

**NPEC Subcommittee SC-3, Operations, Maintenance, Aging, and Testing  
Meeting S01-1  
Wednesday February 14, 2001  
Orlando, FL**

Members Present:           George Ballassi           Surin Dureja  
                                  Paul Colaianni           Dave Horvath  
                                  Wally Colvin             Henry Leung  
  John Taylor

Members Absent:           Brij Bharteey            Sonny Kasturi  
                                  Preston Dougherty      Steve Parsons  
                                  Lamis Fleischer         Jit Vora

Other Attendees:         Bob Lofaro                Burl Williams  
                                  Mansoor Sanwarwalla    Tom Worrell

**1. Introduction**

Dave Horvath welcomed everyone in attendance and introduced the “Other Attendees”: Burl Williams, Tom Worrell (sitting in for Preston Dougherty) from WG 3.2, Bob Lofaro and Mansoor Sanwarwalla from WG 3.4. Dave also presented the agenda, which was approved with a few minor alterations; the final agenda is included as Attachment 1.

**2. Secretary's Report**

A. S00-2 Minutes

The minutes from S00-2 were approved, without modification, by acclamation.

B. Action Item Status **[\*\*John, Needs renumber and cross-reference check.]**

All **[Not really, see Section 4B of these minutes]** action items were closed from the last meeting. The following new action items were identified.

Item No.	Description	Status
AI01-1-X	Send out update of IEEE Stds Status spreadsheet. [D. Horvath will provide to J. Taylor for distribution to SC-3 members.]	Due 4-1-01
AI01-1-X	Check status of IEEE 1205 complimentary copies for WG-3.4 members. [D. Horvath]	Due 4-1-01
AI01-1-3	Email SC-3 feedback on NPEC Standards hierarchy to NPEC. [D. Horvath]	Closed
AI01-1-1	Send update of combined SC-3 and WG Roster to SC-3 and WG members prior to issuing meeting minutes. [J. Taylor]	Due 4-1-01
AI01-1-2	Arrange and send meeting notice out for S01-2. [J. Taylor]	Due 5-1-01

## SC-3 Meeting S01-1 Minutes (Continued)

Note (repeated from prior minutes): It is expected that P323 (Equipment Qualification) will be up for a ballot within the next year. Any IEEE and SA member can request consideration for addition to the NPEC ballot group by completing the form at <http://standards.ieee.org/db/balloting/ballotform.html>. It may be advantageous to add a comment at the bottom of the form that the request is for IEEE 323 only if appropriate. One can then confirm the success of this approach (if so inclined) by contacting IEEE staff: Michael Binder @ 732-562-5540 or Carol Buonfiglio 732-562-3834.

### C. Alligator Fund

The Alligator Fund is made up of voluntary contributions from SC-3 members to defray the cost of meeting rooms, refreshments, etc. The balance after S01-1 is \$12.

### D. Membership Table

Mansoor Sanwarwalla was voted in as an SC-3 member by the subcommittee members that were present. It was further agreed that the working groups would continue to meet in conjunction with the subcommittee, to allow more working group members to attend the subcommittee meeting.

An update of the membership roster is to be transmitted by email in advance of the minutes and changes/corrections from members not present will be elicited (AI-1). The final update will be included as an attachment to the minutes (See [Attachment 2](#)). The current SC-3 and working group rosters are also on the IEEE/NPEC website at URL: <http://grouper.ieee.org/groups/npec/private/sc3/sc-3.html>; user name: [REDACTED] password: [REDACTED].

The current breakdown of members by category is as follows: [**\*\*John, May need update.**]

<u>Utility</u>	<u>AE/Consultant</u>	<u>Gov't/National Labs</u>	<u>Other</u>	<u>Total</u>
6	5	2	1	14

## 3. SC-3 Chair's Report

### A. NPEC Activities

Dave used [Attachment 3](#) to summarize the previous NPEC Meeting N00-2.

### B. Future Meeting Locations

It was decided that the next SC-3 and working group meetings would be held tentatively the week of 8/14-16/01 in Annapolis, MD. The exact dates and times of the Subcommittee and Working Group meetings will be announced later. The first meeting of 2002 is tentatively scheduled during February in Texas (either San Antonio or Houston). John Taylor will arrange the meetings and advise the membership [AI-2].

