

Engineering Standards Update



News from Engineering Standards Program

Nov. 1, 2023

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

Topics this month:

- New ES-WPD Group Lead
- New ES-IF and ES-UPD Groups
- New Pressure Safety Program Manager
- Training & Qualification
- LANL Engineering Standards Issued in October
- National Standards Action
- DOE Technical Standards Action
- MSS Document Action
- When Good Conduct of Engineering Isn't Followed

Happy Thanksgiving!



NEW ES-WPD GROUP LEAD

Laila Badran is the new Group Leader for the Weapons Project Delivery and Nuclear Design Group per Bryan Haver on Oct. 4th.

NEW ES-IF & ES-UPD GROUPS

ES has established two new groups, effective Oct 30th, to provide dedicated support for the IF and UI FODs. This will allow ES to better align with the FODs and function without mixing FOD priorities.

On the direct support side (e.g., system and plant engineering, dark green below):

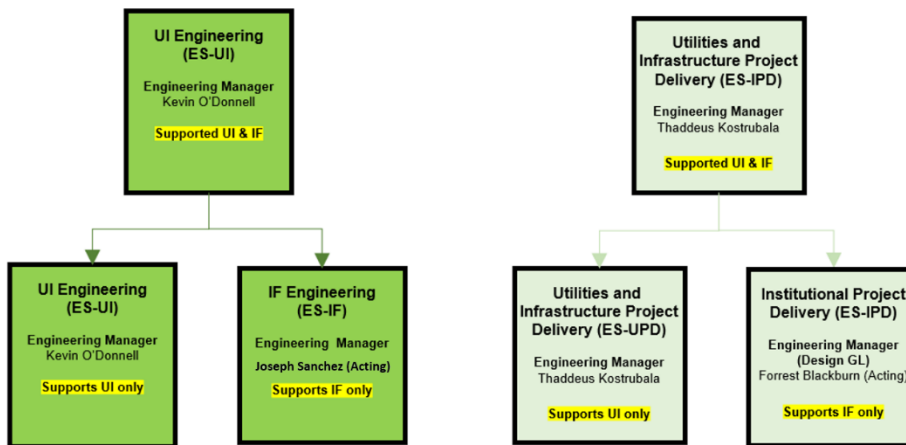
For ES-UI, Kevin O'Donnell, current group lead, will continue in his role but will only support UI FOD.

For the new ES-IF group, Joseph Sanchez, current ES-WPD electrical team lead, will complete the first rotation for the acting group lead beginning Oct 30th through Dec 8th.

On the project delivery side (light green below):

The new **ES-UPD** group supporting UI FOD will be led by **Thaddeus "Tadz" Kostrubala**, current ES-IPD group leader.

For ES-IPD, Forrest Blackburn, current ES-IPD engineering manager, will complete the first rotation for the acting group lead beginning Oct 30th through Dec 8th.

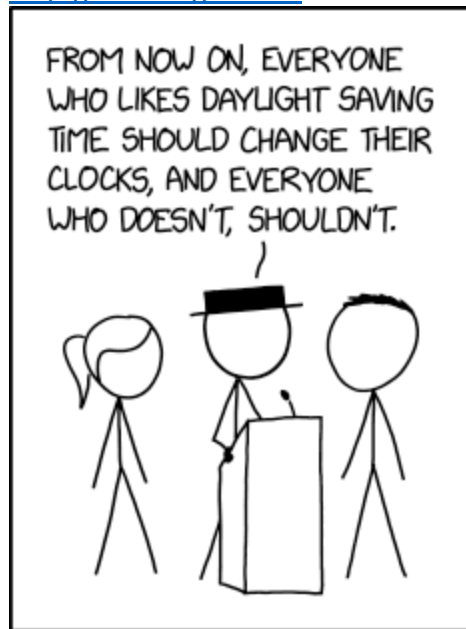


Service to each FOD will remain uninterrupted during this reorganization. ES staff supporting UI and IF will continue to work on their current projects regardless of these group changes. Over time, ES staff supporting UI and IF will focus on serving the FOD to which they are aligned.

NEW PRESSURE SAFETY PROGRAM MANAGER

Derrick Velasquez is the new Pressure Safety Program Manager with ES. He has worked at LANL for over ten years and brings a wealth of knowledge and experience to the program! He'll work alongside the POCs and SMEs in the Institutional Pressure Safety Support (IPSS) team in [ES-OPS](#).

Daylight Saving Choice



THE GOVERNMENT FINALLY
DECIDES TO PUT AN END
TO ALL THE ARGUMENTS.

