
ENGINEERING STANDARDS UPDATE

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

Topics this month:

- **ES Div Reorg Beginning**
- **CGD & TEA EDRMS Reports**
- **Engineers Week Submissions Due Jan 7**
- **Electrical Standards Course Jan 11**
- **LANL Standards Issued in December or so**
- **Engineering Processes News**
- **DOE Technical Standards Action**
- **National Standards Action**
- **MSS Document Changes**
- **When Good Conduct of Engineering Isn't Followed**

First, a word from our sponsor:

The LANL Engineering Standards are great; get them here: <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.

**ES DIV REORG BEGINNING**

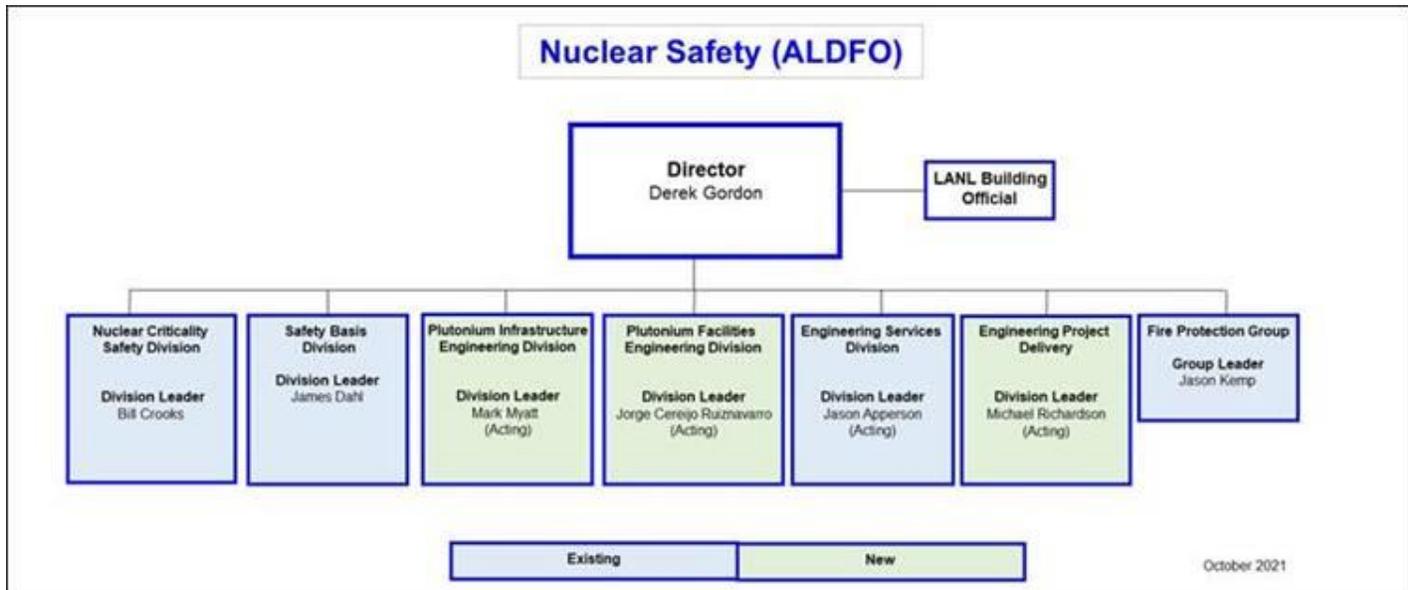
Discussed in October's Update, the downsizing of ES is to begin with spinoff of the Plutonium Infrastructure Eng Div. (You may recall the notional concept below from back then).

Also, there's a new internal/external job ad for the LANL Building Official shown below (ad 94792) here:

<https://lanl.jobs/los-alamos-nm/lbo-office-project-program-director-4-project-program-director-4/86C9EC841B15402DAFC5AADB0869E164/job/>

Rumors that both Jim Streit and Larry Goen want the job back are just that, rumors.

Stay tuned -- breaking up is hard to do...



CGD & TEA EDRMS REPORTS

For those supporting the nuclear facilities: When supplier qualification to NQA-1 fails (i.e., not IESL-worthy), one turns to commercial grade dedication (CGD). Pulling a hot-linked report of CGD or TEA documents from EDRMS is now possible. This is great because reviewing past efforts should save some effort and potentially improve quality versus starting from scratch.

A job aid on how to pull such reports was recently webposted to AP-341-703 and the main CoE page, and we've initiated cross-posting on affected ES group pages. Aid is here: <https://coe.lanl.gov/APs/AllAPs/CGD-TEA-EDRMS-Report-Job-Aid.pdf>

As a caution, there's an issue with incomplete results due to one's permissions; it's addressed at length at the start of the aid. Thanks to Ha Nguyen and team in SI-DCRM.

