

This Guidance Card can assist you in improving electrical safety during your safety walkarounds. It is provided only as an example, for you to adapt to your own organization's needs.



GUIDANCE CARD

LA-UR-05-6362

Number: OSH.05e	Functional Area: Occupational Safety and Health
Rev: 2 (05/05)	Topic: Approval of Unlisted Electrical Equipment

References: LIR 402-600-01.3, Electrical Safety, Revised March 11, 2004
LIG 402-600-01.2, Electrical Safety Implementation Guide, Attachment D, June 5, 2003
29 CFR 1910.303 (a) and (b)
NEC 90.7

Note: Unlisted electrical equipment is equipment that has not been approved by a Nationally Recognized Testing Laboratory (NRTL).

Performance Expectations

1. Unlisted R&D, facility and utility equipment is "approved" prior to use. The approval indicates that:
 - The equipment is safe for the intended use;
 - The equipment has been examined for safety in accordance with considerations stated in 29 CFR 1910.303(b) by the Group, Division, or Chief Electrical Safety Officer (ESO); and
 - The approval is documented (e.g., in a SOP, HCP, or IWD or through use of the checklist in Attachment D, LIG 402-600-01.2, which is recommended). A LANL approval label has been placed on the equipment. The label indicates the file number of the evaluation form, LANL division and group, responsible ESO, and the approval date.
2. A risk-based (graded) approach is used to classify unlisted electrical equipment. For equipment that presents a high initial electrical risk, corrective action is taken immediately.
3. New or modified equipment after October 1, 1999 must be examined and approved prior to use. (The "Process for Approval of Unlisted Equipment" is diagramed in Attachment D of the LIG. There are provisions allowing a prioritization plan for equipment purchased in the last 5 years and automatic approval for equipment that has been in continuous use for 5 years without an accident.)
4. All existing equipment must have been examined and approved prior to October 1, 2003.
5. Electrical equipment operating within the following parameters is considered as presenting a very low hazard and can be exempted from the process:
 - Voltage > 50 V, current < 5 milliamperes, and stored capacitor energy < 10 joules.
 - Voltage < 50 V and power < 1,000 watts, and stored capacitor energy < 10 joules.
6. The evaluation (listed in 1 above) includes the determination that the equipment is free of recognized hazards that are likely to cause death or serious physical harm to employees. This evaluation consists of eight elements. A review of these eight elements requires the use of the detailed checklist form and instructions given in Attachment D, LIG 402-600-01.2 and is normally beyond the scope of management walkarounds.

Procedure:

- Review guidance card, any IWDs/HCPs used for documentation or the approval form.
- Interview principal investigator(s) and technicians(s) about equipment operation and history. Determine if the equipment must be examined and approved prior to use. Determine if the equipment is included in the prioritization plan and when it is scheduled for examination and approval. Determine if the equipment has an automatic approval.
- Record observations based on comparison to the performance expectations listed above.
- Document the results within 3 days.

Questions: For workers

1. Can you define the term unlisted electrical equipment? Do you have any equipment that requires equipment approval? Do you have any equipment that has been approved?
2. What are the hazards associated with the use of this equipment? What documents specify these hazards?
3. What are the electrical specifics of the equipment (e.g., voltage, current, energy, power)? How is the residual risk associated with the use of this equipment mitigated?
4. Identify all personnel expected to be a part of the operation. Has everyone been authorized and trained to use this equipment? Show me the document that authorizes the work.
5. Who is your Group or Division Electrical Safety Officer (ESO)? Has your ESO worked with you on any equipment approval issues?
6. What participation did you have in the evaluation and approval of the unlisted equipment used for this operation, if any? If so, what was your input to the process? Was your advice heeded to your satisfaction? What could be done differently?
7. What training have you received for electrical safety? Do you have a training plan? Has it been met? If not, how do you intend to complete the required training? If you do not understand the requirements for approval of unlisted electrical equipment, when will you take the classroom training on the Electrical Safety Program at LANL (EDS 33215)?
8. Have you ever had any problem with the proper functioning of the equipment? Was it adequately addressed?

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