

Engineering Standards Update

News from Engineering Standards Program

Feb 5, 2025



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

Topics this month:

- [Engineers Week 2025](#)
- [New Form 2033 Process for Software](#)
- [ES-IF/ES-IPD Group Leads Update](#)
- [Training & Qualification](#)
- [LANL Engineering Standards Issued in January or so](#)
- [LANL Engineering Processes Changes](#)
- [National Standards Action](#)
- [DOE Technical Standards Action](#)
- [MSS Document Action](#)
- [When Good Conduct of Engineering Isn't Followed](#)



ENGINEERS WEEK 2025

Engineers Week is an annual event that celebrates engineers' impact on the world. This year, the national theme is *Design Your Future* and is being hosted at the Lab by the Engineering Leadership Council and ALDW from Feb 19-20 2025 at TA-03 Building 207 and virtually through CVent. There will be several presenters from the ES division at the event. For more information, see the article [here](#).

NEW FORM 2033 PROCESS FOR SOFTWARE

P1040, Revision 15 implements a new process for completing software quality grading using Form 2033s. A new electronic tool, the [Form 2033 Graded Software Inventory \(GSI\)](#), has been launched to streamline the software grading process and better integrate with ESM Chapter 21 – Software requirements. This tool replaces the existing Form 2033 and is the system of record for all new software grading. P1040, Rev. 15 and the GSI were released on 12/16/2024.

Use of the GSI is required as one of the initial steps in implementing ESM Chapter 21 – Software. As part of improving the process, software grading information pertinent to implementing Chapter 21 is now included in the records generated. This includes the ID for your software (SWID), ML, and whether your software is SSC or Non-SSC. In addition, for design or analysis software owned and managed by Engineering Services, PFE, or PIE, software can be designated as such when using the tool (replacing the "[ES Inventory](#)" when fully populated). GSI software records can easily be modified at any time to update supplemental information including version numbers if the software is updated, licensing information, and the status of the software (e.g., the software is in use, retired, etc.). Please contact p1040@lanl.gov if you have any questions regarding this new process or how it interacts with ESM Chapter 21. ESM Chapter 21 revision planned for the spring and being led by Alan Yaeger will refer to the GSI's Form 2033. Thanks to David Bright, IQPA for the news story!

ES-IF/ES-IPD GROUP LEADS UPDATE

Jake Hilderbrand and Karen Marsh have been selected as Group Leads for ES-IF and ES-IPD, respectively, having served in an acting role since Jan 2024. Both Jake and Karen bring a wealth of experience, knowledge, and leadership to the roles. Congratulations to them!

Facts about President's Day



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.

CoE Commercial Grade Dedication (CGD) - Preparers Course #30727 – Feb 6, 8:00 am - 4:00 pm, Teams

For those of you who will serve as LANL CGD Preparers including Procurement engineers, select CSEs and Quality SMEs, Course #30727 is required (#30726 is a prerequisite). **NOTE: Historically, this course is only offered twice a year, so plan accordingly!**
For any questions, contact instructor John Lamendola.

CoE: Design Engineer ES-EPD Article 250 Conductors Duty Area 9, #55880 – Feb 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 Conductor Sizing Duty Area 9, #58408 – Feb 13, 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 Submittal Review for Design Engineers, #57893 – Feb 20, 9:00-10:00 am, Teams

This training, led by Eric Stromberg, covers design submittal reviews.

Intro to LANL Engineering Standards, #24140 – Feb 24-27 (M-Tr, must attend all 4 days), 1:00-3:00 pm, Teams

Attend each day to receive credit (it's 8 contact hours, despite what UTrain may say). Provides familiarity with national and LANL engineering standards for anyone performing, reviewing, or managing design activities. **Required course for many LANL engineers and only taught a few times a year – so try to attend.**

CoE Design Engineer Transformers Duty Area 9, #58417 – Feb 27, 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, #60196 – Mar 10-13, 17-20 (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..

CoE Design Engineer Raceway and Box Fill Duty Area 9, #53734 – Mar 13, 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 Types of Design Reviews, #50368 – Mar 20, 9:00-10:00 am, Teams

This training, led by Eric Stromberg, covers types of design reviews.

