



**IEEE SUBCOMMITTEE ON QUALIFICATION
IEEE/NPEC/SC 2 Meeting 11-1**

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Radisson Blu in Goteborg, Sweden

<http://www.radissonblu.com/hotel-gothenburg>

June 13-17, 2011

Meeting Minutes

Wednesday, June 15, 2011: 8:00 a.m

A. Business

1. Call to Order

J. Gleason

The meeting was called to order at 8:05 a.m.

2. Introductions and Approval of Agenda

2.1 Quorum Roll Call

There were 32WG-2.1 members and proxies present, of which 27 are members or proxies of SC 2. There are 51 members of SC -2. A quorum is not required for international meetings per SC-2 bylaws. .

2.2 The members and the guests were identified

2.3 Approval of Agenda and general remarks

A motion was made by Nissen Burstein to approve the meeting agenda. J Parello seconded the motion. The agenda was approved with unanimous consent.

2.4 Sponsors for the Meeting

Dr.Kjell Spang of the Swedish regulatory Body presented the sponsors of the meeting:

Swedish Radiation Safety Authority (Strålsäkerhetsmyndigheten, SSM)

Vattenfall AB Business Unit Nuclear Power

SEK Svensk Elstandard (Swedish National Committee for IEC and CENELEC)

The meeting expressed special thanks to the sponsors and requested Dr. Spang to convey our gratitude.

3. Secretary's Report

J White/T Koshy

3.1 Approval of Previous Meeting Minutes (SC-2/10-2)

**IEEE SC-2 Financial Status Summary - Fiscal Year 2010
(Includes Working Groups, Sub-Committee and ADCOM)**

12/31/2009	Closing Balance:	\$ 2,197.80
1/1/2010	Opening Balance:	\$ 2,197.80

SC-2 (10-1) Meeting April, 2010 Las Vegas, NV

Collected at Meeting		\$ 3,340.00
Total Cash on Hand	4/21/2010	\$ 5,537.80
Cost of Meeting from Rio All-Suite Hotel & Casino:		\$ 3,358.18
Misc. Expenses		\$ -
Balance	4/21/2010	\$ 2,179.62

SC-2 (10-2) Meeting Oct-2010 Seattle, WA

Collected at Meeting		\$ 2,035.00
Total Cash on Hand	10/6/2010	\$ 4,214.62
Cost of Meeting from Renaissance:		\$ 1,812.51
Misc. Expenses		\$ 2.49
Balance	10/6/2010	\$ 2,399.62
Transfer to J. Gleason	Oct-2010	\$ 2,399.62

SC-2 (11-1) Meeting Jun-2011 Gothenburg, Sweden

Collected at Meeting		\$ -
Total Cash on Hand	6/15/2011	\$ 2,399.62
Cost of Meeting from Renaissance:		\$ -
Misc. Expenses		\$ -
Balance	6/15/2011	\$ 2,399.62

A motion was made by Jim Parelo to approve the minutes. Nissen Burstein seconded the motion. The meeting minutes was approved with unanimous consent.

- 3.2 Action items: None
- 3.3 Status of SC-2 Membership : 51 members
- 4. Chairman's Report
 - 4.1 Summary of SC-2 ADCOM: Looking into publishing 8 international standards. SC-6 looking into new areas that need standards.
 - 4.2 NPEC Meeting

Mr. Satish Aggarwal, the Chairman of NPEC provided the following briefing:

Three distinguished guests: President and CEO of Westinghouse, CEO and Vice President of EPRI and General manager of TEPCO, Owner/Operator of Fukushima. He further indicated that it should be our goal to revise the applicable standards to address the lessons from the recent Fukushima.Event.

He indicated the interest from Russia, S. Korea and India to participate in IEEE committees. He reiterated the NPEC goals and requested special efforts to involve young professionals in the working groups.

He requested the group to foresee the needs 10 years ahead and develop standards for modular reactors.

The next NPEC meeting of 2012 will be in January 2012 and there is plan to join with PES for a meeting in July in San Diego.

- 5. Vice-Chairman's report
 - 5.1 Meeting Schedule

The following locations were voted on for selecting the location for the next meeting:

Charlotte	-	0 Votes
Lynchburg	-	3
Fort Lauderdale		6

Key West - 9
 Orlando - 14 Orlando was chosen as the next meeting location.

It was suggested to avoid first week of November, Thanksgiving week, and last week of October.

Memorial

The meeting remembered the great services of Tom Henesey who was called to eternity.

Nissen Burstein proposed to adjoin the meeting for the day at 5:10 p.m. Thomas Koshy Secoded the motion. The meeting adjoined with unanimous consent.

The meeting was reconvened at 8:00 a.m. on June 16, 2011

6. Work in Progress

6.1 Mr. *Channarasappa* presented the SC 2.6: C37.98 (Relays Seismic Qual) Following a discussion the meeting recommended to reconsider the title as “Standard for Seismic Testing of Protective Relays for Safety Application”. (Item#2)

Thomas Koshy agreed to provide a tabulation comparing safety classifications used by various countries.

Table 3.3-1 Comparison of different classification system

National or International Standard	Classification of the Importance to Safety			
IAEA	Systems Important to Safety			Systems Not Important to Safety
	Safety	Safety Related		
IEC 61226	Systems Important to Safety			Unclassified
	Category A	Category B	Category C	
France N4	1E	2E	IFC/NC	
European Utility Requirements	F1A (Automatic)	F1B (Automatic and Manual)	F2	Unclassified
Japan	PS1/MS1**	PS2/MS2**	PS3/MS3**	Non-nuclear Safety
USA	1E, Safety Related, or Safety	Non-safety related		
		Important to Safety	Balance of Plant (BOP)	
CANADA (CSA Std N209.14)	Important to Safety			Not Important to Safety
	Safety, Safety Related			Not Safety, Not Safety Related
	Category 1	Category 2	Category 3	Category 4

* DBE = design basis event (There is also Class 1 in Russian regulations, but it is not relevant to I&C systems and does not correspond to IAEA Safety, IEC Category A and IEEE Class 1 categories.)

