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. [P341]

Topics this month:

- **Are You on a National Standard Committee?**
- **Exhibit I, Ad Nauseum**
- **Are You Feeling Lucky?**
- **LANL Standards Issued in August**
- **DOE Technical Standards Actions**

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

ARE YOU ON A NATIONAL STANDARD COMMITTEE?

That is, a LANS person doing committee work for ACI, ANS, ASCE, ASHRAE, ASME, ASTM, NFPA, etc?

A sure sign of fall, every year we solicit input and then report this volunteer work to DOE-HQ; it's then sent to the OMB annually per public law. DOE also documents this work in "DOE-TSL-4, Directory of DOE and Contractor Personnel Involved in Non-Government Standards Activities" periodically, so it's publicized. LANL is among the highest of the DOE sites reporting.

To fulfill this reporting requirement, please print this form's page 1, complete/sign, and send to oruch@lanl.gov, fax 7-5405, or M/S P948 by **September 15 at the latest**.

Already known:
Mark Anderson, Bill Atkin, James Baker, Sherri Bingert, David Bowman, David Bracken, Lowell Christensen, Harry Clifford, Robert Daley, David Fry, M. Isabel Cuesta Garcia, Marjorie Gavett, Heidi Hahn, Thomas Houston, Benito Jacquez, Robert Montsalve-Jones, Alan Justus, Douglas Kautz, Paul Leslie, Sheila Lott, Michael Mallett, Alexander Martinez, Thomas McLean, John Milewski, Murray Moore, Russell Mosteller, William Myers, Connon Odom, Glen Pappas, Donivan Porterfield, Craig Rasmussen, Christopher Romero, Scott Salisbury, Michael Salmon, Thomas Sampson, James Sprinkle, James Streit, Thomas Tierney, Kush Tyagi, Laurie Waters, Tom Waters, Jeffrey Whicker, and James Ziemba.

EXHIBIT I, AD NAUSEUM

This new contract exhibit was first discussed here in the April issue and again in July. Well, ASM's formal launch began August 26 (a little later than projected, but not as late as my future procurements could be after pointing that out). Anyway, per ASM, construction and environmental projects, plus other projects over $5M, must begin using it now (others may by choice). See the previous Updates for more info, the ASM SharePoint forms site (currently under "Other") for the documents themselves, and engineering's input template to the Att B submittal list near the top of the Master Specs webpage. If you hear cursing along Pajarito Road it may be from those in the NMSSUP project, one of the first to use it.

ARE YOU FEELING LUCKY?

Not dating myself with a reference to the Dirty Harry movie, but rather the Google search option "I'm Feeling Lucky" that returns only the top hit. Why? It turns out the LANL Engineering Standards is one of the most popular of such sites on the 'net.

Idle boasting? Sure. But also trying to help you users find us (I get a call about access nearly once a week).

Our site is on the external ("green") server for the benefit of our AEs, other subs, and the taxpayers (and tax evaders and all others). And because of its content and perhaps outside sites linking to it, we have a high rank on Google. We're the top hit if you search for "lanl standards" or even "eng standards" (with or without quotes). We also rank high for "engineering standards."

If you use the LANL internal website search box, just searching "standards" will get you there, 3rd hit.

Are you still reading, punk? (OK, that's Dirty Harry-ish). Since you must be interested, here's one techie's explanation of how Google works and ranks: "Google spiders the web to maintain its index, with emphasis on content and link popularity. One factor that determines your rank on Google is the number of links that point to your site, the quality (popularity) of the sites that link to your site, the text in and around the links that point to your site, and who you link to. Google's web crawler only views the visible text on your page. The Meta description and keywords have little influence on Google's rankings… [bruceclay.com]"

Finally, and still on the topic of the internet, with all the recent computer security auditing, LANL is getting more aware of phishing emails, and that's good. Last's month's discussion about an urban legend regarding LANL Master Spec use had at least one recipient wondering if the Update with email link to snopes.com was a clever, targeted phish (a "spear phish"). Be assured that I may be a spammer, but I'm not a phisher.

LANL STANDARDS ISSUED IN AUGUST

Engineering Standards Manual

Chapter 17 Pressure Safety

Section I Program Requirements, Rev. 2 -- Clarified 9.0.B, C, and G and 9.0.I regarding handling of deficiencies

Procedure ITM-342-1701, Pressure Vessel Inspection & Test NEW

LANL Master Specifications (update campaign in progress)

Canceled:

02 3000 R1 Subsurface Investigation

Canceled; requirement addressed by General Conditions

13 3425 R1 Pressure Relief Wall Panels

Canceled; little use and no LANL-specific content.

26 0513 R1 Medium Voltage Cables

Canceled; construction subcontractor requirements are captured in related sections and procurements not dependent on this section.

Approved:

09 6500 R2 Resilient Flooring

Verified and updated reference standards; clarified Submittals and made some conditionally optional; reformatted entire section to match CSI SectionFormat.

13 4800 R2 Sound, Vibration and Seismic Control

Technical and administrative updates throughout.

22 0816/33 1300 R2 Disinfection of [Potable Water Piping]/[Water Utility Distribution]

Changed advance notification days, deleted reference to on-site SDWA compliance laboratory, and added part on pressure testing prior to disinfection process.

