

Engineering Standards Update

News from Engineering Standards Program

Feb. 6, 2024

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

Topics this month:

- New Email for Engineering Processes Team
- New ES-IF and ES-IPD Acting Group Leads
- Commissioning POC Change
- Don Yardman Retiring
- Engineers: Funding Available to Gain Professional Development
- Training & Qualification
- LANL Engineering Standards Issued in January
- National Standards Action
- DOE Technical Standards Action
- MSS Document Action
- When Good Conduct of Engineering Isn't Followed

NEW EMAIL FOR ENGINEERING PROCESSES TEAM



The Engineering Processes Team now has a new email address for any general questions members in CoE: Sarah Murdock, Tobin Oruch, Beau Portillo, and Christina Salazar-Bal [Procedures](#) webpage and click on the email under the Engineering Processes team.

NEW ES-IF AND ES-IPD ACTING GROUP LEADS

Jake Hilderbrand and Karen Marsh will complete the second rotation for the ES-IF and ES-IPD acting Group Lead positions, respectively, beginning Jan 15th until the positions are filled.

COMMISSIONING POC CHANGE

With the retirement of Cindy Dilworth, Charles Richardson has assumed her STUPCOMM Group Leader role; Tom Gerike, STUPCOMMPI's GL will become the new ESM Chapter 15 Cx POC and Charles will remain the Alternate POC.

DON YARDMAN RETIRING

Don Yardman, Alternate Civil POC, is retiring at the end of Feb after dedicating many years of service to LANL. We thank Don for his hard work and contribution to the engineering standards. Fortino Ramirez remains the Primary POC and John O'Brien as the Alternate POC for Civil.

ENGINEERS: FUNDING AVAILABLE TO GAIN PROFESSIONAL DEVELOPMENT

The Engineering Leadership Council (ELC) is offering professional development opportunities to Laboratory engineers. The funding may be used to help engineers attend professional events, present at conferences, nominate colleagues for awards, publish journals articles and more. See article below for details on the program, funding and application process/criteria. For questions, please contact [Nathan Moody](#) or [Holly Trelue](#).

[Engineers: Funding available to gain professional development and increase visibility \(lanl.gov\)](#)

TRAINING & QUALIFICATION

Courses, Seminars, Programs

CoE ASME B31.3 Process Piping Code, #53900 – Feb 12-15, 20-22, 26 (must attend all 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 Commercial Grade Dedication (CGD), #30727 - Preparers Course - Feb 15, 9:00 - 11:00 am, Teams

For those of you who will serve as LANL CGD Preparers including Procurement engineers, select CSEs and Quality SMEs, both Courses #30726 (prerequisite) and #30727 are required. Contact instructor John Lamendola with questions.

Intro to LANL Engineering Standards, #24140 – Mar 11-14 (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). 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**.

CoE: Design Engineer Over-Current Protection Duty Area 9, #58192 – Mar 14, 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 - ASME B31.9, #56239, Mar 18 - 21, 25-28, 2:00-3:30 pm, Teams

Ari Swartz is leading this instructor-led course to familiarize participants with ASME B31.9 code and its real application as related to the duties of a Pressure Safety Officer.

Onboarding Training Courses by CoE Office, Teams:

- CoE ES LANL Organization and Engineering Divisions Introduction #54659, Feb 7, Feb 14, Feb 21, Feb 28 10.30 - 11.30 am
- CoE ES Onboarding: Job Functions of Roles #54860, Feb 8, Feb 22 11.30 am - 12 pm
- COE Engineering Initial Onboarding #54864, Feb 21 10 - 10.30 am
- COE Configuration Management Overview #55231, Feb 8, Feb 22 9.30 - 10.30 am.

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). 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.

With AI & rapidly changing technology.....

