

IEEE NPEC Subcommittee SC-3
Operations, Maintenance, Aging, Testing, & Reliability
Meeting 15-1 Minutes

- **SC-3 Membership**

The most-recent rolling attendance report was reviewed for the attendance of SC-3 members. The current report is contained in Attachment 2.

Jim Parello has resigned and will be removed. Tom Carrier has retired and will also be removed. Marie Cuvelier is being carried as a Corresponding Member, pending determination of her status.

- **Alligator Fund**

The status of the alligator fund was reviewed and it was noted that the fund balance is unchanged. We agreed, once again, that there would be no collection for this meeting. The Alligator Fund status is contained in Attachment 3.

- **Action Item Status**

The status of the action items was reviewed; the action item list is provided in Attachment 4.

SC-3 Name Change (AI-11-2-C) – the subcommittee name change to “Operations, Maintenance, Aging, Testing, & Reliability” was discussed. No update was available, and the name change remains pending.

Strawman for gap analysis for SC3 standards (Action 12-2-B) – Development of a Template / Strawman for gap analysis for the SC3 standards remains open and is assigned to Yvonne. No update was available.

Submit a PAR extension for P1819 to be on the September NESCOM Agenda. (Action 14-1-A) – The PAR was extended, expiring in December 2017. This completes the action on this item.

Check on access to the IEEE Standards Dictionary for (1) WG members and (2) public users. (Action 14-1-C) – IEEE SA Members’ logins now allow access to the Standards Dictionary, thus resolving part 1 of this item. Part 2 remains open.

3.0 IEEE Patent Slides

Tom reviewed the IEEE Patent Slides, which are contained in Attachment 9

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4.0 Chair's Report

- **Leadership Review / Succession Planning**

Yvonne is considering stepping down as SC-3 Chair at the end of the year. Joe Napper's status is shaky. Everyone was asked to look towards recruiting new members. We also need 1 or 2 new officers for SC-3.

- **Leadership Telecons**

There were no Leadership telecons since the previous meeting.

- **PAR / Standards Status**

The PAR for our new P1819 standard has been extended to December 2017. We hope to have the draft ready to Preview at N15-2. An email vote will be required.

P352 should be ready for Preview at the N15-2 meeting. An email vote will be required.

After these two, the next SC-3 standard to be revised will be IEEE 336.

PAR / Standards Status was reviewed and updated on the Paul Yanosy Standards Status Spreadsheet provided in Attachment 5.

A possible objective for planning would be to have no more than two (2) standards being worked at the same time.

- **NPEC Preparations**

SC-3 has no presentations or previews for the NPEC meeting, so no further action was required. A Preview for P352 is planned for the N15-2 meeting.

5.0 Working Group Reports

- **WG-3.1**

The WG is busy working on the preparation of the initial version of IEEE P1819. The WG was about 40% through resolving internal comments during Monday's meeting, and was to continue work Tuesday afternoon, following this SC-3 meeting. Good progress was made with the telecom participation of Ralph, Ted, & Vish on Monday. There has also been a good bit of email correspondence between Yvonne, Ted, & Vish on this standard.

- **WG-3.2**

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WG-3.2 is having telecons. A meeting in Washington is planned for later this year to address whether cyber security should be addressed by the WG.

- **WG-3.3**

Comment resolution is about completed on P352, and a new draft will be issued to the WG shortly. Following that review, an email vote will be held to allow Preview by NPEC during the N15-2 meeting.

- **WG-3.4**

WG 3.4 is currently inactive, since the revision to IEEE-1205 has been issued.

6.0 Liaison Reports

Liaison reports were provided as follows:

- NRC – Sheila Ray presented the NRC Liaison Report, which is provided in Attachment 7.
- ASME – No update was presented.
- NRMCC – Jim Liming noted that George was turning over the liaison position to the NPEC Chair or Vice Chair.

7.0 Old and New Business

We need to revise the SC-3 OPM to address the WG P&P Template. This will be undertaken as a future action, no assignments were made during this meeting.

There were no new Action Items from this meeting. The current AI List is provided in Attachment 4.

There was no new business.

No information on the next meeting (15-2) was available. The subject is on the agenda for the afternoon's ADCOM meeting. [NOTE: The 15-2 meeting was subsequently announced to be held in Salt Lake City during the usual late July time frame.]

