

Date: Thu, 03 Dec 1998 10:30:39 -0600
From: Meredith Brown <racer@lanl.gov>
Subject: Yellow Alert: Static Shock Warning

Title: Yellow Alert-Static Buildup Shock Warning

Lesson Learned Statement: Hazard assessments need to include risks that may result from procedures not being followed and personal protective equipment that is not in good condition.

Discussion of Activities: Linemen were lashing a fiber-optic cable to a power pole using a 4-wheel drive all-terrain vehicle provided the power to pull the cable along the static line. A phase-to-ground was in place one pole span from where the work was being conducted. Personnel were wearing protective equipment (hard hat, safety glasses, and general purpose leather gloves). Work was progressing when a lineman in an elevated bucket on a bucket truck recoiled his arm in response to a shock received from the static line.

Analysis: Static electric buildup in the static lines was the source of the electrical discharge. The hazard assessment did not address static electric shock as a risk. Checks to ensure that grounding procedures were followed and that the grounding was effective were not conducted. The gloves used had holes in them which may have provided a pathway for the arc to contact the skin in the lineman who received the shock.

Recommended Actions: The hazard assessment will be revised to include the risk of static electric shock. It will also be included in future hazard assessments for similar work. Static ground to pole ground will be tested at each work point. Visual checks will be made to ensure that both static lines are connected via metal cross arm or static jumper. Personnel protective grounds will be moved closer to the work point. A single set of personnel protective grounds will be attached at the work point. Only leather work gloves in good condition (e.g., without holes) will be used.

Estimated Savings/Cost Avoidance: N/A

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Authorized Derivative Classifier: Dennis Murphy
Reviewing Official: Dennis Murphy
Priority Descriptor: Yellow/Caution
DOE Functional Category: Safety
User-Defined Category: Electrical safety
Keywords: shock, electrical, static
References: DOE/NV Surveillance Report JM0008

Follow-up Actions: Information in this report is accurate to the best of our knowledge. As a means of measuring the effectiveness of this report, please contact the originator of significant action(s) taken as a result of this report or of any technical inaccuracies you find. Your feedback is appreciated.