

IEEE NPEC SC-2 Spring Meeting 15-01

April 15-17th

Sheraton Sand Key Resort



1160 Gulf Blvd.
Clearwater Beach,
Florida 33767
Phone :(727) 595-1611

Friday April 17th: SC-2 Meeting

A. BUSINESS

Call to order - R. Konnik

1. **Introductions, Approval of Agenda** - R. Konnik
 - a. Roll Call - J. Cornelius
27/46 quorum met
 - b. Identification of Guests - R. Konnik
 - c. Approval of Agenda and General Remarks - R. Konnik
Gleason presentation postponed
Added John White presentation
Motion to accept the agenda was made, seconded and unanimously approved
 - d. Meeting Fee - \$20 – this includes all Working Group meeting room fees and social event.
It was determined that there would be no fee for this meeting.
Recognized sponsors for food and reception
2. **Secretary's Report** - J. Cornelius
 - a. Approval of Previous Meeting Minutes
These minutes will be posted and approved later...perhaps via e-mail
 - b. Status of Action Items

Standards status provided on the agenda

- c. Status of SC 2 Membership 2015 – There are 46 members at this time
- d. Report of SC 2 Financial Status/Alligator Fund

SC-2 (14-2) Meeting October 2014 Clearwater Beach, Florida
Balance Prior to Meeting - \$4,535.00
Collected at meeting – \$0
Cost of Meeting - \$539.22
Balance (1/25/15) - \$3,995.78

3. Chairman's Report - R. Konnik

- a. Summary of SC 2 ADCOM

Location will be planned for the next 2 meetings to help attendees prepare their visas.

Due to the uncertainty of not meeting the quorum, Membership needs to be evaluated. Procedures will be reviewed for update to better align with increase membership allocation to include use of Corresponding members...etc. to be considered for implementation.

- b. Summary of NPEC Meeting

Voting rules were reviewed, found conflicts that need to be reassessed. Consensus is needed. This will most likely result in the need 75/75 rule for certain items and a simple majority (50%) for other

It was announced that IEEE-383 has gone through and is being balloted

- c. Web Site Updates

Sections are now "public" and "private"...
There is a new link...:

<http://grouper.ieee.org/groups/npec/sc2/sc2.html>

There will be a renewed effort to keep information up to date.

- d. Status of required project revisions

There was a review of several projects, some of which are still in process and others are pending upcoming activity.

It is intended that some projects will be "started" before so that there is enough time to have the Standard re-affirmed or completed. The suggestion to "stagger the effort" so we do not have for example, 8 standards being written simultaneously

Art Muldonado from ICC is here and will discuss standards and activities of the ICC.

Timing of standards work is critical for them also especially since there are so many standards.

4. Vice-Chairman's Report - E. Mohtashemi

Meeting Schedule

- a. 15-2 November 1-3rd, Clearwater Beach Sheraton With Scientech EQTM
The next meeting would be coordinated with the EQTM at this same location.
- b. 16-1 TBD
Will be determined before next meeting.
A suggestion was made to go west possibly Las Vegas, Seattle, San Diego, or Scottsdale.
April/November will most likely remain as the targeted months.
- c. 16-2 TBD
Noted that NPEC/ICC/SC2 all meeting simultaneously causes a tight schedule and this needs to be considered...if more WG get going this will become an issue. Simultaneous or back to back meetings could turn into 2 weeks.

5. Previews

- a. IEEE 650 Battery Chargers

D. Dellinger

Has been realigned and rescheduled...

Does not address harsh environment....

Changes to be made are simple updates

Added "inverters" and "UPS"

Scope statement...

Added "UPS"

References added

Added section 3.10 UPS

Section 4.3 need to consider EMI/RFI Fig 1 flow chart updated

Added 5.1 digital micros FPGA hardware and software...

Added 5.3.1. Transient test must auto restart

Accommodate high kva testing on lesser rated system as Applicable

Addition of ANNEX G

Another review targeted for Fall of 2015 with plan for final draft for SC-2 16-2

Will be posted on Web.

Working Group and Liaison Reports

- a. SC2.1: IEEE Std 323 (Electric Equip EQ) J. White
Refer to presentation
- b. SC 2.2: IEEE Std. 334 (Motors) J. Dean / B. Newell
Status updated...presently in a holding pattern no actions...no PAR
Presently "looking" at medium voltage motor lead qualification
- c. SC 2.3: IEEE Std. 382 (Valve Operators) E. Mohtashemi
Action items white paper on Reg Guide 1. 73 R1 changes Discussed in
WG meeting (15-01)
And will preview PAR at next meeting
- d. SC 2.4: IEEE Std. 383 (Cables) R. Konnik
In ballot
Discussed editorial changes will go for 10 day recert
PAR expires in December 2015
No major issues only editorial in nature.

