

ENGINEERING STANDARDS UPDATE

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

Topics this month:

- **Training & Qualification**
- **LANL Standards Issued in March or so**
- **Engineering Processes News**
- **DOE Technical Standards Action**
- **National Standards Action**
- **MSS Document Changes**
- **When Good Conduct of Engineering Isn't Followed**

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

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

SUBSTITUTES FOR A HEALTHY DIET:

NOODLES-ZUCCHINI
CHIPS-CARROTS
MILK-COCONUT MILK
RICE-CAULIFLOWER
BUTTER-SADNESS
SUGAR-A BROKEN HEART
CHEESE-NOPE
COFFEE-THIS IS STUPID AND I'M NOT
DOING IT

TRAINING & QUALIFICATION

Re **Yolanda Trujillo** -- Noted briefly last fall but deserving more, long-time CoE training specialist Yolanda has moved on TA-55's Training and Mission Services (and we wish her well!). Now, we must all move on as well—so for help with CoE training, please contact Stan E. Hayes, sehaves@lanl.gov.

T&Q suggestions and questions tool—NEWISH!!!!

This also bears a repeat: LANL customers of CoE T&Q matters can make suggestions and even get clarification on things like qual standards and courses. This is done via an online SharePoint form just as CoE has had for APs and Standards for a while. Go to Conduct of Engineering Training & Qualification (internal link) to see it. Under Mentoring Resources (upper-right) select "Training & Qualification Clarification." You'll see the Training & Qualification Clarification form there. Thanks to Jessica Blea and others!

Safety Basis for Engineers, Course 39564, Wed, April 13, 9-11am, MSTeams

Course is required for and will help CSEs and PrEs learn what they need to know about Safety Basis to prepare for their oral boards and their engineering duties. Has lots of TA55 examples but is generally applicable to any nuclear facility. POC: Joy Getha, 5-9586, jlgetha@lanl.gov. Please sign up for this course in UTrain by the 12th so Joy can email the handouts.

[Click here to join the meeting](#)

Or call in (audio only)

+1 575-323-9652,,240917986# United States, Las Cruces

Phone Conference ID: 240 917 986#

24140 Intro to Eng Standards – Self-assign in UTrain

I'm targeting a session in May. There are a lot of new people that need it – it's a **required** course for many LANL engineers (ES, PFE, PIE, TA55 process), recommended for those at local AE firms, and **only taught a couple of times a year**. If you need it you should self-assign in UTrain if your manager hasn't already via a training plan. Thanks!

ESM Chapter 21 Software -- Overview and Owners Courses – Self-assign in UTrain

Like 24140 above, these courses are only taught when UTrain shows sufficient demand. In this case: 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. Managers (including FDARs) of Owners only need the overview.

So...if you, in fact, need training, please self-assign in UTrain for the course(s) below. If you're not sure what you need, contact me (oruch@lanl.gov; 5-8475) or SME/instructor Joy Getha, 5-9586, jlgetha@lanl.gov.

- 38047 ESM Chapter 21 Software Overview Course 3 hours. (RLMs and Owners)
- 34048 ESM Chapter 21 Software Owner's Course 3 additional hours (just Owners return for this).

If you just need awareness at low level, so can self-assign/take 38040, a read/sign.

Registering for UTrain Courses: Go to UTrain, search on course, select and enroll. Disenroll if you have to bail. AEs can also register for some; use token (CryptoCard) or contact ES training guy Stan Hayes (sehayes@lanl.gov) with Z number.



LANL STANDARDS ISSUED IN MARCH OR SO
Engineering Standards Manual ESM STD-342-100

ESM-Chapter	Section	Title	Date	Comments
Ch 16 IBC Program	IBC-GEN	Fire Alarm Work Alteration Levels (ES-DO-Memo-22-003, Kemp and Apperson) was posted	3/15/22	Levels established for Replacement-in-Kind (RIK), Fire alarm Full System Replacement Projects (FSRP), and new work.
Ch 17 Pressure Safety	ADMIN-3	Approver Listing for Pressure System Component Purchase (2022-1-3 update)		From ASM and Ari Swartz, POC
	Ch. Refs	DOE Worker Safety and Health Policy Clarification Portal (PC Portal)		New helpful link
Ch 21 Software	SOFT-V&V	New: Software Test Plan (SWTP) and Software Test Case (SWTC) Templates (vice Form 3055 r0)		Thanks to Nathaniel Hein, IQPA. Ch. POC: Tobin Oruch

Master Specs STD-342-200

Section Number	Rev.	Spec Title	Effective	Summary of Latest Revision
11 5311.10	4	Glovebox Fabrication	4/5/22	Admin change to fix typos and links. Thanks to Maria Watkins, SI-DCRM

ENGINEERING PROCESSES NEWS

From CoE Eng Process Manager Sarah Murdock, smurdock@lanl.gov:

The following Administrative Procedures have been amended or created and posted to the COE Administrative Procedures SharePoint site. If you have been identified as requiring additional training on this AP you will see an assignment on your UTrain "to do" list. [None on these two.]

