



# Monday, July 25, 2011 Dana Point, CA

Members Present:	Gopal Aravapalli	Singh Matharu
	George Ballassi	Kirk Melson
	John Beatty	Jim Parello
	Suresh Channarasappa	Ted Riccio
	Tom Crawford	Rebecca Steinman
	Sharon Honecker	Yvonne Williams (Secretary)
	Dave Horvath	
	Peter Kang	New Members
	Bob Lane	Tom Carrier
	Jim Liming (Chair)	Vish Patel
Members Absent	Hamid Heidarisafa	Glen Schinzel
	Jacob Kulangara	John Stevens
	Joe Napper	John Taylor (corresponding)
Guests	Howard Butler	Jodi Haasz
	Ralph Chackal	Steven Hutchins
	Bob Fitzpatrick	Frank Kloer
	Scott Goedeke	

# 1.0 Welcome, Review Desired Outcomes

The meeting was called to order by Chair Jim Liming at 1:36 pm. Jim identified that voucher cards can be picked up during the meeting for coffee for tomorrow morning. The overall schedule for SC-3 and working groups for the 11-2 meetings is WG 3.3 Monday morning, SC-3 Monday afternoon, WG 3.4 Tuesday morning and WG 3.1 Tuesday afternoon.

The members in attendance and guests introduced themselves.

# 2.0 Chairman's Introduction

Jim asked for a moment of silence for Mansoor Sanwarwalla, the SC-3 chair who passed away in early May. As the vice-chair, Jim has now become the chair, a tough way to get the job. Jim reviewed the agenda and asked for comments. New business needs to include IEEE 692 PAR. Liaison reports should include NRMCC. Motion to accept the agenda as amended was made by Ted, seconded by George, and the motion passed.

Welcome to new members and guests. If interested in membership, contact Jim or Yvonne.

## 3.0 SC-3 Secretary's Report

### • Approval of SC-3 11-1 Meeting Minutes

The meeting minutes from the 11-1 meeting were quickly reviewed, and comments were requested. Tom Crawford made a motion that the minutes be accepted as written, seconded by Ted, and the motion passed.

### • Posting of Roster on Website

The IEEE policies and procedures allow the posting of contact information on a protected website as long as the membership is in agreement with the posting. There were no objections to posting the roster on the SC-3 website, which is protected by password. Therefore, Yvonne will provide the roster for posting.

### • Action Item Status

The status of action items was reviewed. See the attachment for further information.

There was discussion about the comments made for the proposed maintenance cycle for standards. No one received feedback on the comments made; the new maintenance cycle procedure has been approved and will be presented at the 12-1 NPEC meeting.

#### • SC-3 Membership

Quorum has been met for this meeting.

Tom Carrier has attended meetings, and Vish Patel is attending as the replacement for Owen Scott. The SC discussed membership for these two individuals, with the result that they were welcomed as new members. After discussion of John Stevens, he was moved to corresponding member.

Potential actions to welcome Scott Goedeke will wait for the next meeting.

#### • Alligator Fund (meeting operating costs)

Fees for this meeting are set at \$20.

With the death of Mansoor, there was discussion of making a donation to the American Diabetes Association in his honor. That is the charity identified by the family for donations in his memory. A motion was made by Tom Crawford that \$200 be sent in Mansoor's memory; the motion was seconded by Ted, and the motion passed. Action was assigned to Yvonne to send the contribution and a letter to the family identifying that it had been made.

An ongoing issue for meetings is the projector used to facilitate the meetings. This meeting, Glen was unable to attend, so we had to scramble to obtain a projector. After discussion of potential costs and use of the alligator funds to purchase a projector, Bob Lane indicated that he could donate one. This is a good alternative, and was readily agreed to. Bob will send the projector to Jim.

# 4.0 Chair's Report

### • Succession Planning

Yvonne indicated that she will go ahead and move up to the Vice Chair position. Jim requested volunteers for the Secretary position; there were no volunteers, so Jim requested that members consider volunteering and getting with him or Yvonne.

### • Leadership Telecons

Leadership telecons are held between the meetings, with the chairs of the WGs and the officers of the SC. These telecons are working well to keep work going and to organize the next SC / WG meetings.

### • PAR Status

The status of the PARs for the WGs will be discussed as part of the WG reports.