A special thanks goes to Kirk for stepping up to take the meeting notes.

A motion for adjournment was made by John Stevens, seconded by John Beatty, and passed by acclamation.

Prepared by Tom Crawford, SC-3 Vice Chair.

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SC-3 Website information:

<http://grouper.ieee.org/groups/npec/private/sc3/sc-3.html>

login name: [REDACTED] password: [REDACTED]

ATTACHMENTS

Attachment 1 Agenda	Attachment 2 Rolling Attendance	Attachment 3 Alligator Fund
Attachment 4 Action Items	Attachment 5 NPEC SC-3 Standards Status Spreadsheet	Attachment 6 ASME Liaison Report (None)
Attachment 7 NRC Liaison Report	Attachment 8 NRMCC Liaison Report (None)	Attachment 9 IEEE Patent Slides
Attachment 10 SC-3 Standards Schedule (No Update Available)	Attachment 11	Attachment 12



Agenda – Meeting 15-1 – Las Vegas, NV

NPEC Subcommittee SC-3, *Operations, Maintenance, Aging, Testing and Reliability*

Meeting Date/Time:	Tuesday, 01/20/2015 0800-1200	Chairman :	Yvonne Williams
		Vice Chair:	Tom Crawford
		Secretary:	Joe Napper

Desired Outcomes:	<ol style="list-style-type: none"> 1. Review status/activities of each SC Working Group 2. Update SC3 standards master schedule 3. ??
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WHAT	WHO	WHEN
Welcome, Review Desired Outcomes <ul style="list-style-type: none"> • Meeting logistics • Introductions 	T. Crawford All	0800-1815
Chairman’s Introduction <ul style="list-style-type: none"> • Opening remarks • Review/approve agenda 	T. Crawford	0815-0825
Secretary’s Report <ul style="list-style-type: none"> • Approval of SC3 14-2 Meeting Minutes • Action Item review/status • SC3 membership review 	J Napper	0825-0855
Chairman’s Report <ul style="list-style-type: none"> • SC3 Leadership – Secretary and succession planning • Leadership telecons • NPEC meeting preparations • Alligator fund report 	T. Crawford	0855-0915
Working Group Reports <ul style="list-style-type: none"> • WG-3.1 (Testing) • WG-3.2 (Security) • WG-3.3 (Reliability) • WG-3.4 (Aging) 	J. Beatty M. Cuvelier J. Stevens R. Steinman	0915-0925 0925-0930 0930-0940 0940-0945
BREAK	All	0945-1015
Patent slides	T. Crawford	1015-1020
Liaison Reports <ul style="list-style-type: none"> • NRC Report • ASME Report • NRMCC Report 	S. Ray T. Riccio / C. Sellers G. Ballassi	1020-1050
Old Business <ul style="list-style-type: none"> • SC-3 OPM / WG P&Ps • Master schedule for Std review/updates • Approach for next revisions of stds (gap analysis) -- ?? 	All	1050-1120
New Business <ul style="list-style-type: none"> • As identified during this meeting 	All	1120-1130
Review of New Action Items	J Napper	1130-1145
Next meeting	T. Crawford	
Meeting closeout/adjournment		1200

Attendance at SC-3 Meetings

Last	First	2012-2	2013-1	2013-2	2014-1	2014-2	2015-1
Aravapalli	Gopal				Correspond		
Ballassi	George	O	X	X	X	X	
Beatty	John		X	X	X		X
Carrier	Tom	X	X		Alternate		Retired
Channarasappa	Suresh	X	X	X	X		X
Crawford	Tom	X	X	X	X	X	X
Cuvelier	Marie		X	X	X		Correspond
Erinc	John			X			X
Eustace	Edward			X	X		
Heidarisaafa	Hamid		Correspond				
Honecker	Sharon	X	X	X	Correspond		
Hutchins	Steve		X	X			
Kulangara	Jacob	X	X	X		X	
Kyle	George			X			
Liming	Jim	X	X	X	X	X	X
Melson	Kirk			X			X
Muhtashemi	Ed			X			
Napper	Joe	X			X	X	
Parello	Jim	O	X	X	X	Correspond	Resigned
Patel	Vish	X	X	X	X	X	
Ray	Sheila		X	X			X
Riccio	Ted	X	X	X	X	X	
Steinman	Rebecca		X	X	X	X	
Stevens	John	X	X	X	X	X	X
Taylor	John						
Williams	Yvonne	X	X	X	X	X	
Worrell	Tom		X				
Zee	Kaing				X	X	X

Members are shown in **bold** and colored yellow as of end of most recent meeting.
Corresponding and Alternate members are shown in green.