## SC-3 Meeting S01-1 Minutes (Continued)

### C. NPEC Standards Hierarchy

NPEC has prepared a preliminary figure ([Attachment 4](#)) to show hierarchical relationships of its approximately 40 standards, guides, and recommended practices. The purpose of the figure is to facilitate an evaluation of future revision impacts on other standards. Feedback is being requested by its subcommittees. The subcommittee had the following requested changes:

- IEEE 336 should be added to same block as 338.
- IEEE 1205 should be added to a new block below 323 with a line connecting up to 323.
- IEEE 692 should be in a separate box off to the side not connected to any other standards.

After finalization, NPEC intends to place the hierarchy figure on its website for future reference.

### 4. Working Group 3.1 (Testing) Report

A report was made by George Ballassi, the WG Chair. The working group met on February 13, 2001. The draft PARs for both IEEE 336 (Guide for Installation, Inspection, and Testing for Class 1E Power, Instrumentation, and Control Equipment at Nuclear Facilities) and IEEE 338 (Standard Criteria for Periodic Surveillance Testing of Nuclear Power Generating Station Safety Systems) were reviewed and updated for submittal at the NPEC meeting in March. It is proposed that 336 be revised as a guide. 338 is proposed to remain a standard. A schedule will be prepared to address revising the two standards in a concurrent time frame. User feedback needs to be considered for the revisions, and the 338 revision needs to be coordinated with two IEC standards.

### 5. Working Group 3.2 (Security) Report

The working group will meet the next day to review and update the draft PAR to revise IEEE 692 (Standard Criteria for Security Systems) for submittal at the March NPEC meeting. This working group is still seeking an NRC representative. Jit Vora had taken an action item at the previous SC-3 meeting to solicit an NRC representative. [Action Item 00-2-2] **\*\*\*John note this old incomplete action item!]**

### 6. Working Group 3.4 (Aging) Report

Chair Paul Colaianni reported that WG-3.4 will be meeting the next day to discuss assignments on the NPEC Goal 6 action plan previously assigned. Additional detail will be in the working group's meeting minutes. IEEE Std 1205 was published prior to the end of 2000. Dave Horvath and Paul gave presentations on IEEE 1205-2000 at the ANS topical meeting last November in Washington, D.C. Dave Horvath accepted an action item to check on complimentary copies of IEEE 1205-2000 for members of the working group. [Action Item 01-1-X]

## SC-3 Meeting S01-1 Minutes (Continued)

### 7. **Liaison Reports**

#### a. **NRC Liaison Report**

There was no NRC Liaison report presented at the meeting. (I have a call in to Paul Shemanski to see if he has a report for inclusion in the minutes)

#### b. **BNL EQ Report Summary**

Bob Lofaro gave an update on the status of the BNL EQ Report. He recently attended a public meeting where the report was presented. A closure date for the EQ GSI has not yet been established.

#### c. **Presentation: Probabilistic Safety Assessment**

Wally Colvin gave an excellent tutorial type presentation on the basics of PSA, prioritization techniques, and applications to the Maintenance Rule. The training was for WG-3.1 but SC-3 members were also invited. **Thanks Wally!**

### 8. **New Business**

Topics for informative presentations at future meetings were discussed. The subject of Post-modification testing was suggested by Dave. Burl Williams is considering making a presentation on the subject.

The meeting was adjourned.

Prepared by

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John Taylor

#### List of Attachments

1. [Agenda](#)
2. [Combined SC-3 and Working Group Roster](#)
3. [Summary for NPEC Meeting 00-2](#)
4. [NPEC Standards Hierarchy Relationship Figure \(Draft 2-12-01\)](#)

# **IEEE Subcommittee 3 Meeting S01-1 Agenda**

**Wednesday, February 14, 2001 1:00 pm  
Orlando FL 32819**

**1. Introduction - D. Horvath**

- Opening remarks - D. Horvath
- Meeting Agenda - D. Horvath

**2. Secretary's Report - J. Taylor**

- S00-2 Minutes
- Action Item Status
- Alligator fund
- SC-3 Membership

**3. SC-3 Chair's Report - D. Horvath**

- NPEC Activities
- Future Meeting Locations
- NPEC Standards Hierarchy

**4. WG 3.1 Report - G. Ballassi**

- PAR for Std. 336-1985 Revision
- PAR for Std. 338-1987 Revision

**5. WG 3.2 Report - D. Horvath**

- PAR for Std. 692-1997 Revision

**6. WG 3.4 Report - P. Colaianni**

- Publication Status
- NPEC Goal 6 Status

**7. Liaison Reports**

- NRC - J. Vora
- BNL EQ Report Update - J. Taylor/R. Lofaro
- Acknowledgement of Wally Colvin Training on PSA/PRA

**8. New Business (Open for Input)**

**IEEE - Nuclear Power Engineering Committee  
Subcommittee SC-3 Membership List  
Operations, Maintenance, Aging, And Testing**