## • NPEC Meeting Preparations

There are no presentations planned for this NPEC meeting.

### 5.0 Vice Chair's Report

The latest draft of the OPM was reviewed. The major decisions made during the discussion were:

- Use revision 0, effective date and approval by SC-3 chair
- Name of SC-3 name should include Reliability, Jim Parello to bring this up at NPEC AdCom meeting
- Honorary members and corresponding members must be regular members of the SC before being recategorized to the other membership category.
- The SC-3 chair should be indicated as appointed by the NPEC Chair, via recommendation from the SC-3 membership, as reported by the departing chair to NPEC. This is understood to fit with the succession planning.
- Approval of documents for submittal to NPEC we want to use a percentage of all membership (not just those attending), to be able to demonstrate consensus. Two-thirds affirmative vote is needed.
- WG and SC-3 officers must be members of IEEE and the Standards Association. The prime reason is that the duties demand those memberships in order to fulfill the responsibilities, e.g. online submission of standards.
- Guidance documents are constantly changing, so we need to get latest version and rebaseline the document – Ted is emailing what was pulled from website.

## 6.0 Working Group Reports

## • WG-3.1 Testing (Ted)

For 338, comments from the first ballot have been received and comment resolution will be proceeding in the WG meeting tomorrow.

For 1819, work has been slow moving because of work on 338, but it will be ramping up after the comments are resolved. Some inputs were received from workers.

IEEE 336 was published in 2010, and Ted will follow up the IEEE commitment to get complimentary copies to the WG.

It was noted that Soo Kim is no longer our liaison with SA.

SC-6 has requested that Ted provide a presentation to their group regarding P1819; their interest is mainly associated with WG-6.4 for IEEE 7-4.3.2 on software. This presentation will be tomorrow.

# • WG-3.2 Security (Dave)

There was a meeting last Thursday (July 22) with NRC. The issues they have identified will be handled with a corrigendum to IEEE 692. There is an NRC person interested in joining the WG. The PAR was reviewed during the meeting, and is to align with recent industry developments. Motion to approve the PAR for submittal to NPEC was made by Ted, seconded by Rebecca, and the motion was unanimously passed. (Sufficient votes were present to provide this approval.) WG is hoping for ballot by the end of the year.

# • WG-3.3 Reliability (Jim)

352 – this standard was recently reaffirmed, but a new PAR for revision was approved by AdCom and NPEC, and now needs to go to RevCom.

577 – the first ballot and recirculation ballots have been completed. Jim needs to fill out the statistics report and get to NesCom before their meeting in Sept.

933 – the first ballot has been completed; comments are being resolved in preparation for the recirculation ballot.

The WG is also supporting WG-3.1 in preparation of P1819.

# • WG-3.4 Aging (Rebecca)

The preparation of the 1205 revision draft is proceeding with monthly telecons, assigned tasks, etc. The WG is approximately <sup>3</sup>/<sub>4</sub> of the way through the body and has done some Appendix updates. Tomorrow's meeting will be working on clause 6. The PAR was approved by NesCom; the goal is for printing in 2013.

# 7.0 Liaison Reports

The liaison reports for NRC and NRMCC are included as attachments; no report is available from ASME.

Peter indicated that station blackout for a longer time frame is becoming an important topic at NRC. There has been tremendous success with the reliability testing of emergency gas turbine generators. TVA seems to be backing away from Bellefonte 3 and 4, with 1 and 2 the subject of meetings next month of the TVA board.

George provided a summary of the telecon meeting of NRMCC. We may want to coordinate P1819 with NRMCC; Ted suggested giving them a close-to-ready draft of 1819 and asking for feedback.

### 8.0 Old Business

The Paul Yanosy spreadsheet for our standards was reviewed and updated by Jim. An ongoing concern for the SC is the schedule for the standards. It seems to make sense for the WG chairs to try to stagger the standards to not overtax the people resources.

A work-in-progress presentation for 1819 is planned for the Jan 2012 meeting.

At the present time, we should not put anything in the master schedule for 352.

For the 692 corrigendum, the strategy is to propose for AdCom with no preview.

### 9.0 New Business

As we are running out of time, Rebecca indicated that the SC-3 website has been updated with various enhancements. Members are encouraged to take a look and provide any comments they may have.