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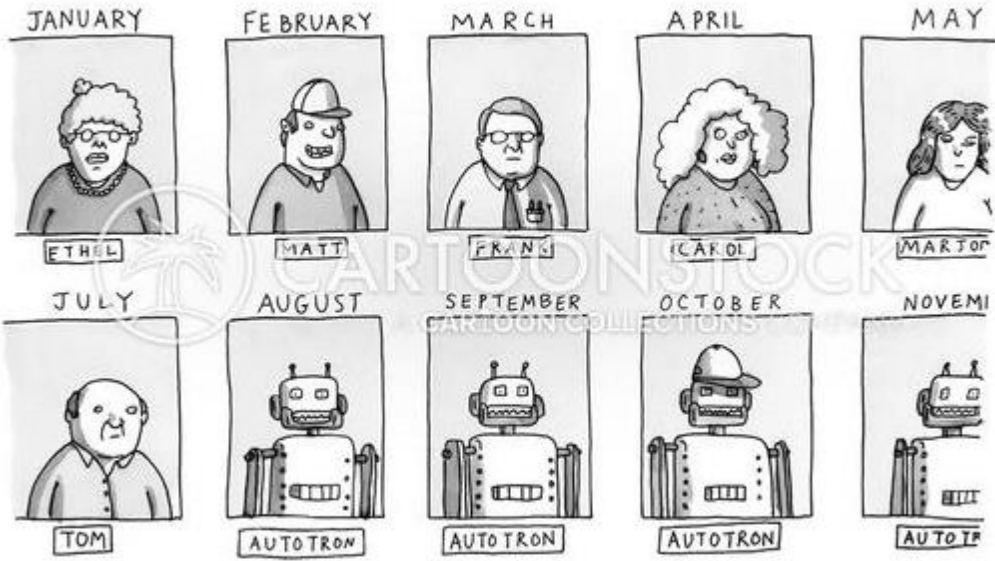


"I'M SORRY... BUT I'VE JUST BEEN INFORMED RECENT TECHNOLOGICAL ADVANCES HAVE RENDERED THIS COURSE OBSOLETE!"

.....don't fall behind!!

EMPLOYEES OF THE MONTH

CC138153



Kanin

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.

LANL ENGINEERING STANDARDS ISSUED IN JANUARY

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

Chapter	Section	Title	Rev.	Date	Comments
Chapter 1 - General Requirements for All Disciplines/Chapters	Z10	Posted Variance: VAR-10642, Priority, Support and General Document Definitions	15	2/6/2024	Thanks to Valerie Rhodes, Sarah Murdock, Tobin Oruch, Dan Tepley et. al.
Chapter 1 - General Requirements for All Disciplines/Chapters	Z10, Attachment A	Temporarily withdrawn per posted Variance: VAR-10642, Priority, Support and General Document Definitions	5	2/6/2024	Thanks to Valerie Rhodes, Sarah Murdock, Tobin Oruch, Dan Tepley et. al.
Chapter 17 - Pressure Safety	References	NASME Reputable Manufacturers List and Approval Process	-	1/22/2024	Thanks to POC Ari Swartz and Alternate POC Rob Payment
Chapter 20 - Systems Engineering	SE Requirements	Posted Variance: VAR-10613, Systems Engineering Roles and PIE-3 (ESM Chapter 20)	0	1/30/2024	Thanks to Ben Schwab, Dante Archibeque et. al.

CAD Standards Manual ESM [STD-342-300](#)

Section	Title	Rev.	Date	Comments
100, General Requirements	Posted Variance: VAR-10642, Priority, Support and General Document Definitions	5	2/6/2024	Thanks to Valerie Rhodes, Sarah Murdock, Tobin Oruch, Dan Tepley et. al.

Others

Document	Title	Rev.	Date	Comments
AP-341-405, Identification and Control of Technical Baseline in Operating Facilities	Posted Variance: VAR-10642, Priority, Support and General Document Definitions	6.2	2/6/2024	Thanks to Valerie Rhodes, Sarah Murdock, Tobin Oruch, Dan Tepley et. al.
ESD-TRN-001, DAR Qualification Standard, Design Authority Representative (DAR) Lines of Inquiry and Study Guide	Posted Variance: VAR-10642, Priority, Support and General Document Definitions	2	2/6/2024	Thanks to Valerie Rhodes, Sarah Murdock, Tobin Oruch, Dan Tepley et. al.