I average out the spring and fall changes and just set my clocks 39 minutes ahead year-round.
xkcd, 177 Huntington Ave Ste 1703 #75312, Boston, Massachusetts 02115-3153 US

TRAINING & QUALIFICATION

Courses, Seminars, Programs

CoE: LANL Engineering Standards Overview #52693 – Nov 6, 2:00-4:00 pm, Teams

If you're new, don't have 8-hour Course #24140 Intro to LANL Engineering Standards (see below) in your training plan, or just want to learn about the standards for 2 hours, then you can take this shortened course taught by Neha Gidwani.

CoE ASME B31.3 Process Piping Code, #53900 – Nov 6-9, 13-16, 20, 21 (M-Tr, must attend all 10 sessions), 2:00-3.30 pm, Teams

Ben 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.

Intro to LANL Engineering Standards, #24140 – Nov 13-16 (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. Also, ignore UTrain showing revision 7/15/2020 11:20 AM America/Denver, that's just an establishment date). You'll need to block your own

THANKSGIVING FEAST OF LEARNING



calendars. 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 ESM Chapter 21 Software – Overview and Owners Courses – series is Tues, Nov 7 and 14, 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, Nov 7, from 9 am - noon.
- 34048 CoE ESM Chapter 21 Software Owners (3 additional hours, just Owners return for this): Thursday, Nov 14, also from 9 am - noon.

CoE Safety Basis Overview for Engineers #39564 – NOTE DATE CHANGE AND MULTIPLE COURSE OFFERINGS BELOW, Teams

If you have this course in your training plan, or just want to learn about safety basis for 2 hours, then you can take this course taught by Heath McLaughlin.

Tues, Nov 7, 9 - 11 am; Thurs, Nov 16, 1 - 3 pm;
Mon, Nov 27, 1 - 3 pm;
Tues, Jan 30, 8.30 - 10.30 am.

Onboarding Training Courses by CoE Office, Teams

- CoE ES Onboarding: Job Functions of Roles #54860, Thurs, Nov 2 & Nov 16, 11.30 am - 12 pm
- CoE AP-341-627 Design Coordination #54166, Tues, Nov 7, 9 - 9.30 am
- CoE: Engineering Services Initial Onboarding Training #54864, Thurs, Nov 9 & Nov 30, 1 - 1.30 pm; Wed, Nov 15, 10 - 10.30 am

- ES Onboarding: AP Introduction and Common APs Deep Dive #54871, Thurs, Nov 30, 1 - 3 pm.

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.

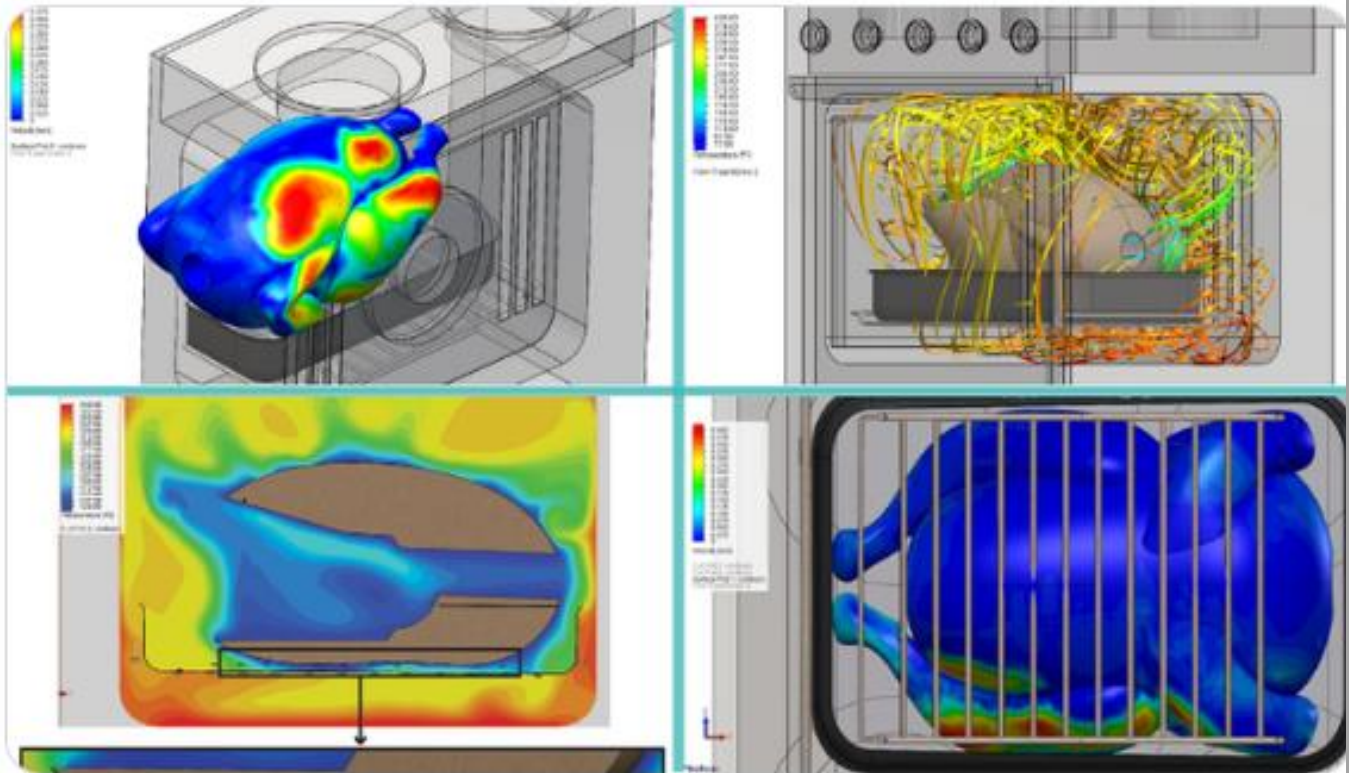
E-mail for CoE Qual Program: COEQuals@lanl.gov

