

## **ENGINEERING STANDARDS UPDATE**

Free of moralizing since June 2013

### **Topics this month:**

- **Nuclear Workers Behaving Badly**
- **Systems Engineers Behaving Socially**
- **Processes Changes**
- **DOE O 420.1C Implementation Coming**
- **LANL Standards Issued in May**
- **DOE Technical Standards Actions**
- **When Good Conduct of Engineering Isn't Followed**

The Standards Homepage: <http://engstandards.lanl.gov/>

### **NUCLEAR WORKERS BEHAVING BADLY**

Reader feedback has dropped off, so trying a new feature. This month, presented without moralizing:

[Goldfish in a Nuclear Reactor -- The Simpson's or Thoreau?](#) (Forbes)

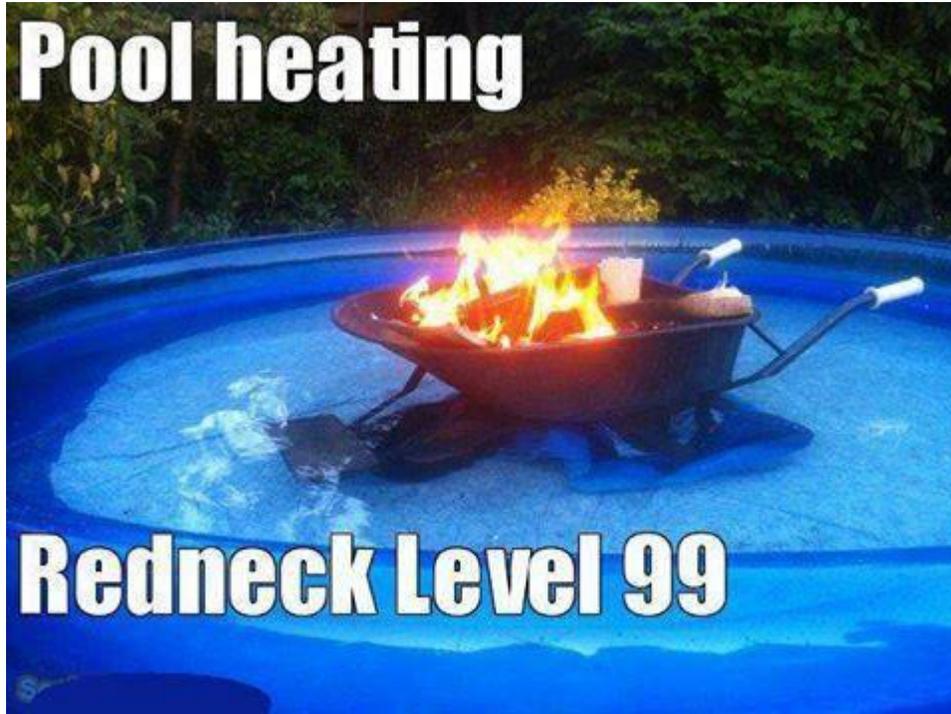
### **SYSTEMS ENGINEERS BEHAVING SOCIALLY**

[It's little wonder they've organized a chapter, since organization is how they excel. So perhaps the real headline is the social aspect?! -- T]

Beginning June 12, the International Council on Systems Engineering's Enchantment (NM) Chapter will begin making its monthly meetings available to all Lab employees via internet broadcast. Presentations cover a wide variety of engineering and project management-related topics. For each meeting attended, 1 hour professional development credit can be claimed to maintain PE, PMP, and/or CSEP credentials. Meetings occur on the 2nd Wednesday of each month from 4:45 'til 6 PM.

Look for abstracts for specific presentations and login information on the LANL Engineering Sciences (ADE) Blog or on the Engineering Professional Development calendar found at <https://ade.lanl.gov/COEforRandD/Lists/Calendar%20of%20Events/calendar.aspx> (Use your WIN credentials to log in to the calendar.)

This news thanks to contact Heidi Ann Hahn, 606-0000, [hahn@lanl.gov](mailto:hahn@lanl.gov)



## PROCESSES CHANGES

The following Engineering Administrative Procedures were posted:

<b>AP-341-401-R3</b>	Course #54129	CoE Program Administrative Procedure Management	All issued: 05/28/13
<b>AP-341-601-R1</b>	Course #44257	Functions & Requirements Document	
<b>AP-341-613-R1</b>	Course #44268	Instrumentation Set Point Control	

USGD/USID: If we have to explain what to do again, we're all in trouble. (joke, opinion or moralizing?)

Training: Disregard if you are not assigned to this AP. Those assigned to this AP will show the requirement in your To-Do List in [UTrain](#). This will not affect your qualifications. You have 30 days from the date of issue to complete the required training. For training questions, contact [Yolanda Trujillo](#) at 665-5696.

Conduct of Engineering APs are on the CoE [Engineering Processes](#) page in SharePoint. For questions about processes, please contact [Gurinder Grewal](#) at 667-3667.

