter 16 - IBC Program	Reference	Reference: Listing of LBO-Approved IBC Testing, NDE, and Inspection Agencies; Fabricators; and Products	-	7/20/2023	Added Armag, KDM Steelworks, U.S. Chemical. Thanks to Mike Fichtel, Beverly Duncan, Chief Inspector Robert Abeyta, and others.

Master Spec Sections [STD-342-200](#)

Section Number	Rev.	Section Title	Effective	Summary
27 1000	9	Structured Cabling	7/19/2023	Added 3.6 on J-hooks, straps, and non-continuous cable support. Thanks to Mike Craig, Jason Flesher, new POC Matthew Holland.

Former Architectural POC Scott Richardson is about out the retirement door, so for him:



NATIONAL STANDARDS ACTION

[Online National Codes & Standards](#) (Accuris Eng Workbench) [β](#) link

NOTE: **Information Handling Services (IHS)**, that some years ago became IHS Markit and in 2022 merged with S&P Global Engineering Solutions, **has now been rebranded as Accuris**. Regardless, the codes and standards are still in the same place and from the service called Engineering Workbench.

Some potentially relevant, recent revisions:

ASTM A479/A479M, Revision 23A, Standard Specification for Stainless Steel Bars and Shapes for use in Boilers and Other Pressure Vessels

ASTM A194/A194M, 2023 Edition, Standard Specification for Carbon Steel, Alloy Steel, and Stainless Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both

ASME Boiler & Pressure Vessel Code 2023

From a 7/13 Swartz email to LANL PSOs (contact him or me if you need the full email and attachments):

The latest edition of ASME BPVC has been released. The release date was July 1, 2023. The mandatory implementation date is January 1, 2024 (6 months). They may on agreement be used earlier. The documents are available through the LANL Library. The attached document provides directions to access the LANL Library for the codes. You may need a plugin for your browser to save the files. The attached email has information about the plugin.

New this year are documents that summarize significant changes in the Codes. There are also Code Cases that you may need to reference. The latest 2023 Code Cases are also available from the LANL Library.

Access the BPVC and code cases via this dedicated link in left frame:



ASME B31.3-2022 Errata

EWB is behind on publishing errata by 2-3 months. For ASME B31.3-2022, ASME lists: <https://cstools.asme.org/csconnect/CommitteePages.cfm?Committee=N10020400&CommitteeErrata=yes>

Record#	Codes Affected	Subject	Posted Date	File
23-1024	B31.3	Errata to B31.3-2022 - Correction to Table A-1M - A213 TP316Ti Min Temp during Publication of B31.3-2018, B31.3-2020, B31.3-2022	05/02/23	PDF
23-1031	B31.3	Errata to B31.3-2022 - Correction to Error made in Table A-2 Note during Publication of B31.3-2022	05/02/23	PDF
23-836	B31.3	Errata to B31.3-2022 - Transposed Min. Tensile Strength and Min. Yield Strength Column Headings in Table A-1	04/14/23	PDF
23-339	B31.3	Errata to B31.3-2022 - Revisions to Para. 328.5.2 were Inadvertently Omitted from ASME B31.3-2022	02/15/23	PDF

EWB's Feb version only has the ASME Feb one on para 328.5.2 (which is ASME 23-339), not the April and May ones above.

NFPA 30, 2024 Edition, Flammable and Combustible Liquids Code

Document number: **NFPA 70-2023 ERTA 4, National Electrical Code**, issued **5/2/2023**

Type of Change: **Errata/Erratum**

Note: LANL currently using the 2020 edition, not the 2023.

NFPA 70E, 2024 Edition, Standard for Electrical Safety in the Workplace

NFPA 77, 2024 Edition, Recommended Practice on Static Electricity

NFPA 170 - Standard for Fire Safety and Emergency Symbols – 2024, Complete Revision

Note: There's also a separate, unincorporated errata NFPA 170 ERTA 1, **6/16/2023**

NFPA 496, 2024 Edition, Standard for Purged and Pressurized Enclosures for Electrical Equipment

NFPA 497, 2024 Edition, Recommended Practice for the Classification of Flammable Liquids, Gases, or Vapors and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas

In recognition of two August supermoons, a real rarity:



IF IT DIDN'T EXIST, THE MOON WOULD SOUND LIKE SUCH AN OUTLANDISH SCI-FI CONCEPT.

I mean, it's pretty, but it doesn't really affect us beyond that. Except that half the nights aren't really dark, and once or twice a day it makes the oceans flood the coasts.

xkcd, 177 Huntington Ave Ste 1703 #75312, Boston, Massachusetts 02115-3153 US

DOE TECHNICAL STANDARDS ACTION

[Tech Stds Program postings](#) in the past month on the [Technical Standards Portal](#):

[DOE-STD-1242-2023, Canine Explosive Detection Team Certification Protocol \(CUI\)](#)

This Technical Standard contains Controlled Unclassified Information (CUI), and as such, will not be available on the Technical Standards Program website. For distribution information, contact Carl Pocratsky (EHSS-52) at 301-903-2769; carl.pocratsky@hq.doe.gov.

MSS DOCUMENT ACTION

Operation and Maintenance Criterion and related Preventative Maintenance Instructions (PMI) are standards with which system and plant engineers should be familiar. Implementation is required 30 days from issue date for non-nuclear facilities, 60 days for nuclear facilities. Questions? Contact the document author shown on its approval page.

Below are recent changes issued by Maintenance and Site Services Division per Jeremy vonHarders. Access here:

<https://logistics.lanl.gov/MSS/layouts/15/start.aspx#/Policy%20%20Procedures/Forms/Public.aspx> If you have issues with SharePoint sites, use a Microsoft browser (e.g., Edge) to access them.

MSS-CE has revised the below PMI Document:

O&M 432: Munters Dehumidifiers

- Initial Issue

O&M 501 Rev 4: Interior Lighting System

- Editorial changes. Added LED lamps as a replacement for incandescent lamps in addition to CFL lamps. Verified that references used are a good basis.

O&M 503 Rev 5: Emergency Lighting Systems

- Editorial changes. Verification that meets requirements of 2021 NPFA 101, 2020 NEC and added a new reference 2023 NFPA 70B

PMI 503-A R4: Emergency Light Inspection, Testing, and Maintenance

- Reformatted into newest template. Added updates from O&M 503, Revision 5, including verification meeting requirements of 2021 NPFA 101, 2020 NEC and added a new reference 2023 NFPA 70B

PMI 507-A: Lightning Protection System Inspection and Testing

- Changed inspecting the grounding electrode to verifying it appears to be installed and has no signs of being damaged. Removed 10 ohm ground resistance acceptance value and allowance to use clamp earth resistance tester on explosive facilities. Template update.

O&M 511 Rev 3: Stationary System Batteries

- Updated to new template.
- Updated to most current NFPA, IEEE, and ANSI/NETA applicable
- codes and standards.
- Corrected temperature deviation for VRLA batteries.
- Replaced SMPOR with Std Discipline POC to match new term
- Engineering Services is using.
- Performed technical edit.

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

LAST MONTH'S UPDATE TOPICS

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

- ES-Div Org Changes
- Revised Form 2178, *Subcontractor Deviation Disposition Request*
- Training & Qualification
- Standards POC News
- LANL Standards Issued in June
- National Standards Action
- DOE Standards Action
- MSS Document 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.



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With the support of Alan Yaeger and Neha Gidwani in the Standards Team and many others in the CoE Office. [Contacts for them.](#)