White paper written...Will be on central desktop to show gap /changes of last 2
revisions. Will also explain why these changes were made.
Target to be done first round this year
- e. SC 2.5: IEEE Std. 344 (Seismic) J. Parello
Updated in 2013 no PAR
Investigated 5 areas for updating
Discussed in the working group meeting 15-1 earlier
One specific area is headed by Marie Nemier who was acknowledged for
her contribution/work.
Received a comment – request to clarify single frequency issues.
Joint logo IEEE Std 344 with IEC 60980 will be starting As basis. No
timeline has been established yet.
- f. SC 2.6: C37.98 (Relays Seismic Qual) S. Channarasappa / M. Nemier
Recently issued currently no activity

- g. SC 2.10: IEEE 627 (Overall EQ) Rebecca Steinman
 Last published 2010
 Some terminology will be focused on next. No changes targeted for next revision
 PAR later this fall and will start working next year.
- h. SC 2.11: IEEE Std. 572 (Connectors) F. Roy/absent
 Will try to start up next meeting and start PAR next year
- i. SC 2.13: IEEE Std. 650 (Battery Chargers) D. Dellinger
 Done (see presentation notes)
- j. SC 2.14: IEEE Std. 649 (Motor Control Centers) R. Francis
 Inactive status will start WG next year. Minor/few changes editorial
- k. SC 2.15: IEEE 1682 (Fiber Optic Cable) J. Pirrong
 Met with nine preliminary members to start compiling a white paper.
 May reorganize and actively look into the next revision/changes.
 Some assignments:
 Mid next year target for white paper.
 Konnik- Reemphasized web publishing may or not have peer review...
 Consider the IEEE technical editor if there is a broad audience
- l. SC 2.16 EMI/EMC S. Channarasappa
 Develop a PAR to work with IEC but schedule is not good with IEC...will get input
 from other IEEE working groups.
- m. SC 2.17 Conformity Assessment Committee J. Cornelius
 This is a NON traditional group ie. Steering committee. There has been a lot of
 progress made in how the WG will continue to form the foundations for approval
 process. Eventually the committee will expand but for now, in this early stage,
 will remain the small yet inclusive group. Under the close supervision by Ravi
 Subrumaniam from the IEEE SA.
- n. EPRI Liaison Report (Presentation in SC-2 Web site)
 C. Abernathy
 Chris discloses the organizations change... plant engineering is going away
 Going toward standards...based organization
 Cable training dates were given
 EQ training August 4-6
 Seismic Qualification June 15-18
 Relay user is in Clearwater July 28-30
 Counterfeit parts training Dec 7

Products activity - currently looking at relay service life

Topics all on the EPRI website...

Fraud

Commercial Grade Dedication

Medium voltage failure guide was updated

Field guide to serviced aged cable

“EPRI wants your old cable” was the request to the industry.

2015 and future reports will include

Seismic guidance

Submergence report on specific cable types

Details of a Motor rewind project

o. NRC Liaison Report

Tania Martinez-Navedo

Current work – Operating Reactors

1. Watts Bar 2 proposed Technical Specifications for electrical systems with two unit operation, specifically, the degraded voltage relays.
2. Ongoing discussions with IEEE and industry on degraded voltage relays. Public meetings were held Jan 13-14, 2015. Industry position paper is being reviewed.
3. Branch Technical Position 8-9, “Open Phase Conditions in Electric Power Systems” is in the final stages for approval.

Current work – New Reactors

1. APR1400 Design Certification Application was accepted March 2015 and the safety review of APR1400 has started.

Current work – Rulemaking

1. ACRS Full Committee Meeting on Mitigating Strategies Rulemaking was held on April 9, 2015.

Current work – International Activities

1. International activities staff is participating in: 1) IAEA Technical Document for Extended Station Blackout – to include information on NRC actions post-Fukushima and 2) IAEA Technical Document on Open Phase Conditions

Upcoming Commission Mandatory Hearings

1. STP 3&4 (ABWR) – Summer/Fall 2015

Current work – Research

1. Assessment of condition monitoring methods for electrical cables
2. Degradation mechanisms of submerged cables.

News

1. New Chairman is Stephen G. Burns.
2. New Commissioner – Jeff Baran.

Additional comments included:

Reg guide 1.89 status “ still working on it”

- p. Post-Fukushima NRC Regulatory Activities M. McConnell
Orders written to get strategies that
 Relate to NRC Order on Spent Fuel Pool Instrumentation (EA-12-051)
more specific spent fuel pool instrumentation EA-12-049 mitigation strategies
 Giving guidance on plant mitigation strategies
 This is Not a policing project

Audits and what did we find...
 Watts bar has submitted there compliance letters...

