

# Engineering Standards Update

News from Engineering Standards Program

May 2, 2024

MAY  
THE 4TH  
BE WITH YOU

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

## Topics this month:

- [Six Awesome Opportunities for Engineers](#)
- [Miramar User Interface Now Live in iLink Modules](#)
- [Training & Qualification](#)
- [LANL Engineering Standards Issued in April or so](#)
- [LANL Engineering Processes Changes](#)
- [National Standards Action](#)
- [DOE Technical Standards Action](#)
- [MSS Document Action](#)
- [When Good Conduct of Engineering Isn't Followed](#)



## SIX AWESOME OPPORTUNITIES FOR ENGINEERS

Want to learn about Systems Engineering, up your CAD game, enroll in a women's leadership program or find a mentor? [Sign up](#) for these cool opportunities, and more, organized by the Engineering Leadership Council.

The opportunities include:

- A systems engineering course
- An innovation sprint
- Computer-aided design (CAD) training
- A women's leadership program
- Engineering mentoring
- Creation of an engineer's handbook.

## MIRAMAR USER INTERFACE NOW LIVE IN iLINK MODULES

Good news! The new Miramar user interface is now live on the iLINK modules including Conditions/Issues Management, Assessments, ECHO, and Rail Task Tracker. In addition, OPEX is now hosted on the DevonWay platform within iLINK.

To get to know the new user interface, you can find on-demand resources on the [iLINK website](#), including an introductory [video on the Miramar user interface](#). You can also find a schedule for virtual demos and Q&A sessions on the [LANL Events Calendar](#) or the [iLINK website](#) (under "Demonstration/Training Schedules").

Contact [iilink@lanl.gov](mailto:iilink@lanl.gov) with any questions.

**Victoria Baca is the new Civil POC and Bruce Gunderson is the new BIM Manager. Welcome to the team!**



## **TRAINING & QUALIFICATION**

### **Courses, Seminars, Programs**

Note on Training Registration emails: When you sign up for a class in UTrain, you will receive an email that is generated by UTrain upon registration and again on the day of or before the class which will include the link to join the Teams meeting (for classes hosted online). **WARNING: To get the Teams link email you must register in UTrain. The email will NOT automatically enter an event on your calendar in Outlook. Please block your own calendar.** To receive credit for the course, you are required to log into the Teams meeting using a computer that has voice and chat capabilities (for classes hosted online). Do not use a mobile device to join the class; if you do so you will not be able to receive credit. For any questions, please email the Training team at [es-do-tng@lanl.gov](mailto:es-do-tng@lanl.gov).

#### **CoE Design Engineer Panel-boards SPD's Duty Area 9, #58416 – May 9, 10:00 am -12:00 pm, Teams**

Eric Stromberg is leading this instructor-led course. It is required for completion of Duty Area 9 for DE qualification of Electrical Engineers (per UTrain curricula 14186).

#### **CoE ASME B31.3 Process Piping Code, #53900 – May 13-16, 20-23 (M-Tr, must attend all 8 sessions), 2:00-3.30 pm, Teams**

Ari Swartz is leading this instructor-led course to familiarize participants with ASME B31.3 Process Piping Code as related to the duties of a Pressure Safety Officer.

#### **CoE ESM Chapter 21 Software – Overview and Owners Courses – series is Tues, May 14 and 16, 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.

- 38047 CoE ESM Chapter 21 Software Overview, 3 hours. (RLMs and Owners): Tuesday, May 14, from 8 - 11 am.
- 34048 CoE ESM Chapter 21 Software Owners (3 additional hours, just Owners return for this): Thursday, May 16, also from 8 - 11 am.

#### **CoE Submittal Review for Design Engineers, #57893 – May 16, 9:00-10:00 am, Teams**

This training covers design submittal reviews.

#### **Generators and Transfer Switches Duty Area 9, #58413 – May 23, 9:00-11:00 am, Teams**

Eric Stromberg is leading this instructor-led course. It is required for completion of Duty Area 9 for DE qualification of Electrical Engineers (per UTrain curricula 14186).

#### **CoE Design Engineer Switches and Disconnects Duty Area 9, #58422 – Jun 6, 9:00-11:00 am, Teams**

Eric Stromberg is leading this instructor-led course. It is required for completion of Duty Area 9 for DE qualification of Electrical Engineers (per UTrain curricula 14186).

#### **CoE Design Engineer Uninterruptible Power Supply Systems Duty Area 9, #58423 – Jun 20, 9:00-11:00 am, Teams**

Eric Stromberg is leading this instructor-led course. It is required for completion of Duty Area 9 for DE qualification of Electrical Engineers (per UTrain curricula 14186).