**10.0** Action Items were reviewed from the meeting. See the attachment.

**11.0** Next Meeting is in San Antonio, with the July 2012 meeting being in San Diego.

### 12.0 Adjournment

Dave made a motion to adjourn the meeting; the motion was seconded by Tom Crawford. The motion passed and the meeting was adjourned at approximately 5 pm.

Prepared by Yvonne Williams SC-3 Secretary.

SC-3 Website information:

http://grouper.ieee.org/groups/npec/private/sc3/sc-3.html login name: password:

# ATTACHMENTS

Attachment 1	Attachment 2	Attachment 3
Agenda	Rolling Attendance	Alligator Fund
Attachment 4	Attachment 5	Attachment 6
Action Items	ASME Liaison Report -	NRC Liaison Report
	Not provided for this	
	meeting (Glen absent)	
Attachment 7	Attachment 8	
NRMCC Liaison Report	SC3 Standards Status	
	Spreadsheet	
Attachment 7	Not provided for this meeting (Glen absent) Attachment 8 SC3 Standards Status	NRC Liaison Report

# Agenda – Meeting 11-02

(without amendments)

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

Meeting Date/Time:	Mon, 7/25/11 1330-1700 PT	Chairman : Secretary:	James Liming Yvonne Williams
Desired Outcomes:	<ol> <li>Review status/activities of ea</li> <li>Update SC3 Std master sch</li> <li>Understand proposed change</li> </ol>	edule	

WHAT (content)	WHO	WHEN (minutes)
Welcome, Review Desired Outcomes <ul> <li>Meeting logistics</li> <li>Introductions</li> </ul>	J. Liming All	1330-1345
Chairman's Introduction <ul> <li>Opening remarks</li> <li>Review/approve agenda</li> </ul>	J. Liming	1345-1400
<ul> <li>Secretary's Report</li> <li>Approval of SC3 11-01 Meeting Minutes</li> <li>Action Item review/status</li> <li>SC3 membership review</li> <li>Alligator fund report</li> </ul>	Y. Williams	1400-1430
Chairman's Report <ul> <li>SC3 Leadership review – succession planning</li> <li>Leadership telecons</li> <li>PAR status</li> <li>NPEC meeting preparations</li> </ul>	J. Liming	1430-1445
Vice Chairman's Report <ul> <li>Operations Manual</li> </ul>	J. Liming	1445-1500
BREAK	All	1500-1510
Working Group Reports • WG-3.1 (Testing) • WG-3.2 (Security) • WG-3.3 (Reliability) • WG-3.4 (Aging) Liaison Reports • NRC Report	T Riccio D Horvath J Liming R. Steinman P Kang	1510-1520 1520-1530 1530-1540 1540-1550 1550-1610
ASME Report Old Business	J. Liming	1330-1010
Master schedule for Std review/updates	All	1610-1625
New Business • SC-3 website overview (Steinman)	All	1625-1645
Review of Action Items	Y. Williams	1645-1655
Next meeting date/location	J. Liming	1655-1700
Meeting closeout/adjournment	J. Liming	1700

# Attendance at SC-3 Meetings

Last	First	2009-02	2010-01	2010-02	2011-01	2011-02
Aravapalli	Gopal	Х	х	х	х	Х
Ballassi	George	Х	х	х	х	х
Beatty John		Х	х	х	х	х
Carrier	Tom				х	х
Channarasappa	Suresh	Х	х	х	х	х
Crawford	Tom	Х		х	х	х
Fitzpatrick	Bob					х
Goedeke	Scott					х
Gradin	Larry	Х				
Gunnett	Rachel	Х				
Heidarisafa	Hamid	Х	х			
Honecker	Sharon	Х	х	х	х	х
Horvath	Dave		х		х	Х
Hutchins	Steve					Х
Kang	Peter	Х	х	х		Х
Kulangara	Jacob		х		х	
Lane	Bob		х		х	Х
Liming	Jim	Х	х	х	х	х
Matharu	Singh		х	х	х	Х
McClure	Phil				dnp	
Melson	Kirk	Х	х	х	х	х
Napper	Joe	Х	х	Х	х	
Parello	Jim	Х	х	х	х	Х
Patel	Vish					Х
Phan	Hanh			х		
Riccio	Ted	Х	х	х	х	Х
Rusaw	Richard		х			
Schinzel	Glen	Х	х	х	х	
Scott	Owen	Х				
Simic	Zdenko					half
Steinmann	Rebecca				х	Х
Stevens	John	х				
Williams	Yvonne	х	х	х	х	х
Zee	Kiang	Х				
members in <b>bold</b>	as of end of 1	1-2 meeting				
TOTAL PAYING AT		21	22	17	20	21

