

Meeting Notes of WG-E3
October 22, 2009 – Nashville, TN

Chair: Randy Clelland for Don Delcourt
Vice Chair: To Be Determined
Secretary: To Be Determined
Technical Editor: To Be Determined

1. Randy Clelland, the chairman of E0 Subcommittee, opened the meeting with introductions.
2. **Obligatory Statement** - The latest revision of five-page long obligatory document from IEEE, regarding patents in standards and inappropriate topics for working group meetings was mentioned to the members. Half-hour later the projector was available.
3. **Member attendance** – There were 5 members present and 4 guests present. Total member o member is 11. No quorum was present. Two guests came later during the meeting.
4. **Minutes/Agenda** - Randy proposed agenda for the meeting and explained the status of the IEEE 979 - Guide for Substation Fire Protection standard. He explained that the current draft (D4) had been reformatted and incorporated many but not all comments submitted for earlier drafts.
5. **Review of draft 4 comments and member's discussions:**
 - Norman Rockwell (TVA): He said that we should go with the current document with some additions. He mentioned that NFPA is suggesting the best practice for transformers spacing. If TVA is not able to meet 50 feet space requirements, TVA puts walls, or fire suppression system on transformers. TVA does not go back to revise existing design to meet today's code unless substation works includes new transformers addition. He mentioned that adding firewalls between transformers might influence air circulation. Gravel around transformers may influence where fire goes. He mentioned that *Factory Mutual* has data that list the fire protection requirements. Of about 300+ substations, TVA has 20 substations with FP, and 10 subs with Fire Suppression systems.
 - Raj Ghai (Hydro one), said that they are updating the existing substation to meet new standard requirements.
 - Randy Clelland (BC Hydro) mentioned that Tables 1 and 2 needs to be updates as well as Figure 1.
 - Joe Gravelle (Xcel Energy) has mentioned that the area of flame when oil containment was not used was not shown clearly. Also he asked how far was edge of oil containment, which would prevent oil spill outside of transformer oil pit?
 - Norman has mention that most insurance companies will go by NFPA requirements.

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- Steve Shelton asked if 30 feet is face to face is the current standard requirements for spacing between transformers.
- Randy: There is concern that substation engineers cannot use the standard for substation design.
- Rad: Good fire protection guide should have numbers to use, with some examples.
- Debra had couple of questions: Need definition of flame front and how to calculate it. Where shape of spill oil came from? She should be ok if these are defined.
- Randy stated that:
 - 1- Change fig. 1 with more realistic oil containment. Add a sample calculation.
 - 2- Add Table 1, by putting data back.
- Norman suggested that standard need to address new technology of mineral oil production that is less flammable.

6. **Assignments:**

1. **Assignment #1** – Is to investigate what should be space separation of two equipment connected to the same circuit. Joe Gravelle and Steve Shelton volunteered to finish this assignment, by no later than 2009-11-16.
2. **Assignment #2** – Is to help Don Delcourt with making examples in Annex B. Hanna and Rad, to help Don getting substation layout drawings by no later than 2009-11-16. Brian Farmer (PG&E) and Joe have already provided substation layouts to Don.
3. **Assignment #3** – Is to define water supply design consideration, section 7.4. Norman Rockwell promised to finish this task no later than 2009-11-16.
4. **Assignment #4** – Norman to consolidate Steve's comments, and give condensed comments to Randy, by no later than 2009-11-16.
5. **Assignment #5** – Joe and Steve to provide a proposal for clause 7.1.1.5, Exceptions, by no later than 2009-11-16.
6. **Assignment #6** – Randy and Joe to provide a proposal for switchgear exception in clause 6.5.2, Fire Separation, by no later than 2009-11-16.
7. **Next Steps** – Randy and Don to work on a new draft for review by the working group. Target date is 2009-12-01 (contingent on assignments being completed).
8. **Next Meeting** – Montreal, CANADA, May 2010

Meeting notes were recorded by Rad Barac.

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Attendance

#	NAME	ROLE	P*
1	Randy Clelland	Member	X
2	Barac, Radoslav	Member	X
3	Longtin, Debra	Member	X
4	Gravelle, Joseph	Member	X
5	Abdallah, Hanna	Member	X
6	Wallace, Brian	Member	X
7	Shelton, Steve	Guest	X
8	Rockwell, Norman	Guest	X
9	Ghai, Raj	Guest	X
10	Vogt, Darren	Guest	X
11	Hulme, Ian	Guest	X
12	Wengerter, Don	Guest	X
13	Burnes, Tom	Guest	X