

Unlisted Equipment Approval

Bob Weiss, LANL

Bobby Sparks, PNNL

2009 EFCOG Electrical Safety
Workshop

- Inter-lab Equipment Approvals
- DOE Electrical Safety Handbook
- Approval Issues
- Procurement

Inter-lab Equipment Approval

1. Need common inspection criteria (All DOE labs follow DOE Handbook).
2. Receiving organization needs approval documents (forms and reports), and other equipment documentation including drawings, schematics, user manuals, etc.
3. A common DOE-wide approval database would simplify this.
4. Notification system so AHJ knows that equipment is arriving on-site.

Inter-lab Equipment Approval (continued)

1. Agreement between labs (i.e. MOU) on document process and tracking of equipment.
2. Common level of training/certification for equipment approvers.
3. Joint lab projects could try this first.
4. For equipment sent to non-DOE sites, including other countries, universities, homeland security, etc.), provide approval documents and drawings, but do not transfer approval authorization.

DOE Electrical Safety Handbook

1. Geared towards AHJ, we also need to have this information in a form usable to experimenters, equipment users, procurement organizations, etc. This can be done by providing guidance sheets, process flowcharts, etc.
2. Concern with how NFPA 791 may be applied, such as...
 - Right now it is a recommendation only, but what if imposed by DOE?
 - Designed to help private companies become independent equipment approvers.
 - Describes testing that we may not want to do, such as Hi-Pot testing for insulation.
 - Reports need to cite standards and their versions for inspections.

DOE Electrical Safety Handbook (continued)

1. We recommend that it allow for DOE labs to use established approval programs, such as provided in the DOE Electrical Safety Handbook.
2. This workshop group will submit suggestions to NFPA 791.

Approval Issues

1. Quality of User-built equipment is often a problem, especially with Grad Students- need to better communicate program requirements to students, experimenters, and visiting staff.
2. DOE labs should take the initiative to provide Universities with Electrical Safety Training material to be made part of science engineering curriculum (part of lab or classroom training).
3. Equipment does not have drawings or schematics – what do you do with legacy equipment with no documentation
4. Push back from users (it has worked fine for years, why wasn't it approved?).
5. Equipment in storage being placed into service without approval.
6. Foreign-built equipment is an issue, fused neutrals, different wire gauge and colors, operating voltage and frequency, etc.

Approval Issues (continued)

1. Workmanship issues, particularly for in-house equipment – need workmanship training?
2. Inspectors are often requested/required to repair the equipment as well as approve it.
3. “Courtesy Labels” (i.e. NTRL Listed, Non-hazardous class X.1, etc.) are very beneficial to the users.
4. Spot-check approval forms to ensure they are being completed properly (quality check).
5. Have senior (experienced) ESOs/approvers mentor newly-trained approvers.
6. Cultural/Mindset issues...
 - Users do not understand value of program.
 - Lack of demonstrated institutional support.

Procurement

1. How can the purchasing process be improved to ensure that NRTL or Reputable equipment is ordered when available?
2. Can better information be given to procurement organizations, such as adding non-NRTL info to prohibited items lists, and instructions on what NRTL means?
3. Reputable manufacturer information needs to be readily available to those making procurement decisions.
4. AHJ has to approve all purchases of NRTL equipment.
5. Ultimate responsibility is with equipment user/requestor.
6. Since procurement policies vary so much between labs, a consistent complex-wide recommended procurement program is difficult.

Any Questions?

