

ENGINEERING STANDARDS UPDATE

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

Topics this month:

- Concrete Mixes Changed Today, 6/5
- Training & Qualification
- Standards POC News
- Engineering and Safety Policy News
- LANL Standards Issued in May
- 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: <https://engstandards.lanl.gov/index.shtml>

**CONCRETE MIXES CHANGED TODAY, 6/5**

Due to a material change at LATM, projects placing concrete starting this afternoon will need to ensure their specification reflects LATM's Tephra pozzolan based preapproved mix designs. Projects in construction phase will likely need an FCR to do this. The LANL masters listing Tephra mixes are:

[03 3001](#) r17 Reinforced Concrete (issued March 20; POC Carlos Coronado;)

[03 3053](#) r11 Miscellaneous Cast-In-Place Concrete (issued May 4; POC now Fortino Ramirez;)

Noise Filter

THIS FEATURE SHOULD AUTOMATICALLY
APPEAR WHEN YOU REACH AGE 30.

Party Mode also enables the feature, but reverses the slider.

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

TRAINING & QUALIFICATION
Courses (standards-heavy!)

[Intro to LANL Engineering Standards, 24140 – June 19-22 \(M-Tr, must attend all 4 days\), 2:00-4:00 PM Teams](#)

Note: Last scheduled offering, next session is TBD.

Attend each day to receive credit (it's 8 contact hours, despite what UTrain may say). You'll need to block your own calendars. Register in UTrain. If that fails, contact es-do-tng@lanl.gov with Z number. 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: LANL Engineering Standards Overview 52693 -- Aug 7, Sep 18, and Nov 6

If you don't have 24140 in your qual standard or training plan and just want to learn about the standards for 2 hours, not 8, then you can wait until later this year, sign up, and take this shortened course on Aug 7, Sep 18, or Nov 6 from 2:00-4:00 pm.

Standards at LANL: Accessing, Downloading, Purchasing, and More [Wednesday, June 14, 2023](#), 11 AM – 12 PM, MT, Webex; Host: [Research Library](#)

Engineering liaison librarian Sarah Hayes will go over standards available through the Research Library, including:

- Standards: What are they and how to find them
- Engineering Workbench (EWB) - accessing and searching the site, as well as how to download and purchase standards from EWB
- The Institute of Electrical and Electronics Engineers' website, IEEE Xplore
- Other standards, like Department of Energy and Defense-issued standards
- Intro to the RL's standards resource guide
- How to suggest a purchase outside of EWB

This event will be held online via Webex. The sign-in information will be sent to you after you [register for the event at LibCal](#). The presentation slides will be sent to attendees after the session is over.

Thanks to Sarah Lynn Hayes, Engineering Librarian, SRO-RL: Research Library, pronouns: she/her, they/them ("[what is non-binary?](#)"), Contact me via email at slhayes@lanl.gov snip

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. The email goes to the whole team: Stan Hayes, Nick Jones, Sadonna Tapia, Santana Quintana, and Chris Martinez.

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 the whole team: 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>

STANDARDS POC NEWS

Excerpts from an email from Tom Wando:

Scott Richardson, who has served as the "Chief Architect" at LANL for an extensive period, will soon embark on a new journey. We express our heartfelt appreciation for his unwavering commitment and seize this opportunity to unveil his transition plan.

-
- Brandon Rael from IPD will assume the roles of Arch POC (Point of Contact) and Alt Computer-Aided Design (CAD) Standards POC
 - Michael Gallegos from WPD will undertake the positions of CAD Standards POC and Alt Arch POC.

...and from another email:

Fortino Ramirez, ES-SPD, will be assuming the responsibilities of Civil Standards POC and will be working jointly with Donald Yardman, ES-IPD, as the Lead Civil Subject Matter Expert (SME), taking over from Jon Stein, ES-UI. Please contact Fortino Ramirez @ 505-487-3924 or framirez@lanl.gov for any questions.

I certainly agree with Tom in expressing the utmost appreciation for Scott's POC work over a large part of the last 20 years! Thanks to Jon as well, although much more recent.



Looking at architecture until Scott's very final day in a couple of months.

LANL STANDARDS ISSUED IN MAY <http://engstandards.lanl.gov/>
Engineering Standards Manual ESM [STD-342-100](#)

ESM-Chapter	Section	Title	Rev.	Date	Comments
Chapter 1 - General	200/210/230	Attachment 1: CMMS Upload Workbook	1.6	5/12/23	210/230 revisions on those tabs. Thanks to Charlie Nuss, Keeper of the Lists.

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

Section Number	Rev.	Section Title	Effective	Summary
03 3053	11	Miscellaneous Cast-In-Place Concrete	5/4/23	Tephra pozzolan-based pre-approved mix designs for NMDOT (Class A, AA, and F) added. Thanks to departing POC Jon Stein.
26 0813	4	Electrical Acceptance Testing	5/2/23	Deleted LANL's startup and Commissioning Group (STUPCOMM) as an option for testing pending resumption of capacity for same. Deleted insulation and continuity test requirements for electrical conductors. Added notes that optional standby systems do not have a NFPA level. Thanks to Tom Gerike, POC Eric Stromberg.

