

ENGINEERING STANDARDS UPDATE

Standards are serious business, but this newsletter isn't.

Topics this month:

- **Free Standards: IBR Portal, etc.**
- **Concrete Anchor & Firestopping Seminars**
- **Nuclear Workers Behaving Badly**
- **LANL Standards Issued in October**
- **Processes Changes**
- **DOE Technical Standards Actions**
- **When Good Conduct of Engineering Isn't Followed**

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

FREE STANDARDS: IBR PORTAL, ETC.

Everyone likes freebies, especially engineers. Here's the best nerdy freebie in a long while, and it even goes by an acronym, which everyone likes, too. It's about access to the standards of several national organizations – some that aren't in our library's [IHS](#) online service.

Excerpt from ANSI:

“The American National Standards Institute (ANSI) Incorporated by Reference (IBR) Portal provides a one-stop mechanism for access to standards that have been incorporated by reference in the U.S. Code of Federal Regulations (CFR). These standards incorporated by the U.S. government in rulemakings are offered at no cost in “read only” format and are presented for online reading. There are no print or download options.

Standards available on the ANSI IBR Portal include those developed by the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC), and other standards developing organizations (SDOs) that have signed a terms and conditions agreement with ANSI...All users will be required to [install the FileOpen plug-in](#) [some LANL IHS users may have done so already] and accept an online end user license agreement prior to accessing any standards.

In addition to the standards available directly through the portal, several SDOs are offering free access via their own website...”

Go to the portal's standards listing here: <http://ibr.ansi.org/Standards/Default.aspx>

ALSO -- for a smattering of scanned, older national standard editions posted by some radical, free-government types (public.resource.org), go [here](#).

CONCRETE ANCHOR & FIRESTOPPING SEMINARS

As a reminder from last month: Firestopping and post-installed concrete anchors are two specialty components that are normally critical to life safety and tricky to do correctly, so they trigger a lot of QA. They're governed by the IBC's Chapter 17 on special inspection and thus require CM-CE inspection per ESM Chapter 16. Fire stopping installers need to be certified by UL or FM per [07 8400](#). Anchor installers at LANL will need to be certified in a few years when we adopt ACI 318-11 via IBC 2012 or 2015.

There are two opportunities to learn about these things in December:

Powers Fasteners lunch & learn Dec 18

Here's another freebie, new this month: Powers Fasteners is a medium-sized player in the post-installed anchor market. ES-EPD is organizing a free seminar with complimentary lunch to be held in a downtown L.A. location TBD on December 18 (Wednesday) during the lunch hour from 11:30 am to 1:30 pm. It is in association with Structural Engineers Association of New Mexico (SEANM) and National Council of Structural Engineers Association (NCSEA).

- Two (2.0) PDHs will be provided within 2 to 4 weeks after the seminar. Please do not forget to PRINT your name on the Sign-in Sheet on that day in order to receive the Continuing Education Certificate.
- Attendees can probably charge their regular code beyond the one hour lunch.
- During the seminar, design manual and product samples will be available for each attendee. A limited number of PDA 2.1 Anchor Software Tutorials (on CD) will also be available.

The deadline to respond is Tues, November 19. Contact Simon Luk, 505-665-2193, sluk@lanl.gov. Please mention any dietary restrictions.

Hilti firestopping and anchor course Dec 3

Reminder from last month: Daniel Lopez ("Construction Inspector Extraordinaire," July [Update](#)) is scheduling a Hilti training/certification class for post-installed anchors and firestopping on Tuesday, December 3, 8-12 a.m. in the Otowi Siderooms A&B. Good for installers, inspectors, and engineers. RSVP to d_lopez@lanl.gov.

Double-dip and go to both if you like or you need the credits.

WEBINARS

ARCHITEXTS



NUCLEAR WORKERS BEHAVING BADLY

Recabling delays Shin Kori start ups

18 October 2013

The start of commercial operation of the Shin Kori 3 and 4 reactors under construction in South Korea is likely to be delayed by a further year after safety-related control cabling failed quality tests.



Shin Kori 3 and 4 (Image: MOTIE)

Plant owner Korea Hydro and Nuclear Power (KHNP) reported on 16 October that control cabling installed during construction of the APR-1400 pressurized water reactors had failed flame tests, as well as tests to confirm the cable's performance in the event of a loss of coolant accident (LOCA). The cabling had been made and supplied by Korean company JS Cable.

The Ministry of Trade, Industry and Energy (MOTIE) has today announced that the start up of the units will be delayed by up to a year whilst the cabling is replaced. The cable, it said, would be supplied by an undisclosed US company.