John Stevens should not be bold, is a corresponding member of SC-3

# **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
S05-1	\$312.14	\$207.18	\$359.82	\$159.50
S05-2	\$159.50	\$240.00	\$0.00	\$399.50
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

### NPEC Subcommittee SC-3 Operating, Maintenance, Aging, Testing and Reliability

Action Items List

Action Items List											
Subcommittee 3.0 Actions	Owner	Due Date	Closure Comments								
Operations Manual A. Get current version out to SC3 membership, leaving Rev 1 changes available in document thru "track changes", for more comments and suggestions B. Update for conformance with IEEE guides and policies (e.g. WG requirements, SA Baseline Operating Procedures) C. Form subgroup to get to Rev 2 for discussion at 11-1 meeting (J. Parello + others) - see item 10 in 10-2 minutes also D. Consider adding Gopal's NPEC / SC-3 chart as an appendix	changed to Jim	Ongoing effort	<ul> <li>A. Rev 1 clean and track changes pdf files sent to membership 10/26/10 by Mansoor - completed</li> <li>B /C /D. Action reassigned to Jim Liming as incoming Vice Chair, needs to happen before 11-2 meeting. Committee was formed to assist Jim (Tom, Yvonne, Jim Parello). Need to rebaseline against new documents.</li> </ul>								
Standards status / schedule - update for meeting minutes and send to all SC3 members ensure 1819 is included in list	re-assign	Ongoing effort	Mansoor to update spreadsheet based on discussions in 11-01 meeting and to include 1819 action was against status sheets with dates, 11-02 meeting - discussed the Paul Yanosy spreadsheet								
plan for 11-2 meeting	WG chairs	by end of April 2011	Closed for 11-2 meeting								
comments), based on feedback from members	George / Dave	end of February - to Dave Ringle	Closed comments provided.								
Investigate whether a PAR is needed to address NRC (Satish) concerns on 692	Dave H	11-02 meeting	closed - PAR in new business for 11-02								
SC-3 website update update information, add documents from Secretary	Rebecca	Ongoing effort	closed - website has been updated								
Contribution in honor of Mansoor to American Diabetes Association + letter to family	Yvonne	After 11-2 meeting									
	Bob Lane	After 11-2 meeting									
SC-3 name in NPEC needs to reflect reliability	Jim Parello	AdCom mtg	bring up at AdCom meeting 11-2								
Get IEEE to send out complimentary copies of 336 to workers	Ted	After 11-2 meeting									
	<ul> <li>A. Get current version out to SC3 membership, leaving Rev 1 changes available in document thru "track changes", for more comments and suggestions</li> <li>B. Update for conformance with IEEE guides and policies (e.g. WG requirements, SA Baseline Operating Procedures)</li> <li>C. Form subgroup to get to Rev 2 for discussion at 11-1 meeting (J. Parello + others) - see item 10 in 10-2 minutes also</li> <li>D. Consider adding Gopal's NPEC / SC-3 chart as an appendix</li> </ul> Standards status / schedule - update for meeting minutes and send to all SC3 members ensure 1819 is included in list Discuss meeting arrangements for the WGs within the available time and come up with a plan for 11-2 meeting Provide comments to IEEE on proposed change to maintenance cycle for standards (as SC-3 comments), based on feedback from members Investigate whether a PAR is needed to address NRC (Satish) concerns on 692 SC-3 website update update information, add documents from Secretary	Operations Manual       Mansoor         A. Get current version out to SC3 membership, leaving Rev 1 changes available in document       thansoor         changed to Jim       Liming         B. Update for conformance with IEEE guides and policies (e.g. WG requirements, SA       (all to review Rev         Baseline Operating Procedures)       C. Form subgroup to get to Rev 2 for discussion at 11-1 meeting (J. Parello + others) - see       (all to review Rev         1 for more       comments and suggestions       seeline 10 in 10-2 minutes also       (all to review Rev         D. Consider adding Gopal's NPEC / SC-3 chart as an appendix       sent out)       sent out)         Standards status / schedule - update for meeting minutes and send to all SC3 members       re-assign         neuron 1819 is included in list       WG chairs         Discuss meeting arrangements for the WGs within the available time and come up with a plan for 11-2 meeting       WG chairs         Provide comments to IEEE on proposed change to maintenance cycle for standards (as SC-3)       George / Dave         Investigate whether a PAR is needed to address NRC (Satish) concerns on 692       Dave H         SC-3 website update update information, add documents from Secretary       Rebecca         Contribution in honor of Mansoor to American Diabetes Association + letter to family       Yvonne         Projector donation       Bob Lane         SC-3 name i	Operations Manual       Mansoor changed to Jim         A. Get current version out to SC3 membership, leaving Rev 1 changes available in document thru "track changes", for more comments and suggestions       Mansoor changed to Jim         B. Update for conformance with IEEE guides and policies (e.g. WG requirements, SA Baseline Operating Procedures)       (all to review Rev 1 for more comments and suggestions when       Ongoing effort         C. Form subgroup to get to Rev 2 for discussion at 11-1 meeting (J. Parello + others) - see item 10 in 10-2 minutes also       Sent out)       Sent out)         D. Consider adding Gopal's NPEC / SC-3 chart as an appendix       sent out)       re-assign       Ongoing effort         Standards status / schedule - update for meeting minutes and send to all SC3 members ensure 1819 is included in list       WG chairs       by end of April 2011         Discuss meeting arrangements for the WGs within the available time and come up with a plan for 11-2 meeting       WG chairs       by end of April 2011         Provide comments to IEEE on proposed change to maintenance cycle for standards (as SC-3 comments), based on feedback from members       George / Dave       end of February - to Dave Ringle         Investigate whether a PAR is needed to address NRC (Satish) concerns on 692       Dave H       11-02 meeting         SC-3 new in NPEC needs to reflect reliability       Store the seca       Ongoing effort 11-2 meeting         Projector donation       Bob Lane       Meeting         <								