There will be 10CFR50.155 when codified
Regulatory guidance will be available at the same time...
No requirement for beyond dBE but evaluation still exist
Guidance rules for plant by plant basis
Invited offline questions

- q. ISA Liaison Report Bob Queenan
 See attached...

Updated 01-0x

Need for further calibration for cross calibrations

Normalizations – heat balance vs uncertainties

Looking at industry consensus for human factors for control room

- r. ASME Liaison Report OPEN
- s. IEEE/ASME NQA-1 Liaison Report OPEN
- t. IEEE ICC Liaison Report Art Maldonado
Sub committeeD
See presentation
Cable systems...broad scope...incl fiberoptic not T&D
Reviewed the various standards discussion groups/WG...there are many
Art extended an Invitation for vice chairs and an increase in participation from the
SC-2

IEEE/IEC liaison John White

John White gave summary for joint Logo part 1,2,3,4,5,

Regarding the P-62582 series:

The next document for indenter modulus is the – 2 document...

Should be going to NPEC ready for ballot pending anytime electronic ballot

60780/323 gone through ballot –

Very minor changes have been reviewed

Recirculated ballot should be out soon

17 balloting countries only negatives came from Germany

Joint document targeted for June 5 in Paris

October time frame is targeted for revcom

The IEC was pleased the way the 60780 has progressed and it was mentioned that seismic IEEE - 344 was next

Will involve and use lessons learned and get IEEE to take the lead moving forward

497 will go through and adopt later SC5?

All of these efforts still get PAR and proceed as normal for IEEE

All guidelines will be held to such as 10 year life

Central desktop training by Malia Zaman

She presented a summary of the tool and then went to a live site...

Presentations (Allotted time including questions)

a. LOCA and Post-LOCA Qualification of PEEK insulated cables - Sven-Olof Palm

b. Steris Isomedix Update – Eric Rasmussen and John White

John gave a summary:

The issue was originally considered with two dates identified as having this variability error.

Later realize that the dosimetry has not changed and therefore should all be considered the same. The number should be less than the 10%

Steris is on a path to produce a guidance document.

The industry has begun to draft position paper.

The “March 2” comments went back to STERIS... the industry group is creating guidance to address how to apply the findings to qualification status.

The industry wants more response/information for “extent of conditions” (other locations) from Steris.

Steris says only applies to THE Whippany facility not the other two...

Some certs identify the locations but many do not. Other locations include Morton, Libertyville, or Isomedix Parsippany.

The August letter was sent and NRC acknowledge the letter but industry informed Steris that this does not mean all is OK.

Early letters were to be updated.

And still addresses only the Whippany facility they do not fee that they “can even address” the other facilities.

Industry has offered some suggestions that would help bound the errors/corrections but Steris has declined to do much more that what they have offered.

With regard to the Industry position ...

Future relationship- they have revised their procedures will report what they did but not give the details about what the number you get includes. Difficult to understand how you identify and know what you get from this information and the certificates.

The forms may change to include more direction of what is needed.

Position paper seems to make it clear that you cannot use the margin to accept or accommodate for this error for equipment that is installed or already irradiated

Eric's Input –

Discuss the confidence level 95% based on 2 standard deviations.
Density variability has been studied and derived by 2 independent studies.

Including historical data of what was in the process

The visibilities are dosimetry, source decay, mass interference and proximity

The Ceiling location will be different than the other locations and will be higher variability error.

Knowing where in the facility your sample was may be difficult to know.

Bill Horin has been working on a reply to Steris last position letter.

A white paper is being prepared. The overall goal of the paper will include:

- How to apply, history
- Reg guide references

Margin applicability
Calculations alternatives'

The Intent is to distribute to the user community with industry help, to give more information including dosimetry quantities, why 2 std dev... just overall what now.

The NRC is also part of the feedback group

The taks group is still moving forward with many involved.

Discussion about part 21 timing compliance with timing.
NRC seems to be ok with the coordination of the detail of the issue.

This is what the paper will direct the utility how to apply and what to consider.
Including the margin, error factor/correction and operability questions.

"Collectively the utility group is working on this and this could be adequate for the NRC" -Koshy

Will be distributed to ALL. Regardless of membership

These seems to be no list of all the contract work at Steris especially with regard to "what is nuclear and what is not" ...what applies to the utility

The Industry Paper will be given after Steris gives their position...
There is a good relationship with Steris from the working group and a need to keep it that way.

