



Safety Alert

Electrical Safety

For two consecutive years Argonne has missed an important Performance Measure Goal in our contract with DOE. The measure is to have no occurrences of unauthorized work on energized electrical circuits or equipment. In FY2008 there was one such incident and there were two in FY2007.

Energized electrical work basically includes most electrical work involving voltages above 50 volts with exposed electrical wiring or components when the equipment is not first placed into the “electrically safe work condition” as defined in ESH Manual 9.1.6 and the NFPA 70E standard. The first rule, then, is to place the equipment into the electrically safe work condition prior to beginning the work including applying a proper lockout/tagout or in some permitted cases by unplugging and controlling the plug (ESH Manual 7.1.9 and 7.1.12.1).

Energized electrical work is unauthorized unless you meet all of these requirements:

- 1) Completed and up-to-date required electrical safety training on your Training Profile verifying also that your JHQ accurately reflects the electrical work you perform.
- 2) Knowledgeable about the equipment you will be working on. Make sure you are familiar with the equipment and procedure you will be using first and that you know all of the hazards of the task including identification of all sources of hazardous energy.
- 3) Authorized by your supervisor or management to perform the work.

There are additional aspects to the work to consider it authorized.

- Lockout/Tagout (LO/TO) zero voltage verification is energized work and requires wearing the proper personal protective equipment (PPE). An equipment specific LO/TO procedure or the general LO/TO procedure (Form ESH-247) must be followed when performing this step. See the flowchart in ESH Manual 7.1.9 to determine which procedure (equipment specific/complex or general/simple) to use.
- For energized electrical work that strictly is limited to only testing, measuring, troubleshooting, and/or calibrating, a procedure must be used and followed including the use of PPE. The requirements for this written procedure appear in ESH Manual 9.2.8.1.
- For all other energized electrical work, a completed and fully signed Energized Electrical Work Permit (Form ANL-211) is required before any work can begin. The criteria of the permit must be followed and the work scope cannot exceed the described tasks or steps.

Refer to Chapter 9 of the ESH Manual or contact Joe Kilar, the Electrical Safety SME, or any member of the Argonne Electrical Safety Committee (http://www.anl.gov/ESH/sub_pages/committees/esc/index.htm) for further information or questions you may have on this topic.

Let's work together in FY2009 to avoid unauthorized electrical work, enhance our safety, and thereby meet this Performance Measure.

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