### NRC LIAISON REPORT BY PETER KANG OFFICE OF NEW REACTORS (NRO) US NUCLEAR REGULATORY COMMISSION July 25-27, 2011

# **US NRC Activities**

## NRC's Japan Task Force Review and Recommendations

The NRC Japan Task Force developed a comprehensive set of 12 recommendations to increase and re-defined what level of protection of public health regarded as adequate. Among the recommendations, strengthening station blackout (SBO) mitigation capability for existing, and new reactors for its design basis and beyond design basis events, such as floods, hurricanes, earthquakes, tornadoes' or tsunamis. It includes with a rule to set minimum coping time, establish equipment, procedures and training to keep the core and spend fuel pools covered. In addition, preplanning and pre-staging offsite resources to be delivered to the site to support uninterrupted core or spent fuel damage and maintaining containment integrity. As part of the longer team review, it will include additional emergency preparedness topics relating to multiunit events, and prolonged SBO.

## NRC staff assessing how long AP1000 rulemaking is to be delayed

NRC staff continues to review changes to the amended Westinghouse AP1000 design documents to determine the impact on the schedule for final certification of the AP1000, but the agency will not approve a final rule as planned by September, 2011, as additional technical issues had been discovered in the review of the reactor design, potentially delaying the review. Westinghouse has said the additional items were known to NRC and represented confirmatory material that was not safety-significant. Company officials repeated June 30 that they have made no changes to the physical design of the reactor, only to documentation and calculations supporting the AP1000 design.

## NRC and industry differ over degraded voltage protection issues

During a workshop at the agency's headquarters June 28, 2011, utilities are urging NRC to hold off issuing a final Regulatory Information Summary (RIS) until the effect on plants is better understood on degraded voltage protection issues. The effort to resolve so-called degraded voltage protection issues dates to the late 1970s, when NRC first told licensees they had to protect their nuclear power plants from electric grid voltage drops. With recent inspections found continued problems with how plants implemented the degraded voltage protection requirements, a draft RIS, was issued to clarify regulations that protect plants for comment in January. The nuclear industry states that the effort imposes new requirements and could force units to switch to backup diesel power more often. The workshop was resulted discussing from a series of inspection findings and disagreements between utilities and NRC inspectors that shows a lack of mutual understanding of what the overall problem and key issues are relating to degraded voltage regulation at specific plants, was to clarify understanding of the technical and regulatory issues surrounding degraded voltage protection. The industry suggested additional meetings and the creation of a technical group to continue discussing the issue. The NRC suggested small group meetings could continue. Extra NRC representatives are participating a continue dialogue with the industry representatives during this IEEE meeting.