FYI - Lightning protection components which used to be on [Form 410](#) Product Approval list, requiring SME approval for purchase, were removed from the list in September 2023.

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](#).

While using ChatGPT, remember to follow LANL policy. It can be a helpful assistant or tutor!



NATIONAL STANDARDS ACTION

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

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.

NFPA Notes: Refer to ESM Chapter 2, D40GEN [Attachment 1](#), *Adopted Editions of NFPA Fire Protection Codes, Standards, and Recommended Practices*, since many of the following are not yet adopted. Also, as a reminder, NFPA codes & standards are read-only in EWB.

[NFPA 13-2022](#), **Standard for the Installation of Sprinkler Systems** (LANL uses 2019)

Type of Change: Incorporated TIA and ERTA Changes

[NFPA 69-2024](#), **Standard on Explosion Prevention Systems** (not listed in Att. 1 but 2019 is invoked by NFPA 1-2021)

Type of Change: Complete Revision

[NFPA 70 ERTA 7](#), **National Electrical Code** (LANL uses 2020)

Type of Change: Errata/Erratum to 2023 edition

Publication Date: 12/7/2023

[NFPA 75-2024](#), **Standard for the Fire Protection of Information Technology Equipment** (LANL uses 2020)

Type of Change: Complete Revision

[ASHRAE 55 ADD I](#), **Thermal Environmental Conditions for Human Occupancy**

Type of Change: Status Change (Addendum to 2020 to update references to updated ASHRAE publications)

Publication Date: 4/28/2023

[IAPMO UPC](#), **Uniform Plumbing Code 2021 (29th Edition)** (LANL uses on projects since 4/21/22)

Type of Change: 4th printing dated Feb 2023 (errata fixed) posted

EWB Code Access Note: Most of the 2024 International and Uniform series codes have been published and are shown on EWB, but LANL doesn't subscribe to them since we're mostly using selected 2021 editions [per ESM Chapter 16, IBC-GEN [Att. A](#): LANL Building Code (LBC)]. To access the 2021s on EWB, you may have to uncheck "Most Recent Revision" for the 2021 to appear in the search results. It will show as revised but should be available (no shopping cart icon). Takes a little brainpower--can't just surf like an overcaffeinated teenager ;-)

The future?



"They don't appear to want to take over. They just want to dance."

DOE TECHNICAL STANDARDS ACTION

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

[DOE-HDBK-1244-2023, Biokinetic and Dosimetric Models Used in DOE-STD-1196-2022, Derived Concentration Technical Standard](#) (NEW!)

Publication Date: Dec 13 2023

This Handbook documents the biokinetic and dosimetric models used to derive the effective dose coefficients and derived concentration standards tabulated in [DOE STD-1196-2022]. The derived concentration standards (DCS) values are reference concentrations of radionuclides in environmental media (air, water, and milk) that provide a basis for the control of releases from DOE facilities.

[DOE-STD-8002-2023 Explosives Safety Functional Area Qualification Standard](#) (the Feds follow these, not Triad)

Publication Date: Dec 29 2023

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.

AP-MNT-013 R5: Deferred Maintenance & Repair Needs Identification and Reporting

- In Section 3.2, “Quarterly Updates of Items Impacting DM and RN,” removed all references to “CAIS DM/RN reports” from Steps 1, 2, and 3.
- In Section 3.3, “Annual DM Identification and Reporting,” removed reference to “CAIS” in Steps 4-6.

AP-MNT-017 R2: Condition Assessment Surveys (CAS) of Real Property

- In Section 3.1, “Inspection, Scope Steps”, removed all references to “CAIS reports” from Step 1. Removed second step.
- In Section 3.2, “Pre-Inspection Planning Steps,” removed all references to “CAIS DM/RN reports” from Steps 1 and 3.
- Added steps for MSS Data Assessment Planner and Assessment Team in Section 3.2.
- In Section 3.3, “Perform Inspection Steps,” added and modified steps for Assessment Team and Maintenance Coordinator/Building Manager.
- In Section 3.4, “Post-Inspection Steps,” modified step for Assessment Team. In Section 3.4, added steps for MSS-Data Facility Assessment Team Leader, MSS-Database Technician, and MSS-Asset Condition Analysis Team Leader.
- In Section 4.0, “Responsibilities,” added step for Maintenance Coordinator/Building Manager.

