



Laboratory Safety Committee

Electrical Safety Subcommittee

Updated: 12-1-09

ESS D2006-1 06-Feb-2006

Voltage Testing Necessary for Non-Electrical Work Activity?

Greg Gilbert of FESS Ops had requested via email that the ESS consider the above mentioned types of tasks – as to whether they would be required by NFPA 70E to perform "no voltage verification" dressed in the PPE required after performing Lockout/Tagout procedures for strictly mechanical repair or preventive maintenance tasks on motor driven equipment. Examples of mechanical repair were replacing belts, filters, couplings, bearings, performing pump repair, alignment, etc. The current practice for such mechanical work is to follow all of the LOTO steps; notify, prepare, isolate, lock out, and verify by pushing the start button for the equipment.

The ESS found the current practice for the described tasks to be acceptable. However, central to this acceptance is that the motor driven equipment be operating or commanded to operate briefly before the energy source is isolated. After isolation, the attempt to re-start the equipment by normal means and the equipment failing to start is considered acceptable verification. This action positively identifies the connection to the energy isolating device. Acceptance is also conditioned by the premise that the work is mechanical and does not involve removing panels or guards that would result in having exposed electrical circuit parts or connections. It is assumed the equipment is simply configured and without multiple means of ON/OFF control. The equipment may be OFF and cannot be re-started because the equipment is broken, because of additional attendant hazards, or because the equipment would be additionally damaged. For such cases, it would be necessary to verify the absence of electrical power to the equipment by electrical testing.