## **Risk-informed regulation complementary tool**

NRC Chairman Gregory Jaczko said that the NRC has no intention to abandon its historical deterministic approach to regulating nuclear power installations in favor of a system based on probabilistic risk assessment. But he said that rather than slowing the introduction of risk information into regulation, the use of a PRA should be "developed and enhanced" as a "useful tool" to ensure safety. The NRC will continue to use PRA to complement its more traditional defense-in-depth approach as "one more tool to give us better insight" into nuclear plant safety. While the industry sees risk-informed regulation as a way of putting resources where they provide the greatest safety benefit, some critics, however, say that it allows the industry to save money by reducing safety margins and that is not wise in light of the Fukushima One accident, which was caused by events that had been considered impossible and had not been designed to protect against.

## NRC should assess control of buried piping at power plants

According to the US Government Accountability Office (GAO) report released June 21. GAO said the NRC should "periodically evaluate the extent to which the industry's voluntary Groundwater Protection Initiative will result in prompt detection of leaks and, based upon those evaluations, determine whether the agency should expand its groundwater monitoring requirements." This means reviewing current catholic protection system for all buried piping system within the plants.

### Gas Turbines as Standby Emergency Power Sources by US APWR (Mitsubishi) in DC

The US-APWR by Mitsubishi Heavy Industries (MHI) proposed to use four (50 percent) gas turbines instead of diesel driven emergency diesel generators (EDGs) for safety-related emergency power supply application. Issues facing the use of gas turbine for USAPWR are reliability as credible reliability data were lacking. MHI is to demonstrate at least 95% reliability at a 95% confidence level for these turbines. MHI has completed their qualification test-starting and load acceptance tests according to IEEE Std. 387. The functional testing, seismic qualification testing has been completed. Currently, the staff is reviewing the result of those test reports.

## **Design Certifications (DCs) under Rulemaking:**

ABWR B South Texas Project Nuclear Operating Co by Toshiba and GE-Hitachi. AP1000 - AP1000 Reactor by Westinghouse Electric Company

#### **DCs under Review**

ESBWR - Economic Simplified Boiling Water Reactor by General Electric-Hitachi Nuclear USEPR - U.S. Evolutionary Power Reactor by AREVA Nuclear Power USAPWR - U.S. Advanced Pressurized Water Reactor by Mitsubishi Heavy Industries, Ltd. APR 1400 – Korean Electric Power Co (No schedule)

## List of COLs Currently under Review (based on the above DCs):

 ABWR-South Texas Project (2 units)
 AP1000-Vogtle (2 units), Summer (2 units), Lee Station (2 units), Harris (2 units), Turkey Point (2 units), Levy County (2 units)
 USEPR-Calvert Cliffs (1 unit), Bell Bend (1 unit)
 USAPWR-Comanche Peak (2 units), North Anna (1 unit)
 ESBWR-Fermi (1 unit)

# Advanced Reactors

The NRC has received several letters of intent for applications for design certifications and design approvals, but has no schedules.

Design	Applicant
TVA Clinch River	Babcock and Wilcox (B&W) Company -no schedule
NuScale	NuScale
Westinghouse	Westinghouse
mPower	Babcock and Wilcox (B&W) Company -no schedule

# License Renewal

# Applications Currently Under Review:

- Pilgrim 1, Unit 1 Application received January 27, 2006
- Indian Point, Units 2 and 3 Application received April 30, 2007
- Crystal River, Unit 3 Application received December 18, 2008
- Hope Creek Application received August 18, 2009
- Salem, Units 1 and 2 Application received August 18, 2009
- Diablo Canyon, Units 1 and 2 Application received November 24, 2009
- <u>Columbia Generating Station</u> Application received January 20, 2010
- <u>Seabrook Station, Unit 1</u> Application received June 1, 2010
- Davis-Besse Nuclear Power Station, Unit 1 Application received August 30, 2010
- South Texas Project, Units 1 and 2 Application received October 28, 2010
- Limerick Generating Station, Units 1 and 2 Application received June 22, 2011

