

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 and process equipment within them. [[IMP 341](#)]

Topics this month:

- **Happy NEC Year**
- **Welding Spec Collection Expanded**
- **LANL Standards Issued in December**
- **DOE Technical Standards Actions**

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

### **HAPPY NEC YEAR**

LANL is currently using the 2005 Edition of the *National Electrical Code*, but in January the 2008 Edition of NFPA 70 (the NEC) will be required for new designs. That's because Section D5000 of Chapter 7 of the LANL Engineering Standards Manual establishes that the latest NEC will be used for new facility electrical designs starting in the January following issuance. As always, projects that are underway and being designed or installed based on the 2005 NEC may continue to do so based on the "Code of Record" wording in ESM Chapter 1 Section Z10.

For installations, alterations, or repairs that are based on "skill of craft" (i.e., not based on an engineer's design), the Electrical Safety Committee's plan is that when the 2008 NEC becomes required throughout New Mexico, the LANL electrical inspectors will begin enforcing it. It is expected that the State will require the 2008 NEC plus some local amendments effective July 1, 2008.

The 2008 NEC is already available on [IHS](#), the Library's online national standards service.

In the opinion of the LANL Electrical Safety Committee, the 2008 NEC changes will improve the safeguarding of LANL personnel and property from hazards arising from the use of electricity, and have a net neutral cost impact.

Regarding other code adoptions, as communicated in the September Update, New Mexico is proceeding with efforts to adopt the 2006 International Building and Existing Building Codes and 2006 Uniform Mechanical and Plumbing Codes in early 2008 with mandatory use no later than July 1, 2008. Public [hearings](#) are Jan 14 with potential action at the upcoming Jan 19 CID [meeting](#). An NM mandate would result in automatic LANL adoption as a result of wording in ESM Chapter 1 Section Z10; however, our intent is to adopt these same Codes sometime before July 1 with more emphatic language in Z10 and the other affected ESM chapters (5, 6, 16). The 2006 I-Codes will be available on IHS soon.

### **WELDING SPEC COLLECTION EXPANDED**

Welding and brazing onsite must be performed in accordance with the LANL Welding Program, which is ESM Chapter 13. The work itself must follow an approved Welding Procedure Specification (WPS); these are contained in Volume 3 of the program. Now, in addition to the 80-plus LANL-developed WPSs that have been in the program for some time, 62 additional WPSs have been adopted, approved, and posted for use at LANL. This brings the total of available WPSs to nearly 150, which covers a wide variety of base materials, welding processes, and codes and standards.

Applicability and use of these procedures requires compliance within the limits of qualification listed in the WPSs and to have the WPS identified for the specific application on a CWI-approved "Welding Checklist."

The 62 new WPSs are AWS national consensus standards and are only available to those with Yellow Server access due to licensing rules. [WPS Index](#).  
Hint: In the index LANL-developed WPSs generally have "-xxxx-" in their designation right now.

For more information contact Kelly Bingham, LANL Welding Program Administrator in ES-DE, 7-6167, [kellyb@lanl.gov](mailto:kellyb@lanl.gov)

### **LANL STANDARDS ISSUED IN DECEMBER**

#### **Engineering Standards Manual**

#### [Chapter 13, Vol. 3 Section 3-01](#)

Appendix A WPS Index -- added 62 AWS SWPSs

Attachment 2, Rev 4 -- WPS Designation Codes and Nomenclature; new system to accommodate AWS Standard Welding Procedure Specifications (SWPS)

#### **Standard Drawing and Details** <http://engstandards.lanl.gov/engrman/HTML/dwg-civ.htm>

ST-G3020-2 sheet 4 r5 - Exterior Sewage Lift Station Notes and Electrical Detail - minor revisions

**LANL Master Specifications Manual** [http://engstandards.lanl.gov/New\\_Home.html#spec](http://engstandards.lanl.gov/New_Home.html#spec)

**03 3001 Reinforced Concrete, Rev 2, 12/11/07** (thanks to Paul Hudson, John Ruud, POC Glen Pappas)

- Changed working titles to match current work process
- Deleted requirement for CMTRs but added note for projects to consider requiring CMTRs for ML-1 and ML-2 projects
- Deleted requirement for a subcontractor to provide a QA program
- Added aggregate correction factors that can be used for each of the pre-approved mixes when the pre-approved mixes are be used for ML-3 and ML-4 projects
- Clarified requirement for testing for aggregate correction factor on ML-1 and ML-2 projects
- Added ASTM A-615 rebar tagging requirements
- Clarified prohibition of foreign reinforcing steel
- Added acceptance criteria for additional categories of concrete
- Modified acceptance criteria to better match ACI tolerances and pre-approved mix designs
- Updated ACI reference for curing
- Clarified drum rotation requirements

**22 0813 R1, Testing Piping Systems** (thanks to Michael Ladach, POC Charles DuPre)

- Added test requirements for modification piping to plumbing piping.
- Corrected hydrotest requirements for modifications to hydronic piping.

New specs coming in early January:

- 03 1512 r0, Post-Installed Anchors for ML-1 and 2 – Purchase
- 03 1534 r0, Post-Installed Anchors for ML-3 and 4 -- Purchase
- 03 1550 r0, Post-Installed Anchors -- Installation and Testing

### **DOE TECHNICAL STANDARDS ACTIONS**

<http://www.hss.energy.gov/NuclearSafety/techstds/standard/recappts.html>

New or Revised DOE Tech Stds this past month:

DOE-STD-1137-2007 Fire Protection Engineering Functional Area Qualification Standard (27 pages)

DOE-STD-1183-2007 Nuclear Safety Specialist Functional Area Qualification Standard (41 pages)

**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:

- **Master Spec Use**
- **LANL Standards Issued in November**
- **DOE Technical Standards Actions**

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

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