<b>Name/Company</b>	<b>Address</b>	<b>Assignment</b>
<b>BALLASSI, G. (GEORGE)</b> GENERAL DYNAMICS/ ELECTRIC BOAT CORP. [REDACTED]	[REDACTED]	SC-3 (M) WG 3.1(C) WG-3.4(M)
<b>BHARTEEY, B.M. (BRIJ)</b> SPECTRUM TECHNOLOGIES USA INC. [REDACTED]	[REDACTED]	SC-3(M) WG-3.4(M)
<b>COLAIANNI, R.P. (PAUL)</b> DUKE ENERGY [REDACTED]	[REDACTED]	SC-3(M) WG-3.4(C)
<b>COLVIN, W. J. (WALLY)</b> FIRSTENERGY CORP. [REDACTED]	Perry Nuclear Power Plant [REDACTED]	SC-3 (M) WG-3.1(M) WG-3.4 (M)
<b>FLEISCHER, L.Q. (LAMIS)</b> EXELON CORP. [REDACTED]	Peach Bottom Nuclear Station [REDACTED]	SC-3(M) WG-3.4(M)
<b>DOUGHERTY P. (PRESTON)</b> DOMINION GENERATION [REDACTED]	Innsbrook Technical Center [REDACTED]	SC-3 (M) WG-3.4 (M)
<b>DUREJA, S.K. (SURIN)</b> CONSTELLATION NUCLEAR [REDACTED]	Calvert Cliffs Nuclear Power Plant [REDACTED]	SC-3 (M) WG-3.3 (C) WG-3.1 (M)
<b>HORVATH, D.A. (DAVE)</b> ADVENT ENGINEERING SERVICES, INC. [REDACTED]	[REDACTED]	SC-3(C) WG-3.1(M) WG-3.2(C) WG-3.4(PC)
<b>KASTURI, S. (SONNY)</b> MOS [REDACTED]	[REDACTED]	SC-3(PC)

**SC-3 Meeting S01-1 Minutes (Continued)**

Name/Company	Address	Assignment
<b>LEUNG, C.W. (HENRY)</b> ATOMIC ENERGY OF CANADA LIMITED [REDACTED]	[REDACTED]	SC-3(M) WG-3.4(M)
<b>PARSONS, S.Z. (STEVE)</b> AMERICAN ELECTRIC POWER [REDACTED]	DC Cook Nuclear Power Station [REDACTED]	SC-3(M)
<b>SANWARWALLA, M.H. (MANSOOR)</b> SARGENT & LUNDY [REDACTED]	[REDACTED]	SC-3 (M) WG-3.4 (M)
<b>TAYLOR, J.H. (JOHN)</b> BROOKHAVEN NATIONAL LAB [REDACTED]	[REDACTED]	SC-3(S) WG-3.1(M)
<b>VORA, J.P. (JIT)</b> US NUCLEAR REGULATORY COMMISSION [REDACTED]	Office Of Nuclear Regulatory Research [REDACTED]	SC-3(M) WG-3.1 (M)

**SC-3 Meeting S01-1 Minutes (Continued)**

**IEEE - Nuclear Power Engineering Committee  
Working Group WG-3.1 Membership List  
Testing  
Standard IEEE Stds 336 and 338**

<b>Name/Company</b>	<b>Address</b>	<b>Assignment</b>
<b>BALLASSI, G. (GEORGE)</b> GENERAL DYNAMICS/ ELECTRIC BOAT CORP. [REDACTED]	[REDACTED]	SC-3 (M) WG 3.1(C) WG-3.4(M)
<b>COLVIN, W. (WALLY)</b> FIRSTENERGY CORP. [REDACTED]	Perry Nuclear Power Plant [REDACTED]	SC-3 (M) WG-3.1(M) WG-3.4 (M)
<b>DUREJA, S.K. (SURIN)</b> CONSTELLATION NUCLEAR [REDACTED]	Calvert Cliffs Nuclear Power Plant [REDACTED]	SC-3 (M) WG-3.3 (C) WG-3.1 (M)
<b>HORVATH, D.A. (DAVE)</b> ADVENT ENGINEERING SERVICES, INC. [REDACTED]	[REDACTED]	SC-3(C) WG-3.1(M) WG-3.2(C) WG-3.4(PC)
<b>TAYLOR, J.H. (JOHN)</b> BROOKHAVEN NATIONAL LAB [REDACTED]	[REDACTED]	SC-3(S) WG-3.1(M)
<b>VORA, J.P. (JIT)</b> US NUCLEAR REGULATORY COMMISSION [REDACTED]	Office Of Nuclear Regulatory Research [REDACTED]	SC-3(M) WG-3.1 (M)
<b>WILLIAMS, B.E. (Burl)</b> ENTERGY [REDACTED]	Arkansas Nuclear One [REDACTED]	Proposed WG-3.1 (M)