**PS=prevention system, MS=mitigation system, There is not a cable that is classified PS1.

The Ukraine Systems on Nuclear Power Plants are classified in 4 classes based on the influence on Plant safety.

- 1 Class: Fuel elements and systems of NPP which failures lead to the fuel elements damage exceeding the limits specified for the Design basis event (DBE).
- 2 Class: Systems which failures lead to the fuel elements damage within the limits of DBE. Elements of safety systems which failures lead to failures in operation of such systems.
- 3 Class: Elements of safety systems not belonging to 1 and 2 safety classes. Systems for protection of plant personnel and residential population from radiation.
- 4 Class: System for normal operation of NPP which are not relevant for safety. Other systems not belonging to 1, 2 and 3 safety classes

B. DISCUSSIONS AND UPDATES

1. Brief Discussion on NPEC Goals J. Gleason

2. Status of IEEE/IEC P62582 Series (Condition Monitoring)

K. Späng provided and update. IEC 62582 aprt 1, 2, 4 are ready for publication. Part 3 is planned for a CD circulation by Feb 2012. Part 5 on time domain reflectometry is now making progress. (Item # 5)

2. Status of IEEE 323 and IEC 60780 Harmonization J. Gleason, R. Wood

The joint meeting of IEC/IEEE working group will develop a new draft based on the IEEE 323-2003 mark up prepared by 2.1 working group. The revised draft will be distributed by early September.

3. W-AP1000 EQ Program Update *S. Channarasappa Slides attached (Item #8)*

5. GE-ESBWR/ABWR EQ Program, Update *E. Mohtashemi*

6. US EPR EQ Program, Update *N. Burstein (Item #9)*

7. CHINA Nuclear Power Program Y. Dou (Item #11)

8. Sweden Nuclear Power Program P Bystedt (Item #6)

9. Czech Republic Nuclear Power Program M. Tengler (Item # 12)

10 Ringhals 2 TWICE project upgrade program L Wiegert (Item # 13)

11 SP Testing lab (EQ) is located near Gothenburg J. Swenningsson (Item # 14)

12. Conflicts with Qualification and ASME NQA-1 Dedication J. Gleason (Item #4)

- 13 SIPAI Y. Wang (item #15)
14. Czech Cable Deposits V Hnat (Item#16)
15. China's Nuclear program Y Dou (Item #11)
- 16 Fukushima Stress tests A Johansson (Item #7)
17. Invensys recent EQ activity (F Kloer (Item # 10)

C. Working Group and Liaison Reports

1. SC 2.1: IEEE Std. 323 (Electric Equip EQ) *J. Gleason (Stated under item B.2)*
2. SC 2.2: IEEE Std. 334 (Motors) *J. Dean, B. Newell Continue with changes to Motors and MOVs and new PAR to be revised and sent in later this summer.*
- 3 SC 2.3: IEEE Std. 382 (Valve Operators) *E. Mohtashemi Proceed with reaffirmation*
- 4 SC 2.4: IEEE Std. 383 (Cables) *J. White PAR approved and the meeting is postponed for next November.*
- 5 SC 2.5 IEEE Std. 344 (Seismic) *J. Parello: PAR started. 2 Meetings have taken place. It is being revised based on NRC RG 1.100 Rev 3 to include High frequency consideration for hard rock sites and experience based qualification. Currently have 17 full time members and 7 corresponding members.*
- 6 SC 2.6: C37.98 (Relays Seismic Qual) *S. Channarasappa, M. Nemier (Item #8)*
7. SC 2.10: IEEE P-627 (Overall EQ) *D. Horvath - 627 Published*
8. SC 2.11: IEEE Std. 572 (Connectors) *F. Roy - It will be brought to REVCOM in September.*
9. SC 2.13: IEEE Std. 650 (Battery Chargers) *D. Dellinger The PAR submitted was rejected to include additional comments*
10. SC 2.14: IEEE Std 649 (Motor Control Centers) *R. Francis Reaffirmation effort had some delays. It was recirculated and one negative was changed to positive. Activity completed.*
11. SC 2.15: IEEE P-1682 (FO Cable Qual) *J. Pirrong*



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Report.docx

12. EPRI Liaison Report C. Abernathy – No report
13. ASME Liaison Report *G. Schinzel (Item #4)*
14. NRC Liaison Report T. Koshy (Item #3)
15. IEEE/ASME NQA-1 Liaison Report *N. Burstein (Item #4)*

D. EVENTS DISCUSSION

I. Vendor Updates Vendors Present

Rosemont : *The new generation transmitters are being qualified for the new reactor sites.*

Wyle: *Currently equipped to conduct test on AP1000 profile. Seismic table to handle 10g on single axis on a small table and large for 6g. Valve testing capability for 300psi and 700F is currently available.*

Rockbestoes: Tests are being conducted for plants in China. 60 year qualification is progressing. Moisture resistance is also being evaluated.

James Dean: Several MOVs are being tested for concerns in developing low torque.
Magnesium rotors appear to have a dominant problems with adequate torque.

E. WRAP-UP

1. Old Business None
2. New Business None
3. Next Meeting Scheduled
4. Adjournment

A motion was made by Nissen Burstein to adjoin the meeting . J Parello seconded the motion. The meeting was adjointed with unanimous consent.