26 0533 R3 Raceways and Boxes for Electrical Systems

- Added requirement for flexible conduit sections where raceways cross expansion joints or seismic joints, where they are attached to parts of the structure with a potential for differential seismic displacement, and where they connect to equipment with designed anchors (seismic controls) or vibration isolators. This is driven by requirements in ASCE 7 Chapter 13.
- Added references to new LANL Master Specification Section 26 0548 – *Vibration and Seismic Controls for Electrical Systems*.
- Clarified requirement for installation of pull boxes to comply with limits on conduit bends and distance between pull points in the CONDUIT INSTALLATION article of the Section.
- Deleted the requirement to use RGS or RMC below 8 ft above the floor where exposed indoors. This requirement, which was added in Rev 2, has proven to be impractical in application: there were many, many questions about labs and mechanical room locations where the probability of severe physical damage to EMT is low.

- Simplified requirements for concrete-encasement material and installation requirements.
- Deleted detailed firestopping material and installation requirements from this Section and referred to Section 07 8400 - *Firestopping*. Clarified procedure for inspection of electrical firestopping installations.

26 2413 R3 Switchboards

- Updated standards referenced in QUALITY ASSURANCE.
- Added requirement for receipt inspection in accordance with LANL P 840-1 *Procurement Quality*, specifically looking for suspect/counterfeit molded case circuit breakers.
- Corrected some seismic criteria in SERVICE CONDITIONS.
- Added requirement that handle lock-off devices be permanently installed.
- Added requirement that switchboard wiring be VW-1 flame test rated.
- Updated manufacturers and product lines.
- Added references to new LANL Master Specification Section 26 0548 – *Vibration and Seismic Controls for Electrical Systems*.
- Updated installation requirements.
- Updated identification requirements.

26 2416 R2 Panelboards

- Updated codes and standards.
- Added requirement for receipt inspection for suspect/counterfeit circuit breakers in accordance with LANL P 840-1 *Procurement Quality*.
- Deleted "lighting and appliance branch circuit panelboards" to align with the 2008 NEC.
- Added requirements that all panelboards have a door.
- Made allowances for various manufacturer's designs for door-in-door panelboard fronts.
- Added requirements that circuit directory card provide enough space to uniquely describe each circuit as required by the 2008 NEC.
- Clarified requirement for panelboard cabinets to accommodate crimp-on lugs for large conductors.
- Required circuit breakers larger than 100 A to have field adjustable instantaneous trip setting.
- Required SWD or HID marking on circuit breakers used to switch fluorescent or HID lighting loads.
- Added specification for GFCI circuit breakers.
- Required that circuit breakers have provisions for connecting the quantity and size conductors indicated on the Drawings.
- Required handle lock-off device on all each circuit breaker. Device must be securely attached to the circuit breaker case.
- Updated manufacturers and catalog numbers. Deleted one manufacturer that does not have an ISO 9001 quality management system for panelboards.
- Added load center type panelboards for 120/240 V single-phase applications with the panelboard rated 100 A and less with not more than 12 circuits for use at locations with less than 10,000 A prospective short-circuit current.
- Added NEMA PB 1.1 to installation requirements.
- Limited mounting height of panelboards.
- Added requirement to coordinate inspections and tests with Section 28 0813.

32 3100 R2 Fences and Gates

Added reference to master specification 32 3100.

32 3113 R2 Chain Link Fences and Gates

Clarification of fence components and related ASTM Specification and added reference to Master Specification 32 3100.

33 0513 R3 Manholes and Structures
Minor clarifications and added reference to master specification 32 3100.

33 7119 R2 Electrical Underground Ducts and Manholes
Provided more complete description of LANL performed work.
Added NECA/NEMA 605 to standards for receiving, storing, and protecting ductbank material.
Provided more complete description of required LANL STR notifications.
Deleted concrete material from Part 2. Re worked concrete encasement installation requirements in Part 3, referring to Section 03 3001 for materials and installation requirements.
Changed underground warning tape to "detectable" material to aid in locating underground ductbanks.
Deleted smoke and fire stop fittings; the product is no longer available.
Updated description of duct plugs to match current products.
Revised duct sealant product description to match required function for ductbank installation: to prevent water and gas from entering manholes, vaults and structures.
Deleted "cold applied asphalt emulsion damp proofing." In this arid environment, damp proofing is not cost-effective.
Reviewed and updated catalog numbers.
Reviewed and updated ASTM standards for underground utility structures

DOE TECHNICAL STANDARDS ACTIONS

New or Revised DOE Tech Stds this past month:

DOE-HDBK-1122-2009 Radiological Control Technician Training HTML Table of Contents
DOE-STD-1123, Safeguards and Security General Technical Base Qualification Standard
DOE-HDBK-1130-2009 Radiological Worker Training HTML
DOE-HDBK-1131-2007-CN1; General Employee Radiological Training
DOE-HDBK-1136-2009; Guide of Good Practices for Occupational Radiological Protection in Uranium Facilities

LAST MONTH'S UPDATE TOPICS

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

- **Specifications for All**
- **ASME Teaching Code Courses in August and September**
- **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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