Shin Kori 3 had originally been due to begin operating at the end of this year, with unit 4 following next September. However, with their operation already delayed by the need to test the cabling, the units are now expected to start up in 2015 and 2016, respectively.

It was discovered in May that safety-related control cabling with falsified documentation had been installed at four of KHNP's reactors: Shin Kori units 1 and 2 and Shin Wolsong units 1 and 2. KHNP was ordered to stop operations at Shin Kori 2 and Shin Wolsong 1, while Shin Kori 1 has remained out of operation following scheduled maintenance. In addition, the newly-constructed Shin Wolsong 2, which is awaiting approval to start commercial operation, has been prevented from starting up. The regulator told KHNP that the four units will not be allowed to operate until the cabling has been replaced.

Researched and written by World Nuclear News

LANL STANDARDS ISSUED IN OCTOBER

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

Chapter/Section	Summary of Changes
Chapter 13, Welding, Joining, & NDE Volume 1, Section 1-05 Rev. 4, Welder Performance Qualification & Certification	Audit corrective actions and minor tweaks to clarify intent or requirements.

Yeah, not much; some POCs were caught up in furlough churn.

PROCESSES CHANGES

The following Administrative Procedures were posted on the Conduct of Engineering Office, [Engineering Processes](#) page in SharePoint since last Update. Please refer to the original 10/15 and 11/4 email notifications on these for instructions on training and implementation. For questions about APs, please contact [Gurinder Grewal](#) at 667-3667.

AP-341-511, Rev. 2	Design Information Reconstitution Course #44248	Date: 10/09/13
AP-341-513, Rev. 1	Qualification of Existing Data (CANCELED)	

AP-341-520, Rev. 1	Item Lifecycle Management (CANCELED)	
AP-341-616, Rev. 1	Technical Baseline Change During Design. Course # 54164	Issued: 11/01/13

DOE TECHNICAL STANDARDS ACTIONS

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

DOE-STD-1175-2013, Senior Technical Safety Manager Functional Area Qualification Standard [for Feds]

DOE-STD-1194-2011, Nuclear Materials Control and Accountability

DOE-STD-1168-2013, Confinement Ventilation and Process Gas Treatment Functional Area Qualification Standard [for Feds]

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

This one hits close to home. Not meaning to throw stones at our DOE brethren, and this has been a known issue for a while.

September 30, 2013

Department of Energy Quality Assurance: Design Control for the Waste Treatment and Immobilization Plant at the Hanford Site

Summary of Audit Report: IG-0894

*The Department is constructing the \$12.2 billion Waste Treatment and Immobilization Plant (WTP) to vitrify approximately 56 million gallons of radioactive and chemically hazardous waste stored at the Hanford Site. To ensure the vitrification process is safe for workers, the public and the environment, the Department required the contractor for the WTP, Bechtel National Inc. (Bechtel), to develop and follow a quality assurance program based on the American Society of Mechanical Engineer's **Quality Assurance Requirements for Nuclear Facility Applications (NQA-1) Standard.***

The Office of Inspector General received an allegation that Bechtel was missing design control documentation for the WTP and as such, could not demonstrate that equipment was appropriately manufactured.

We substantiated the allegation. Our review revealed significant shortcomings in the Department's process for managing the design and fabrication changes of waste processing equipment procured for the WTP. The Department had not ensured that Bechtel subjected design changes requested by suppliers to the required review and approval by Bechtel's Environmental & Nuclear Safety Group. Further, the Department had not ensured that Bechtel properly verified that deviations from design requirements that could affect nuclear safety were implemented. Management concurred with our recommendations and provided corrective actions taken and planned to address specific

weaknesses identified in our report. We consider management's comments and planned corrective actions responsive to our findings and recommendations.

Topic: Management & Administration

Full Report [IG-0894.pdf](#)

LAST MONTH'S UPDATE TOPICS

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

- **New Engineering Project Delivery Group**
- **Standards Program Report Card**
- **DOE O 420.1C Update**
- **Records Center Move**
- **Fire Safety Month**
- **Firestopping and Post-Installed Anchor Course**
- **Systems Engineering Master's Degree**
- **Nuclear Workers Behaving Badly**
- **LANL Standards Issued in September**
- **Processes Changes**
- **DOE Technical Standards Actions**
- **When Good Conduct of Engineering Isn't Followed**

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

Tobin Oruch, Engineering Standards Mgr
Los Alamos Nat'l Lab, Conduct of Eng Program Office
TA-16-200 M/S F696 ph (505) 665-8475
oruch@lanl.gov <http://engstandards.lanl.gov/>

Please consider the environment before printing this or any email