CoE Design Engineer Panel-boards SPDs Duty Area 9, #58416 – Mar 27, 9:00 am -11:00 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).

Onboarding Training Courses by CoE Office, Teams:

- AP Introduction and Common APs Deep Dive #54871, Feb 13, 10 - 11.30 am, Mar 13, 10 - 11 am
- COE Engineering Initial Onboarding #54864, Feb 6, Mar 6, 10 - 10.30 am
- COE ES LANL Organization and Engineering Divisions Introduction #54659, Feb 12, Mar 12, 10 - 11 am.

Love Data Week 2025 by Research Library - Feb 10 - 14, Zoom/Teams:

- Data Augmentation Workshop, Feb 10, 10 - 11 am
- AI and Data Sharing: A Love/Hate Relationship?, Feb 11, 1 - 2 pm
- LANL Data Lightning Talks, Feb 12, 1 - 2 pm
- Data Coffee, Feb 13, 8.30 - 9.30 am.

For more information, see article [here](#).

Training by IQPA, Teams (Instructor led):

- Nonconformance Control & reporting Coordinator (NCRC), #57109, 1st Wed each month, 1.00 - 3.00 pm
- Nonconformance Control & Reporting Owner Manager (NCR OM), #58013, 2nd Wed each month, 1.00 - 3.00 pm.

Pre-requisites for the courses are UTrain Course #44790, Nonconformance Reporting Overview & Required Reading #56362, Nonconformance Control and Reporting.

T&Q Admin matters

E-mail for CoE Training: 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

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.

For all those history buffs out there.....How well do you know about President's Day and American history? There are 3 questions below with answers that follow.

Q1 of 3: Who was President's Day created to commemorate?

LANL ENGINEERING STANDARDS ISSUED IN JANUARY OR SO

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

Chapter	Section	Title	Rev.	Date	Comments
ESM Chapter 1 - General	Section 200	Master Equipment List; Item Numbering and Labelling	10	01/31/2025	In this revision, added MEL to title. In the document and Appendix E, clarified approval methods and recordkeeping by MSS (with other changes, completing LANL-C-2024-2597) In Appendix D, deleted label request directions. Also in Appendix E, expanded ML-4 scope for BUILDER, SAFER, and criticality safety needs (last completing LANL-IM-2024-0646-01); refined delegation approach and relaxed for ML-4; refined reconstitution priorities; referenced MSS guides. Previously separate Sections 210 and 230 controlling processes added as Appendix F, superseding them. Appendix G on field dependencies added. Appendix H work order example added. Throughout, acronym became abbreviation; numerous other improvements. Thanks to ESM Ch 1 General POC Tobin Oruch, Workbook POC Charlie Nuss, and Szymon Tuzel and several other reviewers.
ESM Chapter 1 - General	Sections 210 and 230	System List; Types and Subtypes for Equipment Items	-	01/31/2025	Superseded by Appendix F of Section 200.

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

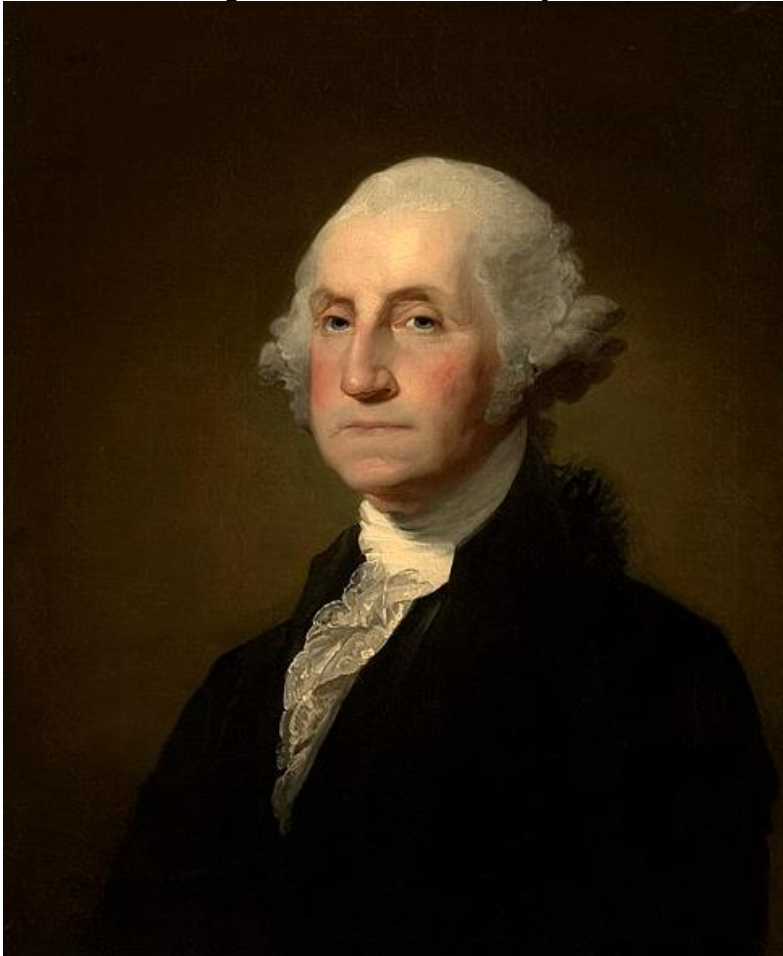
Thanks to Christina Salazar-Barnes for formatting these specification sections and Neha Gidwani for coordinating all these updates with the POCs!