AP-341-517, Design Change Form	
Issued 4/4/2022	VAR-10527- DCF Exception for Simple ML-4 Electrical Branch Circuits Posting in the next couple of days. Thanks to requestor Mike Richardson.
Effective 4/4/2022	
AP-341-704 Quality Verification of Items and Services, Rev. 0 (NEW!)	
Issued 3/15/2022	Provides the steps and requirements to implement the quality verification process for non-safety related Quality Risk Level (QRL) 1 and 2 items and/or services as described in P841-1 <i>Quality Procurements</i> . The AP may also be used for QRL-3 in the event the supplier does not meet the quality program requirements for the procurement. This quality verification process is only required for new or replacement items intended for use in ML-3 or ML-4 SSCs or for activities on SSCs with QRLs as noted earlier. There will be no formal training for this new AP, but it is expected that the user will read through the full procedure before use.
Effective 4/14/2022	

Heads-up territory:

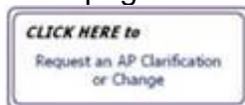
AP-341-611 *System Design Description*, Rev. 4: Adds the requirement for SDDs to go through a review every three years. This is in response to a DNFSB assessment observation. This revision is going through final review right now and is expected to be ready for final approval within the week.

AP-341-627 *Design Coordination*, Rev. 2: This revision incorporates the Engineering Request for Information form (ERFI) for use internally to LANL. This revision also clarifies the requirements and the purpose of this AP for transmittal of design information outside of the initial project input documents. This revision is going through final approval right now and is expected to be effective within the next 30 days.

AP-341-612 *Facility Design Description*, Rev. 4: This revision is following the revision to AP-341-611 in that it adds a requirement for a periodic review. Revision 4 adds the requirement of a review every five years. This revision is going through review right now and expected to be ready for final approval within the next three weeks.

For questions or concerns regarding APs, please contact Sarah at 667-7788.

Please enter issues with APs in the SharePoint issues database. Use the live button below, same one that's found in the upper right of the Processes SharePoint homepage.



From the "I gave you just one job to do...JUST ONE!" chain email:



DOE TECHNICAL STANDARDS ACTION

Tech Stds Program postings in the past month:

An FYI that this DOE HDBK was reaffirmed with very slight (probably mostly admin) changes. DOE-HDBK-1046-2016 (Reaffirmed 2022), Temporary Emergency Exposure Limits for Chemicals: Methods and Practice

This document describes why TEELs are needed, their role in emergency planning in DOE, the history of their development, and the methods by which they are developed. TEEL values are developed by a team of chemists/toxicologists established by DOE Headquarters.

NATIONAL STANDARDS ACTION

LANL's IHS Eng Workbench online codes & standards subscription news.

The 2021 IAPMO Mechanical and Plumbing Codes (UMC & UPC) have been added to the subscription in anticipation of LANL adopting via a pending revision to ESM Ch. 16, IBC-GEN, Att A, LANL Building Code later this FY. The 2015 versions should continue to be available for the remainder of 2022 since they are required for new projects until that time (and projects underway since July 2018). As such, if the 2015 edition(s) are included in a project's code of record, those involved in the design or review of same should download a copy for personal use now. Once LANL adopts, this newsletter will note it (maybe next month).

Speaking of the plumbing code:



FYI (LANL doesn't subscribe to AASHTO):

AASHTO LTS, Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals

Type of Change: Complete Revision

MSS DOCUMENT CHANGES

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

Operation and Maintenance Criterion and related Preventative Maintenance Instructions (PMI) are standards about which system 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.

PMI 405-A Rev2: Water Heater Monthly Inspection and Maintenance

- Separated tasks into three frequencies; monthly (405-A), semiannual (405-B), and annual (405-C)
- Added instructions for inspection of inline strainers, air filter, and pressure delta.

Direct: https://logistics.lanl.gov/MSS/_layouts/15/start.aspx#/Policy%20%20Procedures/Forms/Public.aspx

PMI 405-B: Water Heater Semiannual Inspection and Maintenance

- Initial Issue

Direct: https://logistics.lanl.gov/MSS/_layouts/15/start.aspx#/Policy%20%20Procedures/Forms/Public.aspx

PMI 405-C: Water Heater Annual Inspection and Maintenance

- Initial Issue

Direct: https://logistics.lanl.gov/MSS/_layouts/15/start.aspx#/Policy%20%20Procedures/Forms/Public.aspx

Access to all such documents

anytime: https://logistics.lanl.gov/MSS/_layouts/15/start.aspx#/Policy%20%20Procedures/Forms/Public.aspx

If you have issues with SharePoint site use Internet Explorer to access them.

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

In very, very bad engineer-conduct news:



People enter the U.S. District Courthouse where Jonathan and Diana Toebbe have a hearing in Martinsburg, W.Va., on Tuesday, Oct. 12, 2021. | Jose Luis Magana/AP Photo

Maryland man pleads guilty to trying to sell nuclear secrets to foreign government

Jonathan Toebbe, a nuclear engineer, and his wife were arrested after undercover FBI agents exchanged \$100,000 in cryptocurrency for submarine secrets.

Read in POLITICO: <https://www.politico.com/news/2022/02/14/maryland-man-pleads-guilty-nuclear-secrets-foreign-government-00008742?cid=apn>

LAST MONTH'S UPDATE TOPICS

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

- **ALDFO Engineering Reorg Complete**
- **LANL Standards Issued in February**
- **Engineering Processes News**
- **MSS Document Changes**
- **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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