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.

How engineers "engineer" a perfect Thanksgiving turkey....



LANL ENGINEERING STANDARDS ISSUED IN OCTOBER

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

Chapter	Section	Title	Rev.	Date	Comments
Chapter 1 – General	200/210/230	Attachment 1: CMMS Upload Workbook	1.7	10/31/23	210/230 revisions on those tabs. Thanks to Charlie Nuss, Keeper of the Lists
Chapter 16 – Building Code Program	IBC-GEN, App. B amends IBC-GEN App. B, Prefab Storage Approach	Posted VAR-10586, Vault-Type Restrooms – Hydrants and Occupancy Class	-	9/18/23	Clarified requirements and classes. Thanks to Amy Gitnick, POC Tobin Oruch, Jason Kemp (FP Office), LBO Dan Tepley

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

New EV Charger Standard Detail! This is a new, evolving technology to which there are no mature codes and standards for fire protection and other issues. Revisions will follow to meet those concerns.

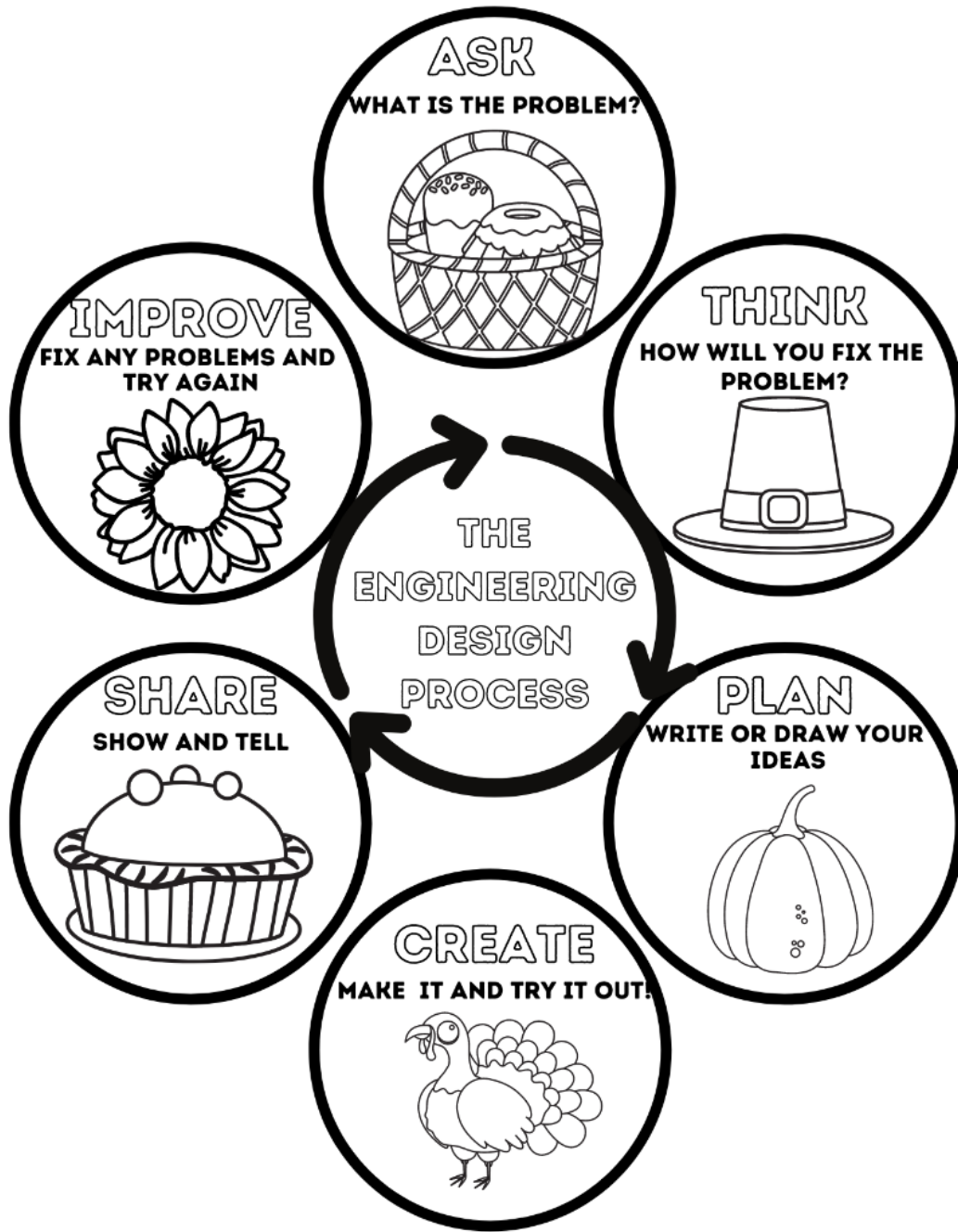
Thanks to Electrical POC Eric Stromberg (document owner), Mark Nelson, Rafael De La Torre, Greg Seay, Alternate Structural POC Andrew Giesler, Structural POC Carlos Coronado, Neha Gidwani, Fire Protection POC Keenan Dotson, Kristi Ketchum, Israel Rodriguez-Rios, Thaddeus Kostrubala, and Alan Yaeger for their team effort in developing the new detail. Also, thanks to UI team members who are overseeing the installation of these stations throughout the LANL campus.

Chapter	Drawing No	Title	Rev.	Date	Comments
Electrical	ST-G4090-1	Designer Notes	0	10/02/2023	Initial issue
Electrical	ST-G4090-2	Post-Mounted Foundation Details	0	10/02/2023	Initial issue
Electrical	ST-G4090-3	Wall Mounted Details	0	10/02/2023	Initial issue
