

Date: Thu, 21 Sep 2000 09:03:54 -0600
From: Meredith Brown <racer@lanl.gov>
Subject: Yellow Alert: Electrical Shock from Energized Equipment

Title: Yellow Alert- Researcher shocked touching energized terminal strip

Date: 8/8/2000 Identifier: 2000-KO-SNL-1000-0002

Summary: Routine replacement of electrical components in an experiment can lead to a lapse of judgement concerning safety steps. The activity that resulted in a shock this time had been performed safely in several prior situations. The excitement of knowing the experiment could be running again soon may have been a factor in the lapse of judgement. Unplugging the equipment would have provided Lockout/Tagout and removed the hazard.

Discussion: A graduate student researcher was replacing a turbo pump controller to a turbo pump on a vacuum system. The researcher forgot to unplug the controller before attempting to connect the pump wires to a terminal strip on the back of the controller. In preparation for attaching the wiring, the researcher touched a screwdriver to the energized terminal strip and received a 120 VAC electrical shock to the left hand.

Analysis: Even though the controller was not turned on and no indicator lights were illuminated, the terminal strip on the back of the controller contained an energized terminal when the controller power cord was plugged into a wall receptacle. The researcher was aware of this and knew how the equipment operated, but was shocked when this one safety step was overlooked. A warning label was added to the terminal strip to aid in preventing future occurrences.

Resolution: A Warning label was added - see Analysis.

Descriptor: Yellow / Caution

DOE Functional Category: Conduct of Operations - Lock and Tag, Maintenance - Electrical

Hazard: Electrical / NEC

ISM: Develop / Implement Controls, Perform Work

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Keywords: electrical shock, lockout/tagout, research electrical equipment