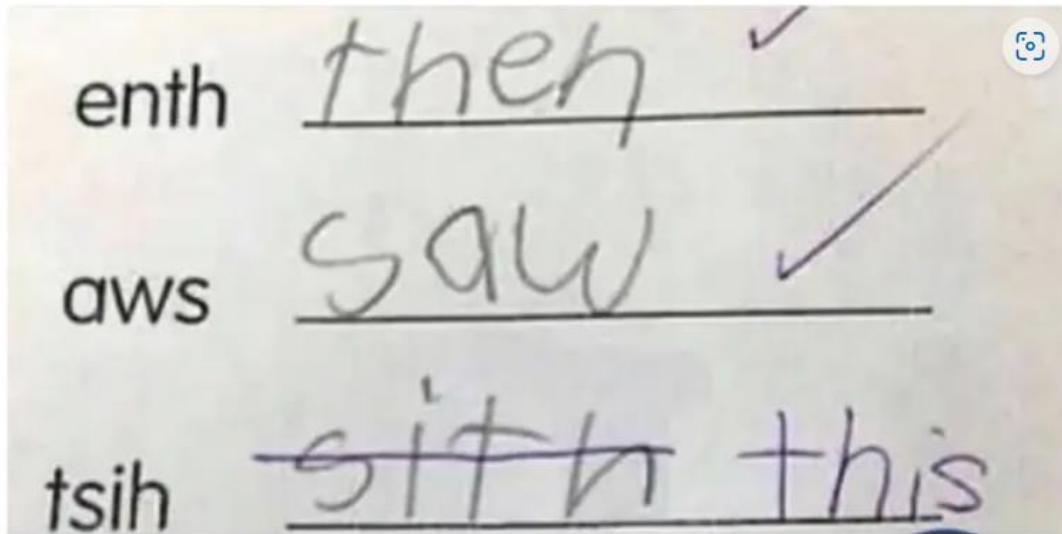
**CoE Building Systems B31.9, #56239 – Jun 17-20, 24-27 (M-Tr, must attend all 8 sessions), 2:00-3.30 pm, Teams**

Ari Swartz is leading this instructor-led course to familiarize participants with ASME B31.9 Building Services Piping Code and its real applications.

**Onboarding Training Courses by CoE Office, Teams:**

- COE ES LANL Organization and Engineering Divisions Introduction #54659, May 15, May 29, Jun 12, Jun 26, 10.30 - 11.30 am
- COE Engineering Initial Onboarding #54864, May 15, Jun 6, Jun 19, 10 - 10.30 am.

Hmm.....sith has ratS sraW all over it.....



**T&Q Admin matters**

E-mail for CoE Training: [es-do-tng@lanl.gov](mailto:es-do-tng@lanl.gov)

Click e-mail address 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 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](mailto:COEQuals@lanl.gov)

Click e-mail address 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 on how to request a course. This places the requestor on the waitlist and notifies the training team of interest for the said live course.

## LANL ENGINEERING STANDARDS ISSUED IN APRIL OR SO

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

Chapter	Section	Title	Rev.	Date	Comments
Chapter 2 - Fire Protection	D40GEN	<a href="#">Clarification CIR-24-006, Need for Hydraulic Calculation</a>	0	4/23/2024	Thanks to Jason Apperson and Fire Protection POC Keenan Dotson.
Chapter 14 - Sustainable Design	-	<a href="#">Sustainable Design of Facilities</a>	12.1	4/24/2024	Revised Table 1 summary for \$50M and Sections A & H to reflect later sections. Thanks to Sustainable Design POC Dee Bangert.
Chapter 16 - Building Code Program	Chapter References and Resources	<a href="#">Listing of LBO-Approved IBC Testing, NDE, and Inspection Agencies; Fabricators; and Products</a>		4/19/2024	Thanks to Chief Inspector Robert Abeyta.

The following note has been added under ESM Chapter 5, Section III:  
 Important Notice - Hilti has discontinued the production of Undercut anchors HDA-P-DUC and HDA-T-DUC. As a result, their use in new designs is no longer allowed. It is the responsibility of the Engineer of Record (EOR) to confirm anchor availability before specifying them in a new design.

### LANL Master Specifications [STD-342-200](#)

Thanks to Christina Salazar-Barnes for formatting.

Section Number	Rev.	Section Title	Effective	Comments
22 0713	7	Plumbing and HVAC Insulation	4/30/2024	Thanks to Mechanical POC Michael Ladach and Alt Mechanical POC Todd Smith.
23 0593	5	Testing, Adjusting, and Balancing for HVAC	4/30/2024	
23 3816	3	Fume Hoods	4/30/2024	
25 5911	1	Equipment Shutdown Circuits for BAS Systems	5/1/2024	Thanks to I&C POC Allen Hayward and Scott Day.

Updated 01 3300 Attachment A Construction Submittal Log coming soon!