Electrical	ST-G4090-4	Electrical One-Line Diagrams (2 Level-3 and 3 dual Level-2 stations)	0	10/02/2023	Initial issue
Electrical	ST-G4090-5	Electrical One-Line Diagrams (6 dual Level-2 stations)	0	10/02/2023	Initial issue
Electrical	ST-G4090-6	Electrical One-Line Diagrams (10 dual Level-2 stations)	0	10/02/2023	Initial issue

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](#).



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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.

The following is for info only, since these editions are not yet LANL-adopted. When they are, ESM Ch. 1 Z10 says all errata and NFPA amendments (i.e., TIAs) shall be followed.

NFPA 14-2024, Standard for the Installation of Standpipe and Hose Systems, AMD 1

Publication Date: **8/25/2023**

Type of Change: **Amendment**

NFPA 70-2023, National Electrical Code ERTA 6 (70-23-6)

Publication Date: **9/14/2023**

Type of Change: **Errata/Erratum**

DOE TECHNICAL STANDARDS ACTION

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

No updates this month.

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 401 Rev 6: Freeze Protection

- Revised Purpose section to comply with latest O&M template.
- Removed DOE Order 433 reference paragraph in Scope section as the DOE Order callout is not needed per Maddie Valdez.
- Added specific personnel responsibilities in Responsibilities section.
- Added specific precautions and limitations to Precautions and Limitations section.
- Added additional Maintenance Requirements including new electrical requirements.
- Updated basis statements with latest codes/regulations.
- Updated Section 9.0, Required Documentation as per the revised AP-MNT-010.
- Updated References section with citations listed throughout procedure.