Section Number	Rev.	Section Title	Date	Comments
27 1000	10	Structured Cabling	2/4/2025	This is a major revision and restructure of the section to comply with updated Communication Standards. Thanks to Communications POC Mike Craig, and Communications Alt POCs Colin Howard and Kenneth Perea.

40 0504	2	Process Piping	1/15/2025	<p>In this revision, added references to 01 4525 NDE specification throughout Section. Removed content related to welding, brazing and soldering and added reference to 01 4631 throughout Section. Revamped Article <i>Submittals</i> in Part 1 and Article <i>Seismic Performance Requirements</i> in Part 2 to standardize across piping specifications. Clarified when unlisted component evaluations are required in submittal space. Updated designer notes to provide additional useful information to designers. Relocated pressure/leak testing details from Section 22 0813 to this Section. Various updates to Part 3 for clarification and accuracy and other minor editorial changes.</p> <p>Thanks to Pressure Safety Alt POC Rob Payment, Pressure Safety POC Ari Swartz, Mechanical POC Michael Ladach and Pressure Safety Program Manager Derrick Velasquez.</p>
43 4113	2	Gas and Liquid Pressure Vessels	1/29/2025	<p>In this revision, corrected ESM Chapter 17 citations, updated the ASME BPVC code of record to 2023, updated entire Part 1 to define minimum requirements, added critical characteristics requirements in Article <i>Materials</i> in Part 2, added more direction for <i>Fabrication</i> in Part 2, updated Appendix A, added Appendices B through D as reference, and other minor editorial changes.</p> <p>Thanks to Pressure Safety POC Ari Swartz, Pressure Safety Alt POC Rob Payment, Mechanical POC Michael Ladach, Pressure Safety Program Manager Derrick Velasquez, IQPA-QP Program Lead Jeremy Valentine, and Structural POC Carlos Coronado.</p>
43 4116	2	Atmospheric Tanks and Vessels	1/29/2025	<p>In this revision, updated entire Part 1 to include multiple atmospheric low pressure tanks, updated Articles <i>References</i> and <i>Related Sections</i>, added critical characteristics requirements in Article <i>Materials</i> in Part 2, added more direction for <i>Fabrication</i> in Part 2, replaced Shop/Factory Acceptance test with Source Verification test, updated Appendix A, and other minor editorial changes.</p> <p>Thanks to Pressure Safety POC Ari Swartz, Pressure Safety Alt POC Rob Payment, Mechanical POC Michael Ladach, Pressure Safety Program Manager Derrick Velasquez, IQPA-QP</p>

				Program Lead Jeremy Valentine, and Structural POC Carlos Coronado.
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A1 of 3: President's Day was created to commemorate George Washington, who was born on Feb 22, 1732. Washington was a vital figure in the establishment of the country and one of the most influential figures in American History.



LANL Engineering Standards Admin matters

E-mail for COE Eng Stds: 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](#).

Q2 of 3: Name five Presidents born in February.

