

## **Engineering Standards Update**

Topics this month: September 2007

This is the monthly newsletter of the LANL Engineering Standards Program. The Standards are mandatory documents that define the minimum design criteria, fabrication, and installation practices for the alteration, repair, and construction of LANL facilities and the programmatic equipment within them. [IMP 341]

## Topics this month:

- Building Codes Changing in 2008
- Welding Audit Shows Standards Non-Compliance
- Last Call for National Standard Participation
- LANL Standards Issued in August
- DOE Technical Standards Actions

The Standards Homepage: <a href="http://engstandards.lanl.gov/">http://engstandards.lanl.gov/</a>

### **BUILDING CODES CHANGING IN 2008**

By contract, LANL generally follows the State of New Mexico's lead when it comes to which model building codes to adopt. Looking ahead? The NM Construction Industries Commission recently approved a modification to the NM Administrative Code to adopt the 2006 International Building and Existing Building Codes and the 2006 Uniform Plumbing and Mechanical Codes, and others. Therefore, on January 1, 2008, these codes (as amended) will be law in the state, although there is a transition period of six months -- until July 1, 2008 -- where designs can use either code. After July 1, 2008, it will be all 2006 codes for those outside LANL.

For LANL work, the Engineering Standards Manual (Chapter 16 IBC Program, etc.) will be revised by June to implement similar changes for new project starts. Until that time, stick with the 2003 editions of the above-named codes. For electrical design, however, start using the 2008 NEC (NFPA 70) for new projects/work beginning Jan 1, 2008, per ESM Electrical Chapter 7 Sec. D5000; this will meet or exceed the State's timetable for electrical.

You might be thinking, "What about energy conservation codes?" ESM Sustainable Design Chapter 14 says that, after Jan 3, 2007, projects must design to achieve 30% better than ASHRAE 90.1-2004, "Energy Standard for Buildings Except Low-Rise Residential Buildings." That's driven by 10 CFR Part 434 for Federal buildings and is better than the State requires, so that's what we do.

Bottom line: Just follow the ESM, and please ask when in doubt.

Access to codes: The Research Library's IHS subscription at <a href="http://library.lanl.gov/infores/stand/">http://library.lanl.gov/infores/stand/</a> currently provides LANL personnel with online access to pdfs of all of the 2003 I-Codes -- and a whole lot of other codes and standards; the 2006 I-Codes will probably be added to IHS on Jan 1, 2008. For the Uniform Codes, see Charles DuPré, the Mechanical POC. The 2008 NEC should go on sale by October 1 of this year and be on IHS by year-end.



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#### WELDING AUDIT SHOWS STANDARDS NON-COMPLIANCE

A recent QA audit of welding at LANL revealed significant lack of implementation of the LANL Welding Program -- enough so that a Price-Anderson violation self-declaration was made, the second on welding in recent years. A corrective action plan for the entire institution is being prepared by POC Kelly Bingham et al. Those performing welding contrary to the ESM <a href="#">Chapter 13</a> program should act to become compliant right away. Bottom line: Same as above.

### LAST CALL FOR NATIONAL STANDARD PARTICIPATION

If you're a LANL employee who serves on a committee maintaining or writing a national, non-government standard, we'd like to know. Please complete this <u>form</u>'s page 1, print/sign, and fax to Tobin Oruch, fax 7-5405, by September 14, 2007 if you have not done so in the past three years. Thanks to previous responders.

## LANL STANDARDS ISSUED IN AUGUST

LANL Master Specifications Manual <a href="http://engstandards.lanl.gov/New\_Home.html#spec">http://engstandards.lanl.gov/New\_Home.html#spec</a>
05 2100 R1, Steel Joist Framing -- Complete revision. Based on the UFGS and other documents.

**05 3000 R0**, Metal Decking -- Complete revision. Replaces both 05 3113 and 05 3123. Based on the UFGS and other documents.

**26 2413 R1**, Switchboards -- Deleted provisions for double-ended switchboard configuration and associated automatic main-tie-main controls. Double-ended configurations will be implemented using switchgear as described in Section 26 2300. Corrected some references to other spec sections.

**26 2816 R1**, Enclosed Switches and Circuit Breakers -- Added requirement for viewing window on safety switches to allow visual verification of ON-OFF status. Changed requirement for compression-type lugs to apply just to enclosed circuit breakers rated greater than 100 amps.

#### DOE TECHNICAL STANDARDS ACTIONS

http://www.hss.energy.gov/NuclearSafety/techstds/standard/recappts.html DOE-STD-1170-2007, Electrical Systems and Safety Oversight Functional Area Qualification Standard, 42 pages, a revision



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## **LAST MONTH'S UPDATE TOPICS**

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

- Are You on a National Standard Committee?
- LANL Standards Issued in July
- DOE Technical Standards Actions

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

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