ENGINEERING AND SAFETY POLICY NEWS**Subcontractor Deviation Disposition Request (SDDR) Form 2178 Revision This Week**

This form has been revised and will be posted on the Standards homepage ([2178, Subcontractor Deviation Disposition Request \(doc\)](#) in the lower-right), probably Tuesday, and then by the Forms Center. SDDRs are applicable to the procurements of engineered or custom (not off-the-shelf) structures, systems, or components (SSCs) or technical services. Their purpose is to document, disposition, review, and reject or approve deviations to subcontract requirements.

Per Dan Tepley, who led the charge, this revision streamlined approvals for rejected SDDRs, incorporated an ES-PFE initiated Variance that captured additional Project and DCF related information, and removed some QA related information that is no longer applicable.

On another note, the policy procedure revisions on pressure safety are being delayed with ESM Ch. 17 revision, now all to be issued Sept 22.

[P101-34 \(Rev.10\) Pressure Safety](#)**Update – Minor Revision –****Provisional Effective: 9/22/23****Summary of Change:****Issued as a PROVISIONAL document until 09/22/23.**

- Extended PROVISIONAL period to 09/22/23.
- Section 4.2: Added bullet pointing RLMs to Section 5.0.
- Section 5.0: Updated to align with new effective date.

[P101-5 \(Rev. 6\) Cryogenics and Compressed Gases: Health and Safety Requirements](#)**Summary of Change:****Issued as a PROVISIONAL document until 09/22/23.**

- PROVISIONAL period extended to September 22, 2023.
- Section 5.0: Updated to reflect new provisional date.



NATIONAL STANDARDS ACTION

[Online National Codes & Standards](#) ← link

Several ASHRAE standards are under continuous maintenance; they issue addenda and we follow them per ESM (Ch. 1 Z10).

Document number: [ASHRAE 55 ADD I](#)

Publication Date: 4/28/2023

Title: **Thermal Environmental Conditions for Human Occupancy**

Type of Change: **Addenda/Addendum**

NFPA codes and standards on IHS are read-only. LANL follows slightly older editions per the [ESM Ch. 2 Attachment 1](#) listing, and these are still available on IHS. The following are complete revisions, 2024 date.

[NFPA 17](#), Standard for Dry Chemical Extinguishing Systems

[NFPA 220](#), Standard on Types of Building Construction

[NFPA 30](#), Flammable and Combustible Liquids Code

[NFPA 70E](#), Standard for Electrical Safety in the Workplace

[NFPA 90A](#), Standard for the Installation of Air-Conditioning and Ventilating Systems

DOE TECHNICAL STANDARDS ACTION

[Tech Stds Program postings](#) in the past month on the [Technical Standards Portal](#): None

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.

PMI 430-A R1: Alpha Omega Series 1000 - Oxygen Deficiency Monitor Systems Inspection, Testing, and Calibration

- Updated Pre-Maintenance Activities as per recommendation of OSH-ISH. Also modified the frequency of 430-A.001 from quarterly to semiannual as per OSH-ISH recommendation.

PMI 430-B R1: Advanced Micro Instruments (AMI) Model 221R Oxygen Deficiency Monitor Systems Inspection, Testing, and Calibration

- Updated Pre-Maintenance and Post-Maintenance Activities as per recommendation of OSH-ISH.

PMI 430-C R1: PureAire Models D, DR, DRA, and Air Liquide Model O2000 Oxygen Deficiency Monitor Systems Inspection, Testing, and Calibration

- Updated Pre-Maintenance and Post-Maintenance Activities as per recommendation of OSH-ISH.

PMI 430-D R1: Alpha Omega Series 2000 Percent Oxygen Deficiency Monitor Systems Inspection, Testing, and Calibration

- Updated Pre-Maintenance and Post-Maintenance Activities as per recommendation of OSH-ISH. Also modified the frequency of 430-D.001 from quarterly to semiannual as per OSH-ISH recommendation.

PMI 430-E R1: RKI OX-600 Indoor Oxygen Deficiency Monitor Systems Inspection, Testing, and Calibration

- Updated Pre-Maintenance and Post-Maintenance Activities as per recommendation of OSH-ISH and modified 430-E.001 to indicate that the monthly maintenance must be performed by the Oxygen Monitor owner and not the calibration team.

PMI 430-G R1: Other (Out of the Recommended List) Oxygen Deficiency Monitor Systems Inspection, Testing, and Calibration

- Updated Pre-Maintenance Activities as per recommendation of OSHISH.

...and finally:

PMI 431-A: Automatic External Defibrillator (AED) Maintenance

- Removed Weekly Maintenance.

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED



<https://www.media.stellantis.com/em-en/lancia/press/lancia-pu-ra-hpe-features-at-the-milan-design-week-2023>

For Lancia, Pu+Ra is “pure and radical.” For anyone that knows chemistry, Pu is plutonium and Ra is radon; would that make the car more or less appealing to them?

Not to be outdone by a carmaker, “**Florida lawmakers want to use radioactive material to pave roads**” (NPR)

Phosphogypsum, a byproduct in the fertilizer industry, contains uranium and radium — and as the EPA notes, it also forms radon, “a cancer-causing, radioactive gas.” Read in NPR:

https://apple.news/AWSyC2vDAQuKwQ6g_w-QEvQ

Time to find the recirc button on your car’s A/C?

LAST MONTH'S UPDATE TOPICS

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

- Bryan Haver Takes on Conduct of Engineering
- Training & Qualification
- LANL Standards Issued in April
- Engineering Processes News
- 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: <https://int.lanl.gov/org/ddops/aldfo/nuclear-safety/engineering-services/conduct-of-engineering/index.shtml>