

**EFCOG Electrical Safety Subgroup
January 14, 2008 Teleconference Meeting Minutes
Submitted by Jackie McAlhaney**

Attendees

James Durnan	Jerald Kinz	James Follansbee
Keith Schuh	Jackie McAlhaney	Mark McNellis
Lloyd Gordon	Gary Dreifuerst	Pat Tran, DOE-HQ
Greg Christensen	Jim Luhring	John Pearson
Mike Hicks	Todd Bischoff	Larry Perkins
Keith Gershon	Scott Gilmore	Joe Kilar
Todd Kujawa	Heath Garrison	Max Wright
Shane Knox		

Introduction and Discussion of Recent Events

Mark McNellis welcomed everyone back from the holidays and said he was looking forward to working with the group as this years Chairman. He introduced the new officers for 2009 (Jackie McAlhaney, Vice Chairman, Dave Mills, Secretary, Bobby Gray, Officer at Large and Lloyd Gordon, Chair Emeritus). Mark emphasized that our primary objective is to protect workers and prevent electrical events. He then requested a discussion of recent electrical events and discussed one shock event at Sandia that resulted from failure to perform a voltage test. The breaker selected to lock out the UPS was incorrect.

Lloyd Gordon discussed a shock event at LANL that he categorized as the worst shock event at LANL in two years. Subcontract workers were performing environmental cleanup and lowering a camera into a well when worker received a shock. The worker was standing in water. Lloyd indicated that the shock was felt when the worker let go of the camera body. The power supply to the camera and the camera were unlisted equipment and apparently faulted resulting in the shock. Lloyd indicated that the investigation revealed that the dc shock was on the order of 50-60 mA at about 120 V dc. The event was scored at 630 using the severity measurement tool.

Mark asked the group for feedback on how they handle rental equipment or equipment brought on site by subcontractors. Lloyd said that LANL treats rental equipment as “unlisted” and requires a site inspection prior to its use. He also said this policy is written into each subcontractor’s contract at LANL.

Larry Perkins discussed a battery event that resulted in a 240 V dc shock. The worker complained of chest pains and was taken to a hospital. Larry will provide additional details to Mark as he gets more information on the event.

DOE Electrical Safety Handbook

Larry Perkins indicated that he and Pat had received the final revised version of the Electrical Safety Handbook revision. He requested Lloyd to provide him the pictures in a separate file and also provide the comments/resolutions. Pat said that some of the photos may need to be reduced in size since they consume many pages in the handbook.

Lloyd said that LANL had spent about \$13,000 for the graphics work for the Handbook. Mark thanked Lloyd and Bobby Gray for leading this major effort.

Larry requested status on posting of the R&D training modules to the EFCOG website. Lloyd replied that the modules have been cleared by his security process and he just needs to put them into the correct format. Lloyd said he expects to get them posted in about 2 weeks. Larry indicated that some of the R&D folks at Oak Ridge had requested them.

Spring Meeting Plans

Mark McNellis discussed plans for our Spring Meeting in St. Louis in conjunction with the IEEE Electrical Safety Workshop on February 2-6, 2009. He encouraged everyone to register for our meeting on the EFCOG page. He also reviewed the proposed agenda for the meeting and said it will be posted to the EFCOG website.

National Training Center (NTC) Electrical Safety Training Material

Mike Hicks reported that he had received the training material from Bryan Drennan but was not sure if it was complete or the latest version. Lloyd indicated that he had a copy and it is not the latest version. Mike responded that he will talk with Randy Unger about getting the latest copy. Mark McNellis agreed to visit the NTC and attempt to get the latest copy. Jackie McAlhaney mentioned that we should maintain the material on the COE when we get the latest copy. Mike indicated that this had been discussed in the past but some felt this material is only specific to DOE qualifications and should not be placed on the COE. Mike said we will provide material to Pat Tran to maintain.

DOE Monthly Report on Electrical Events

Glenn Searfoss provided a review of electrical safety events within the complex. The number of reported electrical shock events for 2008 exceeded 2007 by one shock event. However, the 26 events for 2008 were below the average number of electrical shocks per year (28.75) for the previous four years. Almost three quarters of the 2008 electrical shocks involved non-electrical workers. Hazardous

energy control continues to be an issue, involving more than a third of the 2008 events. Half of all lockout/tagouts problems were associated with subcontractors. It is extremely important to plan the job correctly and ensure that an electrically safe work condition exists before starting the job. This will greatly reduce the risk of contacting energized parts, which can cause an electrical shock or arc flash. On the positive side, the average number of electrical safety occurrences per month in 2008 (9.4) is the lowest in five years and shows a 27 percent reduction from the previous four-year monthly average.

There were 7 electrical safety occurrences for December 2008:

- 1 resulted in an electrical shock
- 1 involved damaging an electrical conduit during drilling
- 1 involved cutting an energized 120-volt cable
- 1 involved lockout/tagout
- 4 involved electrical workers and 3 involved non-electrical workers
- 2 occurrences involved subcontractors

Bobby Gray indicated that he is now working with HQ to evaluate all electrical occurrence reports for application of the electrical safety severity ratings. He indicated that he will screen all occurrence reports for inclusion of the electrical severity score and discuss with the facility to ensure consistent reporting.

Lloyd indicated that Tommy Martinez is continuing to work on improvements to the electrical severity measurement tool and will revise document in the future.

Adoption of NFPA 70E-2009

Jim Durnan expressed a concern about adopting the 70E-2009 because he feels it may be less stringent than the 2004 edition. Jim indicated that the exemption in the 2009 edition for arc flash analysis on systems 240V and below supplied by transformer less than 125kVA is less restrictive than the 2004 edition that is referenced in 10CFR851. Bobby Gray said that this is not a reduction in safety but further defines when an analysis is required. Others expressed opinions that even the 2004 edition references the IEEE 1584 standard that provides basis for this exemption. Mark indicated that we will further discuss this issue in St. Louis and develop a position paper to explain.

AED Policy Status

Greg Christensen reported that he is continuing work on a position paper for use of AED's within the complex. The paper is about 95% complete and will be discussed at the Spring meeting.

General Discussion

Bobby Gray reported on a new NFPA project to develop standards for acceptance of electrical equipment. Keith Gershon is a member of the new committee. Keith indicated that NFPA is stilling accepting applicants for membership and he will provide an update at the Fall Workshop meeting in Hanford.

Pat Tran said he will check on the call in number for our monthly teleconference to determine if we can use same number each month.

Jackie McAlhaney congratulated Mark McNellis on his recent certification as a Certified Safety Professional.

The meeting was adjourned at 1200 Eastern Time.