ENGINEERS WEEK SUBMISSIONS DUE JAN 7

As noted in LANLToday, the submission deadline was extended to this Friday.

Excerpts/More info:

Do you have a presentation or poster idea to share during the Lab's celebration of Engineers Week, **Feb. 23-24**?

Employees, students and postdoctoral researchers **from all engineering organizations** are invited ... both R&D and operations-based projects are welcome.

The event will be open to all employees and will include a hybrid of virtual and in-person sessions. In addition to keynote speakers, the Lab will present its annual postdoctoral publication prize in engineering science.

Details are here https://int.lanl.gov/news/news_stories/2021/december/1209-engineers-week.shtml?source=lanltoday Questions? Contact **Destiny Valdez** at (505) 665-3673. Destiny adds that she needs:

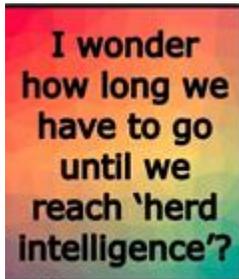
- Main POC
- Best phone number
- LA-UR number (via RASSTI)
- Abstract
- Unclassified
- Would they like to participate in Engineering in 5 or only present a poster?
- Title of presentation

About National Engineers Week

Engineers Week, **Feb. 20-26**, celebrates how engineers impact the world; raises awareness about the need for engineers, technicians, and technologists; and engages students in engineering.

This year's theme, "Reimagining the Possible," celebrates how engineers create new possibilities all the time. From green buildings to fuel-efficient cars to life-saving vaccines, engineers work together to develop new technologies, products and opportunities that change how we live.

At the Lab, the Associate Laboratory Directorate for Weapons Engineering is sponsoring this year's events. Let's celebrate the many ways engineers turn dreams into reality by reimagining what seems impossible to become the possible!



ELECTRICAL STANDARDS COURSE TUES JAN 11

8:00-noon, Webex

Four-hour course 17998 covers the electrical engineering standards in Chapter 7 of the LANL Engineering Standards Manual and discusses mandatory requirements and good practices for those involved in electrical design. Strongly suggested for electrical designers, electrical engineers, electrical safety officers, and facility managers. AEs are also encouraged to participate. Taught by Electrical Standards POC Eric Stromberg via Webex. Register in UTrain then join: <https://lanl-us.webex.com/lanl-us/j.php?MTID=m73751488e8923368422d7ff15225b4a6>. Not many registered as of today.

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. Webex format registrants will receive instructions prior to start.

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

| ESM-Chapter | Section | Title | Rev. | Date | Comments | |
|--------------------------------|---|---|------|------------|--|--|
| Chapter 1 - General | 200 | 200, Item Numbering and Labelling | 9 | 12/21/2021 | Fully superseded/canceled AP-341-404 (and VAR-10424) by adding App. E, MEL Approval and Upkeep. Allowed for limited change approval delegation [briefings forthcoming!] Introduced upload workbook that includes examples, the official acronym/name listings discussed by Sections 210 and 230, and field requirements replacing several standalone attachments to Sections 200–230. Other minor changes throughout including oxygen monitor ID requirements. Approval Form revised. A HUGE thanks to Ryan Keyser and Alan Yaeger. | |
| | 200 | Attachment 1: CMMS Upload Workbook | 1.1 | 01/04/2022 | | |
| | 200 | Attachment 2: Parameter Templates | 0.2 | 12/21/2021 | | |
| | 200 | Form 01: CMMS Change Approval Form (Instructions) | 1 | 12/21/2021 | | |
| | 210 | Attachment 1: Systems List | - | 12/21/2021 | | List now a tab in Section 200 workbook. |
| | 230 | Attachment 1: Equipment Type and Subtype | - | 12/21/2021 | | List now a tab in Section 200 workbook. |
| Ch. 5, Structural | II, Commercial Design and Analysis Requirements | New reference: SDC-C “All Other Systems Usage” Prebid Approval Request Form (e.g., Modular) | | 12/21/2021 | Thanks to POC Mike Denlinger, Karen Marsh. | |
| Ch. 16, IBC Program | IBC-IP Inspection Process References | Independence Requirements for Third Party Inspection Agencies (LANL only) NEW | | 12/3/2021 | New direction on the need for independence in all IBC inspections from the LANL Building Official through ALDFO. | |
| Ch. 17, Pressure Safety | GEN | General Requirements, r0.1 | | 12/16/2021 | Updated document title for qual standard and hyperlink. Also updated other hyperlinks. Per POC Ari Swartz | |

ENGINEERING PROCESSES NEWS

From CoE Eng Process Manager Sarah Murdock:

AP-341-404-R2.1, Master Equipment List

Canceled 12/23/2021; now controlled by ESM Ch. 1 Section 200.