### Standard Drawings & Details [STD-342-400](#)

Chapter	Drawing No	Title	Rev.	Date	Comments
Electrical	D5010-2	Isolated Ground System Diagram	2	10/02/2023	Deleted since no longer used regularly, and dated content, per Electrical POC Eric Stromberg.

Spanning all three CoE programs, PD 340 was issued on April 2, 2024.

[PD340 \(Rev.8\) Conduct of Engineering and Configuration Management for Facility Work](#)

Summary of Changes:

- Changed DOE O 413.3B Chg. 6, Program and Project Management for the Acquisition of Capital Assets, to Chg. 7.
- Reflected the addition of multiple FDAs.
- Included the addition of local documents under P341.
- Included the addition of the COE Glossary FSD under PD340.
- Removed CRAD-PD340 as an FSD under PD340.
- Section 11.0: Updated Reference Section.
- Section 12.0: Updated Forms Section.
- Section 14.0: Updated Contact Section.

*CoE Glossary (of Terms) coming soon!!!*

### **LANL Engineering Standards Admin matters**

E-mail for COE Eng Stds: [engstandards@lanl.gov](mailto:engstandards@lanl.gov)

Click e-mail address above for any general questions. Goes to the whole team: Tobin Oruch, Alan Yaeger, Neha Gidwani and Christina Salazar-Barnes. Alternatively, visit the [CoE](#) or [Engineering Standards](#) webpage and click on the email under the Engineering Standards team. Of course, if your need is discipline-specific, then it's best to contact the Standards POC for the corresponding ESM chapter shown on that [webpage](#).

**To all engineers here on Earth and in a galaxy far, far away.....what came first - Star Wars or Real-life Engineering?**

***Exhibit A - Flying Spaceships or Rockets***



## LANL ENGINEERING PROCESSES CHANGES

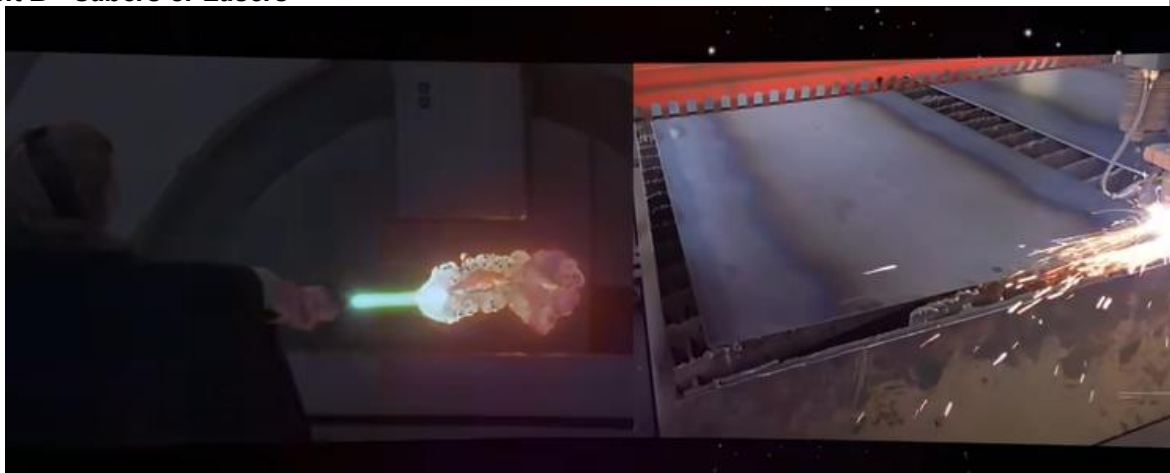
Document	Title	Rev.	Date	Comments
AP-341-701	Evaluation of Vendor Manuals	2	5/1/2024	This AP has been cancelled because it has become obsolete and is not used by applicable CSEs or MSS.

### LANL Engineering Processes Admin matters

E-mail for COE Eng Processes: [COE-APs@lanl.gov](mailto:COE-APs@lanl.gov)

Click e-mail address above for any questions related to Administrative Procedures. Goes to Gabriel Herrera, Beau Portillo, and Christina Salazar-Barnes. Alternatively, visit the [CoE](#) or [Engineering Procedures](#) webpage and click on the email under the Engineering Processes team.

### *Exhibit B - Sabers or Lasers*



## **NATIONAL STANDARDS ACTION**

[Online National Codes & Standards](#) (Accuris Eng Workbench [EWB], formerly IHS)

[AMCA 201](#), Fans and Systems

Publication Date: **2023**

Type of Change: **Complete Revision**

[NFPA 13 ERTA 4](#), Standard for the Installation of Sprinkler Systems

Publication Date: **3/5/2024**

Type of Change: **Errata/Erratum** (for info only since this edition is not yet LANL-adopted. When it is, ESM Ch. 1 Z10 says all errata shall be followed)

## DOE TECHNICAL STANDARDS ACTION

[Tech Stds Program postings](#) are listed on the [Technical Standards Portal](#).