TOTAL PAYING ATTENDEES	15	20	21	15	11	9
TOTAL NON-PAYING ATTENDEES	2	0	0	0	0	0

NPEC Subcommittee SC-3

Operating, Maintenance, Aging, Testing and Reliability

Alligator Fund

The Alligator Fund is made up of voluntary contributions from SC-3 members to defray the cost of meeting rooms, refreshments, etc.

Meeting	Beginning Balance	Meeting Contributions	Expenses	Ending Balance
S06-1	\$399.50	\$220.00	\$178.67	\$440.83
S06-2	\$440.83	\$160.00	\$335.00	\$265.83
S07-1	\$265.83	\$200.00	\$201.70	\$264.13
S07-2	\$264.13	\$600.00	\$340.87	\$523.26
S08-1	\$523.26	\$300.00	\$347.80	\$475.46
S08-2	\$475.46	\$320.00	\$386.26	\$409.20
S09-1	\$409.20	\$180.00	\$12.00	\$577.20
S09-2	\$577.20	\$210.00	\$92.54	\$694.66
S10-1	\$694.66	\$220.00	\$380.90	\$533.76
S10-2	\$533.76	\$425.00	\$474.90	\$483.86
S11-1	\$483.86	\$200.00	\$14.00	\$669.86
S11-2	\$669.86	\$430.00	\$480.50	\$619.36
S12-1	\$619.36	\$340.00	\$203.00	\$756.36
S12-2	\$756.36	\$150.00	\$0.00	\$906.36
S13-1	\$906.36	\$0.00	\$0.00	\$906.36
S13-2	\$906.36	\$0.00	\$0.00	\$906.36
S14-1	\$906.36	\$0.00	\$0.00	\$906.36
S14-2	\$906.36	\$0.00	\$0.00	\$906.36
S15-1	\$906.36	\$0.00	\$0.00	\$906.36

NPEC Subcommittee SC-3
Operating, Maintenance, Aging, Testing and Reliability
Action Items List

Item No.	Subcommittee 3.0 Actions	Owner	Due Date	Closure Comments
11-2-C	SC-3 name in NPEC needs to reflect reliability	Jim Liming	Next AdCom mtg	Bring up at AdCom meeting 11-2. 12-1 mtg: more complicated - Jim to bring up at 12-1 AdCom meeting to make sure what is required and then get those actions started. 13-1 mtg: Will affect NPEC P&P and O&P. Malia confirmed that it could be handled as an editorial change. It just will take time to process. Jim to bring up to ADCOM. Preferred name is: "Operations, Maintenance, Aging, Testing, and Reliability". Request Submitted 01/22/13; see S13-1 Meeting Notes, Attachment 5. No NPEC action, as of the close of the N14-1 Meeting.
12-2-B	Develop a Template / Strawman for gap analysis for SC3 standards	Yvonne	13-2 mtg.	No follow-on as of S14-1 meeting.
14-1-A	Submit a PAR extension for P1819 to be on the September NESCOM Agenda.	Yvonne	07/11/2014	The PAR was extended, expiring in Dec 2017. ACTION CLOSED.
14-1-B	Present the conflict to SA for resolution relative to meeting notice distribution in section 6.0 of the IEEE SA Working Group Policies & Procedures manual template.	Malia	14-2 mtg	New item / Action pending.
14-1-C	Check on access to the IEEE Standards Dictionary for (1) WG members and (2) public users.	Malia	14-2 mtg	SA subsequently announced the availability of the Standards Dictionary to IEEE SA members, which addresses part (1) of this action. Part (2) remains open.