LANL ENGINEERING PROCESSES CHANGES

Document	Title	Rev.	Date	Comments
AP-341-503	Technical Evaluation of Replacement Items	2.2	1/9/2025	This revision includes minor updates (changed P840-1 to 841-1 and SI-DC to PSE-IM). Thanks to AP Manager Azupuri Kaba.
FM01 and FM01(I)	Replacement Item Preliminary Evaluation			
FM02 and FM02(I)	Like-for-Like Replacement Item Evaluation			
FM03 and FM03(I)	Equivalent Replacement Item Evaluation			

LANL Engineering Processes Look Ahead:

- AP-341-519, Att. C - Redline Process coming soon!
- AP-341-901, currently in RevCom for review.

LANL Engineering Processes Admin matters

E-mail for COE Eng Processes: COE-APs@lanl.gov

Click e-mail address above for any questions related to Administrative Procedures. Goes to Azupuri Kaba (Kaba), 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.

A2 of 3: George Washington; Abraham Lincoln; William Henry Harrison; Ronald Reagan; Chester A. Arthur.



NATIONAL STANDARDS ACTION

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

[NFPA 80](#), Standard for Fire Doors and Other Opening Protectives

Publication Date: 2025

Type of Change: Complete Revision

Q3 of 3: *Which pie has become a traditional food linked with President's Day?*

DOE TECHNICAL STANDARDS ACTION

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

[DOE-STD-1095-2025, Department of Energy Laboratory Accreditation Program for Personnel Dosimetry](#)

A3 of 3: *Cherry pie is a traditional meal linked with President's Day, particularly George Washington. The link between cherry pie and President's Day is based on the narrative of Washington chopping down a cherry tree in his youth.*

According to legend, when George Washington was a child, he hacked down his father's cheery tree with a hatchet. When challenged by his father, Washington allegedly confessed and stated, "I cannot tell a lie".

This widely accepted invention has become an enduring part of American legend and is frequently cited to demonstrate Washington's honesty and integrity (considered positive traits by many).



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.

No updates this month.

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

[Flawed Emergency Alert Systems Lagged When Residents Needed Them Most During Los Angeles Wildfires - Fire Engineering: Firefighter Training and Fire Service News, Rescue](#)



With assistance from ChatGPT

The recent Los Angeles wildfires have exposed significant flaws in the city's emergency alert systems, leading to delayed evacuation orders and contributing to tragic outcomes. On January 7, 2025, wind-driven fires erupted in areas including Pacific Palisades and Altadena. In Altadena, where most fatalities occurred, evacuation orders were issued only after homes were already ablaze. Many residents reported receiving no alerts or receiving them too late to take effective action.

The fragmented nature of Los Angeles County's alert systems has been identified as a key issue. With multiple overlapping systems and inconsistent coordination among agencies, the dissemination of timely and accurate information was hindered. This fragmentation led to confusion and delayed responses during the crisis. In response to these failures, Los Angeles County officials have approved an independent review to assess the performance of the alert systems during the Eaton and Palisades fires. The goal is to identify shortcomings and implement improvements to ensure residents receive prompt and clear warnings in future emergencies.

This situation underscores a recurring problem in emergency management. Past incidents, such as the 2018 Camp Fire in Paradise, California, and the 2023 Lahaina Fire in Hawaii, also revealed critical issues with alert systems, emphasizing the need for effective communication strategies during disasters. The Los Angeles wildfires highlight the urgent necessity for comprehensive evaluations and reforms of emergency alert systems to enhance public safety and preparedness in the face of natural disasters.

At LANL, the Emergency Operations Center provides a central location for interagency and interjurisdictional coordination and executive decision-making in support of an accident response. The LANL Wildland Fire Program collaborates with external stakeholders - Los Alamos Fire Department, Forest Service and National Park Service, Bureau of Indian Affairs, Northern Pueblo Agencies, and New Mexico State Forestry Division - and internal stakeholders - Environmental Stewardship, Computational Earth Science, High Explosive Operations, and Fire Protection groups - to enhance wildland fire preparedness and to jointly protect life, property, and the environment from the effects of wildland fires.

LAST MONTH'S UPDATE TOPICS

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

- Graduate School Funding Available for Women Engineers
- Training & Qualification
- LANL Engineering Standards Issued in December 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.

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