No updates this month.

### **Exhibit C - Bionic Arm or Mechanical Arm**



## 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. Click [here](#) to access. If you have issues with SharePoint sites, use a Microsoft browser (e.g., Edge) to access them.

### **O&M 413 Rev 2: Laboratory Fume Hood Systems**

- Included components that do not fall under the scope of the O&M Criterion to Section 2.0, *Scope*.
- Updated references to current editions and corrected the corresponding section citations throughout, as applicable.
- Content updated to reflect the current editions of references cited throughout, including operations and maintenance recommendations and requirements (Sections 6.1, 6.2, 7.1, and 7.2).
- Deleted Table 9-1.
- Updated organization names and contacts throughout.

### **PMI 412-A Rev 2: Centrifugal Pump Preventative Maintenance**

- Added monthly, quarterly, and six-month frequencies to annual frequency and added PMI numbers from 412-A.001 to 412-A.004 to accommodate newly added monthly, quarterly, and six-month frequencies.
- Changed reference for 412-A.001 from "Centrifugal Pump Preventive Maintenance Checklist" to "Centrifugal Pump Monthly Preventive Maintenance."

### **PMI 601-B Rev 2: Crane Load Test Procedure**

- Updated list of Required Documents.
- Renamed 601-B.001 to 601-B.001, *Load Test Sequence for New or Upgraded Crane*.
- Added new checklist, 601-B.002, *Load Test Sequence After Load Bearing Parts are Repaired, Modified, and Replaced*.

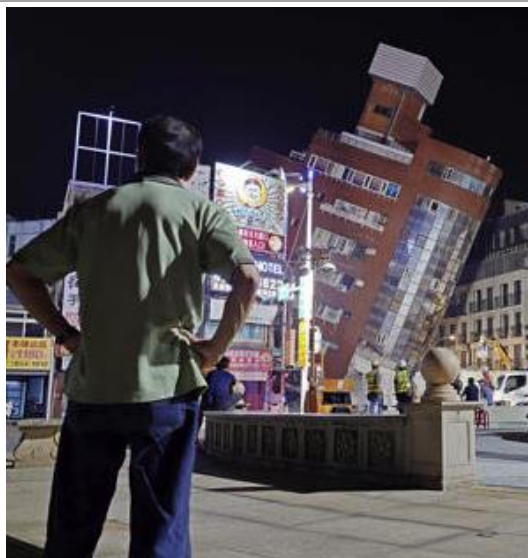


- Substantial rewrite of individual checklists to reflect current maintenance, repair, and testing practices.

**Exhibit D - Droids or Humanoid Robots**



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



*Taiwan - damage under an earthquake*



*Albuquerque - damage under self-weight*

On April 3rd, Taiwan's biggest earthquake in 25 years, magnitude 7.4, killed nine people, injured over 900 people with 50 workers going missing. Even though, the earthquake triggered massive landslides with some buildings precariously titled in the mountains, this is a success story of [good conduct of engineering and emergency response](#) based on lessons learned by Taiwan from the 1999 earthquake which caused 2400 deaths, injured around 100,000 people and destroyed thousands of buildings. Taiwan is no stranger to high seismic activity owing to its location in the Pacific "Ring of Fire". However, the unpreparedness to the 1999 earthquake was a major wake-up call that led to key administrative reform, emergency response and disaster reduction, strict building codes, a world-class seismological network and widespread public education campaigns on earthquake safety. The effects of these reforms is seen in the most recent earthquake.

On the other hand, the roof of a new gym at Explore Academy on Gulton Ct NE campus in Albuquerque collapsed on April 7th under its own self-weight! Fortunately, the gym was unoccupied when the roof collapsed. [An inspection conducted over a month before the collapse raised concerns regarding the roof trusses.](#) This incident has sparked discussion about construction safety and the importance of rigorous inspection protocols to prevent such occurrences.

Both incidents show a stark comparison of what could happen when good conduct of engineering is and 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:](#)

- Sarah Murdock Leaves CoE
- Clint Carter Becomes LANL Level III RT
- Automated DCF Launch in Delta
- ES Downtown Office Reconfiguration
- Training & Qualification
- LANL Engineering Standards Issued in March or so
- LANL Engineering Processes Changes
- National Standards Action
- DOE Technical Standards Action
- MSS Document Action
- When Good Conduct of Engineering Isn't Followed

The views expressed in this email are not necessarily those of the Engineering Standards Team's employer.

To request a change to this newsletter's distribution or to send comments/suggestions, please email [engstandards@lanl.gov](mailto:engstandards@lanl.gov).

