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:

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

2006 IBC AND OTHER CODES ADOPTED

Discussed last month, New Mexico did adopt the 2006 *International Building Code* and *Existing Building Code* and the 2006 *Uniform Mechanical* and *Uniform Plumbing Codes* -- but effective Jan 1, 2008. As a result of wording in Engineering Standards Manual (ESM) Chapter 1 Section Z10, this results in automatic adoption by LANL. We will be updating affected ESM chapters and amendments soon to eliminate any possible confusion. Note: Z10 also requires that any strengthening amendments made by the State be followed.

Reminder -- LANL adopted the 2008 National Electrical Code for all new projects effective January 1, also discussed in January's Update.

The 2006 I-Codes became available on LANL's IHS standards subscription today.

PIPE PROPERLY, PRECLUDE PUNISHMENT

Discussed in October's Update, the arrival of 10 CFR 851 *Worker Safety and Health Program* one year ago allows DOE to fine us for non-compliance in the areas of construction, fire protection, explosives, pressure, firearms, ind. hygiene, biohazards, Occ Med, vehicles, and electrical safety.

The pressure safety provisions include compliance with the ASME B31 series of piping codes. Of these, ASME B31.3, *Process Piping* is used the most at LANL. This Code must be followed whenever installing tubing or piping that carries any fluid to, from, or within process equipment under pressure or vacuum, with a few exclusions (Sect. 300.1).

At 350+ pages, B31.3 has a lot of requirements. Fortunately, we have a comprehensive, LANL-

specific Guide on the B31.3 (D20 App A of the ESM Mechanical Chapter), and it can be very helpful when trying to meet the Code and stay out of trouble. It even has piping specs -- "recipes" for cookbook, compliant design.

One B31 series issue that's come up recently concerns the requirement to have an "Owner's Inspector" verify the piping installation conforms to all applicable examination and testing requirements of the Code and of the engineering design. That has been resolved since Construction Engineering Group Leader Paul Hudson has inspectors meeting the experience requirements of 340.4(b), so contact Paul to arrange all necessary piping inspections.

The latest edition of B31.3 is 2006, available on IHS . For questions contact Charles DuPre, Mechanical POC (7-1722), or alternate Tobin Oruch (5-8475).

ARCHITECTURAL POC NOW CHAVEZ

Following the voluntary departure of long-time architectural discipline Point-of-Contact Scott Richardson, David Chavez in the Project Engineering Office has assumed this function. Please contact David for all architectural standard and spec questions at 5-3927 or dxchavez@ lanl.gov.

LANL STANDARDS ISSUED IN JANUARY

LANL Master Specifications Manual http://engstandards.lanl.gov/New_Home.html#spec

New anchor specs (thanks to Isabel Cuesta Garcia; also Larry Souza, others):
03 1512 r0, Post-Installed Concrete Anchors Purchase -- High Confidence
03 1534 r0, Post-Installed Concrete Anchors Purchase -- Normal Confidence
03 1550 r0, Post-Installed Concrete Anchors -- Installation and Testing

Note: These sections are not required for “non-structural” anchors as defined in ESM Chapter 5 Section II Appendix A; instead, non-structural anchors need only be designed, purchased, and installed per the IBC and manufacturers instructions. App. A.7 states:

> A. Non-structural anchors support very light loads and subsequently are exempt from being “designed anchors.” Post-installed concrete anchors for use in non-structural applications shall be chosen from qualified anchors in compliance with the IBC and ESM Chapter 16, IBC Program.
> B. A non-structural application must meet the following criteria:
> 1. PC-1 mechanical and electrical components where flexible connections between the components and associated ductwork, piping, and conduit are provided and that are mounted at 4 ft or less above a floor level and weight 400 lb or less.

2. PC-1 mechanical and electrical components weighing 20 lb or less where flexible connections between the components and associated ductwork, piping, and conduit are provided, or for distribution systems weighing 5 lb/ft or less.

DOE TECHNICAL STANDARDS ACTIONS

http://www.hss.energy.gov/NuclearSafety/techstds/standard/recappts.html
New or Revised DOE Tech Stds this past month:

- DOE-HDBK-1131-2007, General Employee Radiological Training
- DOE-STD-1146-2007, General Technical Base Qualification Standard

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:

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

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 P948 ph (505) 665-8475 fx 667-5405
oruch@lanl.gov http://engstandards.lanl.gov/
please consider the environment before printing this email