- c. GLSEQ Hydrogen Sensors Qualification and the World Wide Regulations – Jim Gleason
Not given
- d. Central Desktop and Other IEEE Tools – Malia Zaman
See presentation for training and how to get started material.

D. Wrap-Up - 4 PM to 5 PM

Konnik

There was a brief discussion about Qualification an assembly vs qualification of parts.

For example, a cable should be qualified first and then the assembly to which the cable is attached. Did you apply IEEE 383 on cable first?

This May or not be OK with assembly qualification.

Invited participation of presentations related to this and IEEE 572 etc.

This should be addressed before 383, 572, etc are updated again.

White paper for each standard revision perhaps should/can describe the differences from one revision to another

Regardless of utility necessity based on EQ package or licensing basis.

a. Old Business

b. New Business

Malia – SA will start a new process to manage the balloting group more information will be in May.

ASME liaison – John White will discuss with Nissan and George.

Konnik reminded the group about the website.

c. Next Meeting

Clearwater Beach, Florida

Agenda will be on website.

Adcom Sunday, Monday and Tuesday

May be only 2 presentations for ½ day SC2 to give time for Working Groups.

Will inquire about participation at NUGEQ/EQDB since several presentations will be from SC2 to be determined...and informed. Including the Fee.

Wed, Thursday Friday are NUGEQ/EQDB

d. Adjournment

Being no further business there was a Motion to adjourn - Adjourn 2:49

IEEE PES NPEC SC2 Standards

SC 2.	Standard	Title	Status	Par Exp	Expires
1	IEEE/IEC P60780-323	Qualification of Electrical Equipment Important to Safety for Nuclear Facilities	IEC Ballot – IEEE Comment Resolution	31-Dec-17	31-Dec-18
1	62582-1	Standard for Nuclear power plants - Instrumentation and control important to safety - Electrical equipment condition monitoring methods - Part 1: General		NA	31-Dec-21
1	62582-2	Standard for Nuclear power plants - Instrumentation and control important to safety - Electrical equipment condition monitoring methods - Part 2: Indenter modulus		NA	31-Dec-21
1	P62582-2-am1	Nuclear Power Plants - Instrumentation and Control Important to Safety - Electrical Equipment Condition Monitoring Methods - Part 2: Indenter Modulus Amendment 1	WG Draft To Be Developed	31-Dec-18	
1	62582-3	Standard for Nuclear Power Plants - Instrumentation and control important to safety - Electrical equipment condition monitoring methods - Part 3: Elongation at break		NA	31-Dec-22
1	62582-4	Standard for Nuclear power plants - Instrumentation and control important to safety - Electrical equipment condition monitoring methods Part 4: Oxidation induction techniques		NA	31-Dec-21
1	P62582-5	Nuclear Power Plants - Instrumentation and control important to safety - Electrical equipment condition monitoring methods Part 5: Optical time domain reflectometry	Rev Com For June	31-Dec-15	
2	IEEE 334-2006 R2012	IEEE Standard for Qualifying Continuous Duty Class 1E Motors for Nuclear Power Generating Stations		NA	31-Dec-22
3	IEEE 382-2006	IEEE Standard for Qualification of Safety-Related Actuators for Nuclear Power Generating Stations	Need PAR	31-Dec-09	31-Dec-18
4	IEEE 383-2003	IEEE Standard for Qualifying Electric Cables and Splices for Nuclear Facilities	Comment Resolution	31-Dec-15	31-Dec-18
5	IEEE 344-2013	IEEE Standard for Seismic Qualification of Equipment for Nuclear Power Generating Stations		NA	31-Dec-23
6	C37.98-2013	IEEE Draft Standard for Seismic Qualification Testing of Protective Relays and Auxiliaries for Nuclear Facilities		NA	31-Dec-23
10	IEEE 627-2010	IEEE Standard for Qualification of Equipment Used in Nuclear Facilities	Start By 2016	NA	25-Dec-20
11	IEEE 572-2006 R2011	IEEE Standard for Qualification of Class 1E Connection Assemblies for Nuclear Power Generating Stations		NA	31-Dec-21
13	IEEE 650-2006	Standard for Qualification of Class 1E Static Battery Chargers, Inverters and Uninterruptible Power Supply (UPS) Systems for Nuclear Power Generating Stations	Preview July – PAR Extension	31-Dec-15	31-Dec-18
14	IEEE 649-2006 R2011	IEEE Standard for Qualifying Class 1E Motor Control Centers for Nuclear Power Generating Stations		NA	31-Dec-21
15	IEEE 1682-2011	IEEE Standard for Qualifying Fiber Optic Cables, Connections, and Optical Fiber Splices for Use in Safety Systems in Nuclear Power Generating Stations		NA	31-Dec-23
16		EMI/EMC			