O&M 602 Rev 4: Elevators, Dumbwaiters, Platform Lifts, and Vertical Reciprocating Conveyors

- Updated O&M title to specify platform lifts and include vertical reciprocating conveyors.
- Updated references to the most recent editions; corrected section and table references to reflect the content of the current editions.
- Removed hyperlinks.
- Included definition for the Safety Management Program Owner Representative (SMPOR) in Section 4.0 – Responsibilities.
- Included a list of precautions in Section 5.1 – Precautions.
- Incorporated new Section 6.1.3 – Vertical Reciprocating Conveyors.
- Updated protocol for evacuating trapped passengers in Section 6.1.4 – Evacuation of Trapped Passengers.
- Updated Section 6.1.6 – Data Plates to reflect current ASME requirements.
- Updated Section 6.2.2 – Periodic Tests to reflect current ASME requirements.

- Updated Section 9.1 – Code Maintenance Documentation Requirements to reflect current ASME requirements.
- Updated Attachment 1 to reflect current ASME requirements.
- Replaced Attachments 2, 3, and 4 with current internal LANL documents.
- Performed technical editing.

O&M 605 Rev 2: Roll-up/Overhead Doors

- Updated template to current revision.
- Updated organization names.
- Included new references to P101-3, P101-6, P101-19, and P101-20.
- Provided a basis for the procedure steps in Section 7.2.1 (4) and (5), and Section 7.2.2 (1) and (3).
- Performed technical editing.

O&M 721 Rev 9: Wet Pipe Sprinkler Systems

- Updated references/callouts to most recent NFPA 25 (2023 edition)
- Added definitions for inspection, testing, and maintenance
- Added responsibilities for Section 4.0
- Added annual maintenance requirement for commercial-type cooking equipment sprinklers
- Updated Table 6-1 with appropriate table callouts from NFPA 25
- Updated testing frequencies in Section 6.2.9.
- Removed dry-type sprinkler testing every 15-years, to 10-year retesting and replacement after 20 years.
- Adding frequencies at 25 years, 50 years.

AP-MNT-002 Rev 6: Seasonal Facility Preservation

- Updated per 2022 Conduct of Maintenance Assessment Part 0 (IM 2022-7316).
- Basic requirements stayed the same (SFPP, prep checklists, walkdowns).
- Simplified language, deleted redundant content, expanded requirements/details.
- Changed the SFPP responsibility from MM to the FOD; MM still concurs.
- Updated the due date of the Winter Prep Checklist from Oct 1 to Oct 31.
- Updated the due date of the Summer Prep Checklist from April 15 to May 31.
- Added requirements to *document* the actions within the prep checklists (i.e., log/attach reports to show status of seasonal FSRs and PM/CM WOs).
- Deleted redundancies, from other APs and institutional processes, including:
 - 3.1 Process Flow Diagram
 - 3.2[3.6] ensure availability of seasonal PPE (institutional)
 - 3.2[3.8] ensure specific PMs are current: generators, UPS (AP-MNT-006)
 - 3.2[4.17] develop a call list (institutional)
- Instances of “coding” seasonal WOs in CMMS (AP-WORK series)
- Instances of steps for Planners planning WOs (AP-WORK-series)
- Deleted Attachment B (Attachment A sufficient). Number attachment to comply with current template.

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

One team member just returned from a long biking trip in Italy. It was truly great but here are a few fails, at least from a current U.S. building codes standpoint.

Long hallways. In old cities, many hotels (so IBC R-1) were once one or more houses. On two occasions, our single egress route was over 100 feet, alarmed but unsprinklered. I think for IBC-2021 construction, that would be limited to 75' and only if sprinklered (Table 1006.2.1). The red fire door (and barrier?) might help, but still.



"There, I fixed it" mods. In the same hotel as above, the bath exhaust was pie-sliced, invalidating any NRTL-type certification, and also rendering it ineffective (I just missed capturing a fly resting on the vanes, enjoying the hum but not sucked away). Note: A great stay other than these two things and lack of window screens; we usually stayed 3-star with occasional 2 or 4.



"Artisan" sink. Very cool river rock in acrylic sink, but surely not approved by their equivalent of a UPC ER report, so the local code official could accept if equivalent safety and health. As with a small percentage of older sinks in Italy, the faucet is foot-lever actuated (predating accessibility considerations).



LAST MONTH'S UPDATE TOPICS

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

- ESM Ch 17 Pressure Safety New Revision Release!
- Training & Qualification
- LANL Engineering Standards Issued in September
- Data Call for National Standards Committee Work
- 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.