### **DOE O 420.1C IMPLEMENTATION COMING**

LANS has been notified by the Los Alamos Field Office that this new revision of the Facility Safety order will be added to the contract's Appendix G in the next modification (e.g., within 90 days). The details of exactly how and when this will impact the Engineering Standards and other LANL policy documents will be captured in a plan due September 4. The affected Safety Management Program owners for the areas below will develop the plan in accordance with LAFO direction. Stay tuned!

- Nuclear safety design criteria
- Fire protection
- Criticality safety
- Natural phenomena hazards (NPH) mitigation
- Cognizant system engineer (CSE) program

### **LANL STANDARDS ISSUED IN MAY**

Eng Standards Manual [STD-342-100](#)

Chapter 1 Section Z10	Summary of Changes
Attachment C – Deliverable Schedule 30-60-90-100%	Dropped 15% column. Added phasing, deferred design, spec expectations, IBC/IEBC forms, submittal schedule input, struct obs, arc-flash calcs, fire alarm, security, Cx, ML-1/2, Title 3. Other minor updates.

### **DOE TECHNICAL STANDARDS ACTIONS**

DOE [Tech Stds](#) activity this past month:

[DOE-HDBK-3010-94](#), Airborne Release Fractions/Rates and Respirable Fractions for Nonreactor Nuclear Facilities (both vols, Reaffirmed April 2013)

[DOE-HDBK-1145-2013](#), Radiological Safety Training for Plutonium Facilities

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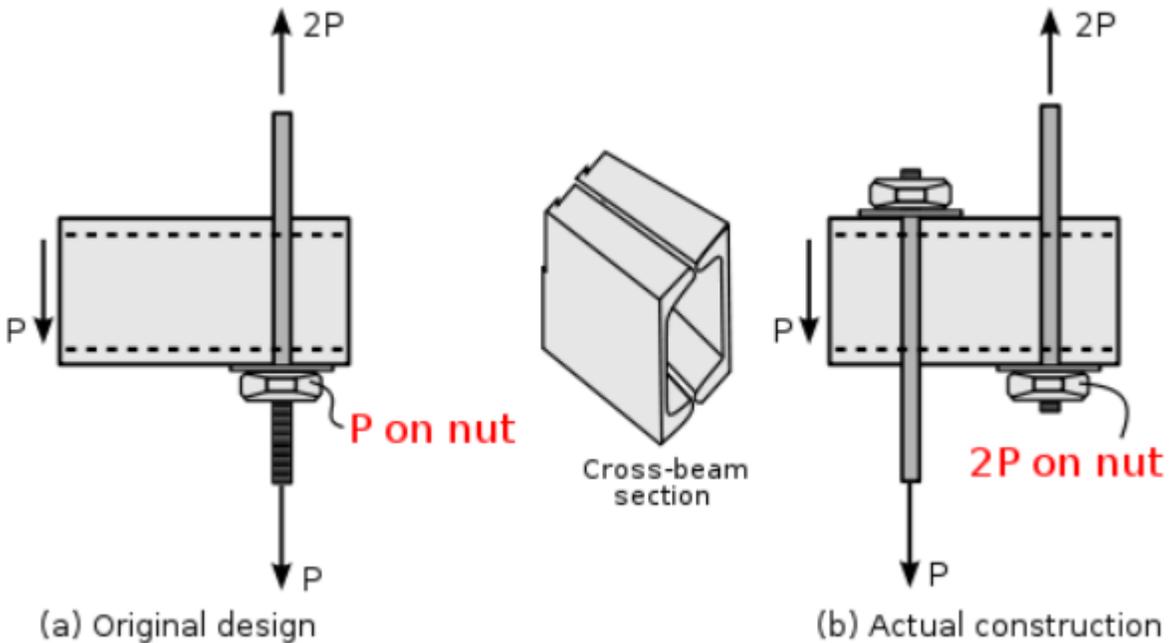
## WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

This is a “classic” failure that’s widely cited.

**Design Change on Hyatt Regency Hotel Walkway; Collapse (from Listverse.com and Wikipedia)**



On 17 July 1981, two suspended walkways through the lobby of the [Hyatt Regency](#) in [Kansas City, Missouri](#), collapsed, killing 114 and injuring 200 people<sup>[15]</sup> at a tea dance. The collapse was due to a late change in design, altering the method in which the rods supporting the walkways were connected to them, and inadvertently doubling the forces on the connection. The failure highlighted the need for good communication between design engineers and contractors, and rigorous checks on designs and especially on contractor-proposed design changes. The failure is a standard case study on engineering courses around the world, and is used to teach the importance of ethics in engineering.<sup>[16][17]</sup> Main article: [Hyatt Regency walkway collapse](#)



## PASSAGES

[Jim Sims](#), a damn good engineer in AET-1, passed away May 29.

## LAST MONTH'S UPDATE TOPICS

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

- **May is Building Safety Month**
- **Spec Writing and SpecText Orientation Webinars**
- **LANL Standards Issued in April**
- **DOE Technical Standards Actions**
- **When Good Conduct of Engineering Isn't Followed**

To request a change to this newsletter's distribution, please contact me.

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