In other news, a new AP-341-704 on quality verification of things like ML-3 items and services is in the works, with the initial Aproove review phase just wrapped up. And a revision to AP-341-401 is in the approval cycle; it'll now cover Work Instructions and be called COE Program Administrative Procedure and Work Instruction Management.

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.

[CLICK HERE to
Request an AP Clarification
or Change](#)

**DOE TECHNICAL STANDARDS ACTION**

Tech Stds Program postings in the past month:

DOE-STD-1063-2021, DOE Standard Facility Representatives
Defines the duties, responsibilities and qualifications for U.S. Department of Energy (DOE) Facility Representatives (FRs), based on facility hazard classification; risks to workers, the public, and the environment; and the operational activity level. Provides the guidance necessary to ensure that DOE's hazardous nuclear and non-nuclear facilities have sufficient staffing of technically qualified FRs to provide day-to-day oversight of contractor operations.

NATIONAL STANDARDS ACTION

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

ASME Joins AWS and Others on Digital Rights Management (DRM)

This week, ASME was to begin to use digital rights management (DRM) software on IHS Engineering Workbench according to Sarah Hayes at the library. For one thing, this means

downloads expire after 120 days and you'll need to download again. Several other societies also employ DRM including AWS and NBBI (and NFPA doesn't even let one download, only read online).

Also, DRM requires a free Adobe Acrobat plug-in that "locks" the PDF file to the computer on which it was first opened. If you have admin rights on your computer, click here to download the plug-in. Once File Open is working, you can view, print or download the file.

Standards Revisions

Document number: **ASCE 7-22**, Minimum Design Loads and Associated Criteria for Buildings and Other Structures

Posted Date: 12/3/2021, Pub Date: 1/1/2022

Note: LANL still follows ASCE 7-10 for now, with 7-16 soon (in 2022, when we adopt 2021 IBC).

NFPA Note: ESM Ch 2 Fire Protection Att 1 – *Adopted Editions of NFPA Fire Protection Codes, Standards, and Recommended Practices* directs the use of various editions, not just-issued ones like the 2022's below, so below is largely FYI. Att 1 will probably be updated in 2022 (LANL planning to adopt most 2021 building codes).

Document number: **NFPA 13-22 ERTA 1**, Standard for the Installation of Sprinkler Systems

Publication Date: 8/31/2021

Type of Change: Errata/Erratum

Document number: **NFPA 20-22 AMD 2**, Standard for the Installation of Stationary Pumps for Fire Protection

Publication Date: 12/8/2021

Type of Change: Amendment

MSS DOCUMENT CHANGES

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

O&M Criterion/PMI Changes

Operation and Maintenance Criterion and related Preventative Maintenance Instruction (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.

If you have issues on the SharePoint site use Internet Explorer to access them. Access to all such documents when no direct link is shown

below: <https://logistics.lanl.gov/MSS/layouts/15/start.aspx#/Policy%20%20Procedures/Forms/Public.aspx>

PMI:700-D Firewater Tank Monitoring Annual Preventative Maintenance

Direct: <https://logistics.lanl.gov/MSS/Policy%20%20Procedures/Forms/Public.aspx>

O&M 733 Rev7: Fire Protection System Impairment Control Program

- Added guidelines regarding the order impairments should be resolved/corrected
- Changed “FP-DO” to “ES-FP”
- Changed “LASO” to “LAFO”
- Updated impairment tag attachment to reflect current Impairment Tag design
- Specified MSS-WC responsibilities for when impairments are lifted
- Updated to criterion template
- Updated references to most current adopted editions.

Direct:

<https://logistics.lanl.gov/MSS/layouts/15/WopiFrame.aspx?sourcedoc=/MSS/Policy%20%20Procedures/733.pdf&action=default>

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

Instead, here's a story about when good CoE IS followed very well.



The \$10B James Webb Space Telescope successfully launched in December and has been unfolding since. https://www.nasa.gov/mission_pages/webb/main/index.html

One authority said the JWST design included 344 single-point failure opportunities (as of today it's progressed past most of them).

Wowwww. New LANL nuclear facility safety class systems have to be designed against ANY single-point failure per the criteria, requirements, and design analysis identified in IEEE 379, Standard Application of the Single-Failure Criterion to Nuclear Power Generating Safety Systems. Of course, our systems don't have to be light enough to launch, be operated entirely

remotely up to a million miles distant, and the rest. And they have to protect the public from a release.

Finally this. A little giddy but good sentiment and I like the math 😊



LAST MONTH'S UPDATE TOPICS

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

- **Training & Qualification**
- **Engineering Processes News**
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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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