Working Group on Voltages at Publicly and Privately Accessible Locations Chuck DeNardo, Chair Sheraton Atlanta Hotel – Capitol North Atlanta, Georgia January 12, 2009 (Monday) 2:00 p.m. – 5:00 p.m.

Unapproved Meeting Minutes

- 1. Call to Order/Review Agenda
 - Chuck called to order and showed the required IEEE slides.
- 2. Introduction of Attendees 32 individuals in attendance
 - John Goodfellow noted that EPRI PUB #1018463, tree contact with distribution voltage, study was recently published.
- 3. Minutes of July 2008 Pittsburgh Meeting
 - Minutes reviewed and motion made to approve minutes, seconded, all in favor, motion to approve July 2008 Meeting Minutes passed.
- 4. Outline Review and Solicitation of Volunteers
 - Looking for volunteers for different sections to the document
 - Volunteers for the Swimming Pool investigation protocol, and the human and animal sensitivity sections came forward during the meeting.
- 5. Presentation and Discussion Section 6 : Contact Voltage
 - Dave Kalokitis & Scott Kruse
 - i. Section 6 Contact Voltage Presentation
 - Discussion concerning hazard level inclusion in document; should be part of section 5, human and animal sensitivity, volunteers will investigate and work on possible wording.

- Discussions around Safety Standards, setting voltage levels.
 The purpose of the guide is to educate the regulators,
 legislators, public and new utility employees, not to set a
 black and white standard.
- 3. Need case studies, diagrams, test studies, looking for volunteers?
- 4. Marty Page Case study on internet, life guard making contact with a pump motor....can it be used? Yes, if true, and report meets IEEE guidelines.
- 5. Brian Cramer Suggested to get rid of the terminology "phantom voltage" and focus on targeting what the cause of the voltage really is. Decision to review the use of the term and propose different wording, if possible.
- 6. Discussion: Be cautious about assuring that all voltages can be resolved once a cause is found, you can't always find the cause/source of the voltage, especially when you test with shunt and voltage goes away.
- 7. Jim Bouford...Published data exists as to the threshold of perception voltage levels. NESC/NEC/UL all have voltage levels published that require protective measures be taken to avoid direct contact. This WG should be able to identify "accepted" voltage levels that are noted as "safe to humans," voltage levels that require "actions within a

defined time frame," and voltage levels that require "immediate resolution."

8. Betty Tobin – campground case, may have some material.

9.

6. Confined Livestock Investigation Protocol & Forms

Chuck DeNardo

- i. Conversations regarding voltage level and ma level.
- ii. Conversations regarding end of line and open delta transformation
- iii. Make this less Wisconsin specific and put into IEEE format.
- iv. 4 channel digital meter used
 - 1. Need to measure 3 or 4 places at the same time.

7. Other Business

- Request to set up phone and allow call ins. The WG thinks this would be unworkable.
- SCE, harmonics, 4 wire circuit, lots of N current, Section 7 issue
- Case Study form to be added to the Web site.
- Chuck to send e-mail to group regarding officer elections.

8. Adjourn