O&M 404 Rev 5: Gas Furnaces and Unit Heaters

- Migrated document to the current O&M template revision.
- Performed technical editing throughout (corrected grammar, typos, formatting, etc.).
- Updated Section 3.0, *Acronyms*, with acronyms used more than once.
- Incorporated changes from NFPA 54/ANSI Z223.1, *National Fuel Gas Code*, 2021.
- Housekeeping requirements added to section 6.1, *Operations Requirements*.
- Removed references from Section 10.0, *References*, that were not referred to in the text or used as basis statements.

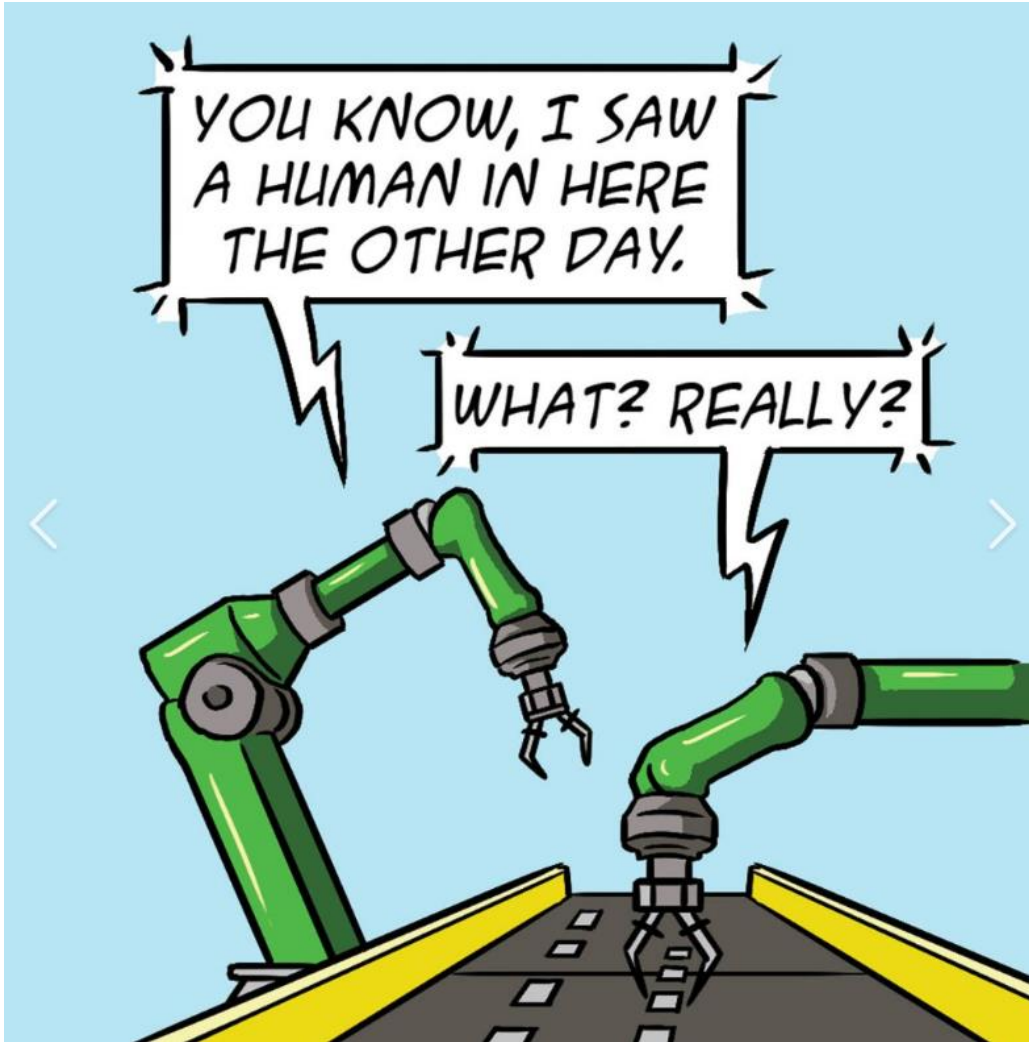
O&M 410 Rev 3: Fans and Ductwork

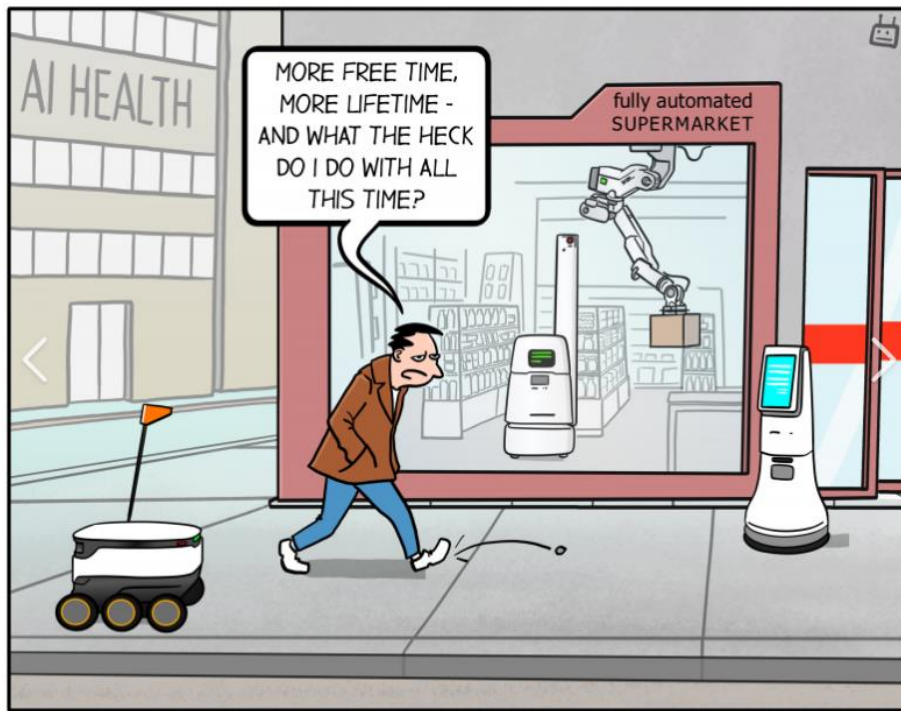
- Updated references: ASHRAE 62.1-2022, OSHA Regulations 29 CFR 1910.212
- Performed technical edit.
- Added quarterly frequency for Section 6.2, Maintenance Requirements.
- Added steps for Section 7.2.1, Air Handling System Ductwork.

O&M 418 Rev 3: Vacuum Pumps

- Updated to current template revision.
- Performed technical editing (added missing acronyms and reorganized in alphabetical order, reorganized definitions in alphabetical order, added missing references and reorganized in alphabetical order, removed unused references, grammatical/administrative changes throughout).
- Included new precautions to Section 5.1.
- Restructured the operations and maintenance requirements found in Section 6.0 by technology/equipment type and organized by frequency; added basic operations requirements per the new references.
- Incorporated new industry references as basis/citations throughout.

The future????!!!!





WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

[The first US lunar lander to launch in over 50 years is headed for a fiery end. Here's what it got done in space \(msn.com\)](#)

A private US company, Astrobotic's attempt to softly land a lunar spacecraft, Peregrine Mission 1, on the moon in over 50 years ended in failure after an anomaly in the spacecraft's propulsion system. This example highlights the razor thin margin in the design of spacecrafts with little room for error. NASA paid Astrobotic significantly less to develop the lunar lander knowing it was taking on increased risk of losing any of the commercial lunar payload missions.

LANL's ESM for facilities on the ground have a higher safety factor for the design of its nuclear and non-nuclear facilities to minimize risk and to protect the public.

LAST MONTH'S UPDATE TOPICS

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

- New ES-WPD Acting Group Lead
- Training & Qualification
- LANL Engineering Standards Issued in December or so
- 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.