Fiscal Year	No.	Renewal Application	Applicant	Submission Date
2011	1	Grand Gulf Nuclear Station, Unit 1	Entergy Nuclear, Inc.	July 2011
2012	1	Callaway Plant, Unit 1	AmerenUE	Oct. to Dec. 2011
2013	1131Strategic Teaming and Resource Sharing (STARS) No. 72Waterford Steam Electric Station, Unit 33Sequoyah Nuclear Plant, Unit 1 and Unit 2		Un-named	Oct. to Dec. 2012
			Entergy Nuclear, Inc.	Jan. 2013
			Tennessee Valley Authority	Jan. to Mar. 2013
	4	Strategic Teaming and Resource Sharing	Un-named	July to Sept. 2013

# **Future Submittals of Applications:**

			(STARS) No. 6		
		5	Byron Station, Units 1 and 2/Braidwood Station, Units 1 and 2	Exelon Generation Company, LLC	Apr. to June 2013
2	015	1	Perry Nuclear Power Plant, Unit 1	FirstEnergy Nuclear Operating Company	Dec. 2014
		1	River Bend Station, Unit 1	Entergy Nuclear, Inc.	Jan. 2015
		2	Un-named Exelon Plant	Exelon Generation Company, LLC	Jan. to Mar. 2015
2	017	1	Un-named Exelon Plant	Exelon Generation Company, LLC	Jan. to Mar. 2017

# Information Notices (INs)

Information Notice	Date	Title
IN 2011-12	06/16/2011	Reactor Trips Resulting From Water Intrusion Into Electrical Equipment
IN 2011-08	03/31/2011	Tohoku-Taiheiyou-Oki Earthquake Effects On Japanese Nuclear Power Plants – For Fuel Cycle Facilities
IN 2011-06	03/22/2011	Erroneous Criticality Alarm Monitoring Signal Caused By Incorrect Data Acquisition Module Configuration
IN 2011-05	03/18/2011	Tohoku-Taiheiyou-Oki Earthquake Effects On Japanese Nuclear Power Plants
IN 2011-01	02/15/2011	Commercial-Grade Dedication Issues Identified During NRC Inspections

# Nuclear Risk Management Coordinating Committee Liaison Report

#### SC-3/NPEC

George Ballassi, NPEC VChair-Electric Boat Corp

NPEC (G Ballassi) participated in a teleconference meeting on June 6, 2011 whose purpose was to:

- 1. Summarize initial risk management developments and efforts related to potential impacts as a result of the Fukushima Daiichi situation,
- 2. Briefly discuss the results of the ASME and ANS staff meeting to support formation of the Joint Committee on Nuclear Risk Management (JCNRM),
- 3. Outline the potential impact of formation of the JCNRM on the future role of the Nuclear Risk Management Coordinating Committee.

Te teleconference was well attended and conducted a "round robin" as each participant expressed their organization's activity relative the accident in Japan and risk management. Some of the significant statements were as follows:

- PWR owners group is focused on high level discussions. Best practices for spent fuel cooling as potentially affected by seismic and external events beyond the 24 hour mission time.
- NEI is expected to issue an iterative report within a week and is expected to take a lead position regarding an industry response to the accident. It is expected that the report will receive wide review. NEI is proposing a Global Response Team
- INPO has the lead as to what actually happened at Fukushima Daiichi.
- DOE has issued a safety bulletin called "Events Beyond Design Basis" and is collecting information from the industry. The DOE sponsored the Nuclear Safety Conference held at Crystal City on June 6 and 7, 2011.
- EPRI is waiting for the regulatory response
- ASME has started two initiatives.
  - 1. Meeting with the executive committee of ASME, working with the existing information and getting organized. Looking to provide recommendations to the JCNRM in September for PRA and Risk management standards. ASME is trying to anticipate standards needs prior to the issuance of NRC reports.
  - 2. Creating a task force on "Beyond DBA Events and Response" involving upgrading PRA's on existing sites.

• A statement was made "Is this really a PRA related task?" since PRA is a subset of risk management.

The above discussion consumed a large amount of the time allotted for the teleconference. Suffice it to say the creation of the JCNRM is still a work in progress without a sense of urgency as best I can tell. The following points are worth understanding:

- The "risk world" is relatively small and those that work the subject often belong to multiple organizations.
- Since meetings involve many of the same people a large attempt is being made to minimize travel.
- ANS and ASME are trying to identify their common interests and subjects while separating their individual society needs.
- The Scope and Charter of the JVNRM is the current aspect of discussion.
- A very open question is "how do other organizations fit in?" Like NPEC?

