

ENGINEERING STANDARDS UPDATE
Trying to Make Standards Exciting Since 2001

This is the monthly newsletter of the LANL Conduct of Engineering Office's Engineering Standards Program. The Standards define the minimum technical requirements for the design, fabrication, construction, commissioning, repair, and replacement of both new and existing equipment and facilities, including both maintenance and modification, for programmatic and facility work at LANL [[PD340](#)].

Topics this month:

- **Conduct of Engineering Courses**
- **Ethics for Sale**
- **Standards Spotlight: Anchorage of R&D Equipment**
- **Swagelok Classes -- Lunch and Turn (of the Nut)**
- **LANL Standards Issued in July**
- **DOE Technical Standards Actions**
- **CoE Quote of the Month**
- **When Conduct of Engineering Isn't Followed**

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

CONDUCT OF ENGINEERING COURSES

Per T&Q Manager Lyle Kerstiens, these are taught by Eng Processes Mgr Gurinder Grewal in MSL Auditorium from 8-5. Enroll or disenroll [here](#); registrar: yitrujillo@lanl.gov

Thurs, Aug 4 43666 Design Control
Thurs, Aug 11 43662 Quality
Thurs, Aug 25 43663 Technical Baseline

ETHICS FOR SALE

Courses, that is. Engineers registered in New Mexico need ethics PDHs periodically; by no coincidence, the New Mexico Society of Professional Engineers ([NMSPE](#)) promotes this and offers such courses. In addition to the [online](#) courses available anytime, below is their live schedule for Fridays this Fall (details soon). Last year, the cost was \$75.00 for Members, \$100.00 for Non-Members, and ran from 1-3:00 pm. It's managers option on reimbursement (Concur small purchase feature).

30 Sept Los Alamos
7 Oct Santa Fe
21 Oct Albuquerque
11 Nov Las Cruces
18 Nov Albuquerque (as part of the NMSPE Fall Issues Conference – get PDH's for the whole day!!!)
9 Dec Albuquerque

STANDARDS SPOTLIGHT: R&D EQUIPMENT ANCHORAGE

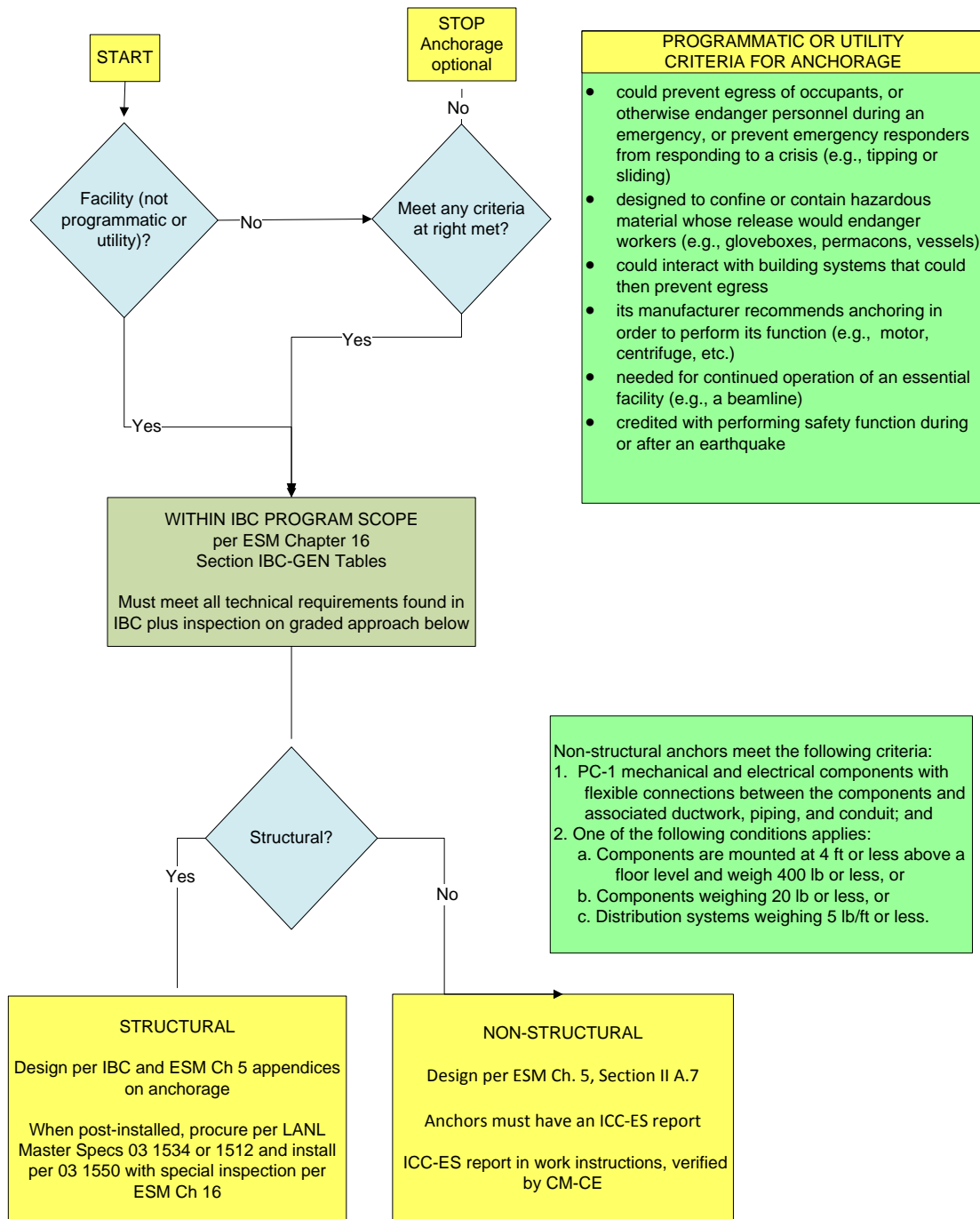
In discussing LANL's adoption of the 2009 New Mexico building codes last month, I noted that Engineering Standards Manual Chapters 5 (Structural) and 16 (IBC Program) were revised to adopt and amend the 2009 model codes on which NM building codes are based.