SC-3 "Operations, Maintenance, Aging, Testing & Reliability"

Chair: Yvonne Williams

PROJECT	Year	Standard Expiration	Re-Affirmation	PAR Expiration	TITLE	Sub-Committee	Regulatory Guide	IEEE Revision Section E Discussion	IEEE Revision Section C Guidance	Working Group	Chair	Cycle Year	N14-1	N14-2	N15-1	N15-2	Status/Comments
336	2010	2020			IEEE Standard Installation, Inspection, and Testing Requirements for Power, Instrumentation, and Control Equipment at Nuclear Facilities	3	1.30 - 1972	1971	1971	1	Y. Williams	5					Revision approved by the SB on June 17, 2010
338	2012	2022			IEEE Standard Criteria for the Periodic Surveillance Testing of Nuclear Power Generating Station Safety Systems	3	1.118 - 1995	1987	1987	1	Y. Williams	3					Revision approved by the SB on Feb. 6, 2012.
352	1987	2020	2010	42705	IEEE Guide for General Principles of Reliability Analysis of Nuclear Power Generating Stations and Other Nuclear Facilities	3				3	J. Stevens	5					Submitted to RevCom for reaffirmation at the Sept Meeting PAR approved June 17, 2010 thru Dec 2014. PAR revision to change from recommended practice to standard approved by at NesCom Jan. 18th meeting. Reaffirmation approved by SB March 2010; PAR approved by ADCOM 1/25/2011; PAR approved by NESCOM 3/29/2012.
577	2012	2022			IEEE Standard Requirements for Reliability Analysis in the Design and Operation of Safety Systems for Nuclear Power Generating Stations	3				3	J. Stevens	3					Revision approved by the SB on Aug. 30, 2012 Published on Oct. 19, 2012.
692	2013	2023			IEEE Standard Criteria for Security Systems for Nuclear Power Generating Stations	3				2	R. Flowers	2					Published in 2010. PAR 692a to amend 692-2010 approved 9-10-2011. Changes found too significant for an amendment. PAR 692 to revise 692-2010 approved 12-8-2012. Review to SC-3 & NPEC in Jan 2013. Completed first ballot 4/26/2013. Recirc. Ballot #1 completed on 6/20/2013. Recirc. Ballot #2 completed 7/9/2013. Under REVCOM review; to be approved at 8/22/2013 REVCOM meeting. Expect to publish by the end of 2013. Current PAR is active until 2016. Issued by SB Aug. 2013.
933	2013	2023			IEEE Guide for Definition of Reliability Program Plans for Nuclear Generating Stations and Other Nuclear Facilities	3				3	J. Stevens	2					Ballot closed Mar-2011. PAR extended to 2013. Recirculation ballot #1 closed 1/21/13. Recirc. Ballot #2 closed 7/25/2013. Resolving editorial (from IEEE editor) comments for potential Recirc. Ballot #3. Submitted to RevCom Oct. 16, 2013. Approved by SB on Dec. 11, 2013.
1205	2014	2024			IEEE Guide for Assessing, Monitoring, and Mitigating Aging Effects on Class 1E Equipment used in Nuclear Power Generating Stations	3	1.218 - 2012	2000	None	4	R. Steinman	1					Re-affirmation approved by Std Bd March 22, 2007. SC-3 approval to preview to NPEC on 7/31/2013. PAR approved by ADCOM 3/31/2014 Approved by SB March 27, 2014.
P1819				Dec. 2017	Standard for Risk-Informed Categorization and Treatment of Electrical Equipment in Nuclear Facilities	3				1	Y. Williams	0					PAR approved by SB March 25, 2010. WIP to NPEC 7/31/2013. PAR extension submitted as of July 2014, following 14-2.PAR extended to Dec 2017.

NRC Liaison Report – NPEC 15-1

Electrical Branch (operating and new reactors) in NRC is working on the following items:

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.
3. Comment resolution of Branch Technical Position 8-9, “Open Phase Conditions in Electric Power Systems.”
4. Acceptance Review of APR1400 Design Certification Application – expected completion by February 2015.
5. IAEA Technical Document for Extended Station Blackout – to include information on NRC actions post-Fukushima.