The NRMCC is willing to participate with the IEEE on a standard if asked. They could help with resource allocation and attempt to prevent overlap with other efforts, and provide expertise.

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

Chair: Jim Liming

PROJECT	Year	Re- Affirmation	PAR Expiration	TITLE	Working Group	Chair	Cycle Year	N10-1	N10-2	N11-1	N11-2	N12-1	N12-2	Status/Comments
1205	2000	2007		IEEE Guide for Assessing, Monitoring, and Mitigating Aging Effects on Class 1E Equipment used in Nuclear Power Generating Stations	3.4	D. Horvath	4			PAR Approved				Standard approved at 3/30/2000 Standards Board Meeting. Ballot for corrigendum opened 1/8/06, approved 3/30/06. Re-afformation in process. Approved by Std Bd March 22, 2007 PAR approved by ADCOM 1/25/2011
336	2010			IEEE Standard Installation, Inspection, and Testing Requirements for Power, Instrumentation, and Control Equipment at Nuclear Facilities	3.1	T. Riccio	1							Revision Approved by Stds Bd on 9/22/05. PAR approved byADCOM 08-02 and approved by StdBd Nov 7, 2008 Ballot opens Dec. 17 and closes on Jan 16, 2010. Revision approved by the StdBd on June 17, 2010
338	2006		Dec. 2014	IEEE Standard Criteria for the Periodic Surveillance Testing of Nuclear Power Generating Station Safety Systems	3.1	T. Riccio	5	Electronic PAR	WIP	Preview				Revision approved by Stds Bd 12/6/06. PAR electronicaly approved by ADCOM and submitted to NesCom for Jan 2010 meeting. PAR approved by StdBd Feb 2010.
352	1987	2010		IEEE Guide for General Principles of Reliability Analysis of Nuclear Power Generating Station Protection Systems	3.3	J. Liming	1			PAR Approved				Evaluating issuance of PAR. PAR submitted to ADCOM 08-02, requires revision PAR will be updated to address Risk Informed Technology. Reaffirmation Ballot close date Nov. 2, 2009 Reaffirmation approved by StdBd March 17, 2010. PAR approved by ADCOM 1/25/2011
577	2004		Dec-2015	IEEE Standard Requirements for Reliability Analysis in the Design and Operation of Safety Systems for Nuclear Power Generating Stations	3.3	J. Liming	7			First ballot complete	First ballot complete			Revision approved by Stds Bd on 5/12/04. PAR submitted to ADCOM 06-02 and approved by StdBd Nov 7, 2008. Recirculation ballot completed on 2/27/2011; 100% approval; preparing draft submittal for RevCom 9/2011 meeting.
692	2010			IEEE Standard Criteria for Security Systems for Nuclear Power Generating Stations	3.2	D. Horvath	1				Corrigend um PAR			Reaffirmation approved by Stds Bd on 9/22/05. PAR for extension approved by Stds Bd 9/22/05. Ballot closed 11/24/08. P692-Draft 3 was balloted successfully in November 2008 by 57 balloters with a 87% response rate and of those who voted 93% voted affirmative. There are a total of 61 comments and 3 negative comments. Plan to reballot this year. PAR extension will be submitted to Std Coordinator by Sept 03. PAR extension approved by Std Bd on Dec. 9, 2009 thru Dec. 31, 2010. Approved by Std Bd June 17, 2010.
933	1999	2004	Dec-2012	Guide for Definition of Reliability Program Plans	3.3	J. Liming	7	ADCOM approved PAR			First ballot complete			Reaffirmation approved by Stds Bd 12/08/04. PAR submitted to ADCOM 06-02 and approved by StdBd Nov 7, 2008. First bailot of 933- 2011_D4_20110124.pdf completed as of 3/1/2011; resolving review comments.
P1819			Dec. 2014	Standard for Risk-Informed Categorization and Treatment of Electrical Equipment in Nuclear Facilities				WIP						PAR electronicaly approved by ADCOM and submitted to NesCom for Jan 2010 meeting. PAR approved by StdBD March 25, 2010.