This month, I'm highlighting ESM [Chapter 5](#) Structural's Section I - General Criteria. It has a new Appendix A that describes when and how to anchor equipment and components.

First, it helps to understand that, for building-related anything, the need for anchoring is straightforward – it's governed by the International Building Code (ultimately per ASCE 7, which the IBC invokes and ESM Ch. 16 clarifies). Actual anchorage design and degree of inspection depends on whether the loads supported rise to the LANL's definition of "structural" – if so, design is done to the Appendix A's for Chapter 5's Sections II and III (commercial and nuclear respectively) and LANL's Div 3 Master Specs govern procurement and installation and special inspection (see ESM Chapter 16). When "non-structural", the design doesn't include seismic loads and inspection is simpler. ["Things" as used above is the building structure, non-structural components, and non-building structures (e.g., a tower or tank)].

For R&D (aka programmatic) equipment, the need for anchorage depends on safety and operational criteria. Here, ESM Ch. 5 Section I's new Appendix A has a flowchart (below) listing the criteria. If any criterion is met, the flowchart goes on to summarize the design, procurement, and inspection requirements – which are the same as those for IBC anchorage discussed above. Questions? Contact Structural POCs Doug Volkman, 7-6238; Glen Pappas, 5-1221; or Mike Salmon, 5-7244.

Figure I.A-1 of new ESM Chapter 5 Section I Appendix A:



SWAGELOK CLASSES -- LUNCH AND TURN (OF THE NUT)

Albuquerque Valve & Fitting is putting on two days worth of free seminars this month, with each morning the same but with the afternoons different. They'll be in the conference room at the Comfort Inn August 16th and 17th. Per Account Manager Randy Huggard, "These seminars are designed for all levels of experience and include hands on learning which will help to ensure trouble free system performance...we will also share trade secrets with the group in order to have more efficient installations...we do these classes to help educate our customers...limit of 15 people per session...breakfast and lunch provided... you can attend any or all of the classes you want. If interested, drop me an email at randy.huggard@swagelok.com or call on my cell (505) 379-7300."

TUES 8/16

9am-12pm: Swagelok Safety Installation Seminar for Fittings and VCR and Thread Identification

This seminar is intended to familiarize end users and purchasing professionals about the proper use of tube fittings and VCR fittings. Installation, trouble shooting and mechanical function of the fittings are discussed. We will familiarize students with techniques to identify threads.

12pm: Lunch

1pm-3pm: Swagelok Valve Selection & Safety Installation Seminar

Familiarize end users and purchasing professionals about valve selection, evolution of design, design advantages, and installation.

3pm-4:30pm: Swagelok Regulator Safety & Selection Seminar

Overview of common regulator types and will also discuss proper operation, sizing, and safety concerns.

4:30pm-5pm: What's New at Swagelok and Q and A

WED 8/17

8am-11pm: Swagelok Safety Installation Seminar for Fittings and VCR and Thread Identification

Same course as Tues am but 8am start.

11am-12pm: Swagelok Hose Safety & Installation Seminar

Overview of hose products available in industry and how to properly install, troubleshoot and assemble hoses on site.

12pm: Lunch

1pm-3pm: Swagelok Tube Bending Seminar

Proper setup of the Swagelok Tube Bender, layout, and bending techniques. The user will be exposed to tube bending techniques that will allow them to install tubing runs more efficiently and confidently.

3:00pm-4pm: What's New at Swagelok and Q and A

LANL STANDARDS ISSUED IN JULY

LANL [Engineering Standards Manual](#) (STD-342-100)

Chapter 5, [Structural](#)

Section I, App A – admin changes to color flowchart

Section II, App A – admin changes to A.7.

DOE TECHNICAL STANDARDS ACTIONS

New or Revised DOE [Tech Stds](#) this past month: none

COE QUOTE OF THE MONTH

"Success is the ability to go from one failure to another with no loss of enthusiasm."

-Churchill

WHEN CONDUCT OF ENGINEERING ISN'T FOLLOWED

Sign on window fan shroud reads "...Emergency Cooling System, Do Not Disturb."



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LAST MONTH'S UPDATE TOPICS

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

- **Wildland Fire and Codes**
- **2009 Code Adoptions**
- **2009 Code Training**
- **Conduct of Engineering Core Courses per Lyle Kerstiens**
- **New Lab Procedure -- Conduct of Engineering Processes for R&D – P 341-1**
- **New Engineering Science Blog Debuts**
- **LANL Standards Issued in June**
- **DOE Technical Standards Actions**
- **CoE Quote of the Month**
- **When Conduct of Engineering Isn't Followed**

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

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