Upcoming Commission Mandatory Hearings:

1. Fermi 3 (ESBWR) – Feb 4 2015
2. STP 3&4 (ABWR) – Summer/Fall 2015

Digital I&C Highlights:

1. Spinline platform review is complete.
2. Platforms currently under review: Lockheed Martin (NUPAC), Toshiba, Mitsubishi (MELTAC)
3. Topical reports under review – 2 Westinghouse Technical Reports on setpoint control programs/methodology – WCAP-17503 and WCAP-17504

Research is working on two projects:

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

The new NRC Chairman is Stephen G. Burns. One new Commissioner has been appointed – Jeff Baran.

Provided by Sheila Ray

Instructions for the WG Chair

The IEEE-SA strongly recommends that at each WG meeting the chair or a designee:

- Show slides #1 through #4 of this presentation
- Advise the WG attendees that:
 - The IEEE's patent policy is described in Clause 6 of the *IEEE-SA Standards Board Bylaws*;
 - Early identification of patent claims which may be essential for the use of standards under development is strongly encouraged;
 - There may be Essential Patent Claims of which the IEEE is not aware. Additionally, neither the IEEE, the WG, nor the WG chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.
- Instruct the WG Secretary to record in the minutes of the relevant WG meeting:
 - That the foregoing information was provided and that slides 1 through 4 (and this slide 0, if applicable) were shown;
 - That the chair or designee provided an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) of which the participant is personally aware and that may be essential for the use of that standard
 - Any responses that were given, specifically the patent claim(s)/patent application claim(s) and/or the holder of the patent claim(s)/patent application claim(s) that were identified (if any) and by whom.
- The WG Chair shall ensure that a request is made to any identified holders of potential essential patent claim(s) to complete and submit a Letter of Assurance.
- It is recommended that the WG chair review the guidance in *IEEE-SA Standards Board Operations Manual* 6.3.5 and in FAQs 12 and 12a on inclusion of potential Essential Patent Claims by incorporation or by reference.

Note: **WG** includes Working Groups, Task Groups, and other standards-developing committees with a PAR approved by the IEEE-SA Standards Board.



Participants, Patents, and Duty to Inform

All participants in this meeting have certain obligations under the IEEE-SA Patent Policy.

- **Participants [Note: Quoted text excerpted from IEEE-SA Standards Board Bylaws subclause 6.2]:**
 - **“Shall inform the IEEE (or cause the IEEE to be informed)” of the identity of each “holder of any potential Essential Patent Claims of which they are personally aware” if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents**
 - **“Personal awareness” means that the participant “is personally aware that the holder may have a potential Essential Patent Claim,” even if the participant is not personally aware of the specific patents or patent claims**
 - **“Should inform the IEEE (or cause the IEEE to be informed)” of the identity of “any other holders of such potential Essential Patent Claims” (that is, third parties that are not affiliated with the participant, with the participant’s employer, or with anyone else that the participant is from or otherwise represents)**
- **The above does not apply if the patent claim is already the subject of an Accepted Letter of Assurance that applies to the proposed standard(s) under consideration by this group**
- **Early identification of holders of potential Essential Patent Claims is strongly encouraged**
- **No duty to perform a patent search**

Patent Related Links

All participants should be familiar with their obligations under the IEEE-SA Policies & Procedures for standards development.

Patent Policy is stated in these sources:

IEEE-SA Standards Boards Bylaws

<http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6>

IEEE-SA Standards Board Operations Manual

<http://standards.ieee.org/develop/policies/opman/sect6.html#6.3>

Material about the patent policy is available at

<http://standards.ieee.org/about/sasb/patcom/materials.html>

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at patcom@ieee.org or visit <http://standards.ieee.org/about/sasb/patcom/index.html>

This slide set is available at
<https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.ppt>



Call for Potentially Essential Patents

- If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:
 - Either speak up now or
 - Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible or
 - Cause an LOA to be submitted

Other Guidelines for IEEE WG Meetings

- **All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.**
 - **Don't discuss the interpretation, validity, or essentiality of patents/patent claims.**
 - **Don't discuss specific license rates, terms, or conditions.**
 - Relative costs, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings.
 - Technical considerations remain primary focus
 - **Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.**
 - **Don't discuss the status or substance of ongoing or threatened litigation.**
 - **Don't be silent if inappropriate topics are discussed ... do formally object.**

See *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and “Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy” for more details.