**SC-3 Meeting S01-1 Minutes (Continued)**

**IEEE - Nuclear Power Engineering Committee  
Working Group WG-3.2 Membership List  
Security Systems  
Standard IEEE Std 692**

Name/Company	Address	Assignment
<b>BOTTOM, PhD, N.R. (NORMAN)</b> PRIVATE CONSULTANT [REDACTED]	[REDACTED]	WG-3.2(M)
<b>GREEN, J (JOHN)</b> HOLOPHANE LIGHTING [REDACTED]	[REDACTED]	WG-3.2 (M)
<b>HORVATH, D.A. (DAVE)</b> ADVENT ENGINEERING [REDACTED]	[REDACTED]	SC-3 (C) WG-3.1 (M) WG-3.2 (C) WG-3.4 (M)
<b>PEARSON, EINAR W. (BILL)</b> NIAGARA MOHAWK [REDACTED]	Nine Mile Point Nuclear Station [REDACTED]	WG-3.2 (M)
<b>PHELPS, P.A. (PAUL)</b> DOMINION GENERATION [REDACTED]	Surry Power Station [REDACTED]	WG-3.2 (M)
<b>SIMS, J (JERRY)</b> SOUTHERN NUCLEAR OPERATING CO. [REDACTED]	[REDACTED]	WG-3.2 (M)
<b>WORRELL, T. M. (TOM)</b> DOMINION GENERATION [REDACTED]	Surry Power Station [REDACTED]	WG-3.2 (S)
<b>WILLIAMS, B.E. (BURL)</b> ENTERGY [REDACTED]	Arkansas Nuclear One [REDACTED]	Proposed WG-3.2 (M)

**SC-3 Meeting S01-1 Minutes (Continued)**

**IEEE - Nuclear Power Engineering Committee  
Working Group WG-3.4 Membership List  
Assessing, Monitoring, And Mitigating Aging Effects On Npqs Equipment  
Standards: IEEE Std 1205**

<b>Name/Company</b>	<b>Address</b>	<b>Assignment</b>
<b>BALLASSI, G. (GEORGE)</b> GENERAL DYNAMICS/ ELECTRIC BOAT CORP. [REDACTED]	[REDACTED]	SC-3 (M) WG 3.1(C) WG-3.4(M)
<b>BHARTEY, B.M. (BRIJ)</b> SPECTRUM TECHNOLOGIES USA INC. [REDACTED]	[REDACTED]	SC-3(M) WG-3.4(M)
<b>COLAIANNI, R.P. (PAUL)</b> DUKE ENERGY [REDACTED]	[REDACTED]	SC-3(M) WG-3.4(C)
<b>COLVIN, W. (WALLY)</b> FIRSTENERGY CORP. [REDACTED]	Perry Nuclear Power Plant [REDACTED]	SC-3 (M) WG-3.1(M) WG-3.4 (M)
<b>DOUGHERTY P. (PRESTON)</b> DOMINION GENERATION [REDACTED]	Innsbrook Technical Center [REDACTED]	SC-3 (M) WG-3.4 (M)
<b>FLEISCHER, L.Q. (LAMIS)</b> EXELON CORP. [REDACTED]	Peach Bottom Nuclear Station [REDACTED]	SC-3(M) WG-3.4(M)
<b>HORVATH, D.A. (DAVE)</b> ADVENT ENGINEERING SERVICES, INC. [REDACTED]	[REDACTED]	SC-3(C) WG-3.1(M) WG-3.2(C) WG-3.4(PC)
<b>LEUNG, C.W. (HENRY)</b> ATOMIC ENERGY OF CANADA LIMITED [REDACTED]	[REDACTED]	SC-3(M) WG-3.4(M)
<b>LOFARO, R.J. (ROBERT)</b> BROOKHAVEN NATIONAL LAB [REDACTED]	[REDACTED]	WG-3.4(M)

**SC-3 Meeting S01-1 Minutes (Continued)**

<b>Name/Company</b>	<b>Address</b>	<b>Assignment</b>
SANWARWALLA, M.H. (MANSOOR) SARGENT & LUNDY [REDACTED]	[REDACTED]	SC-3 (M) WG-3.4 (M)
SHEMANSKI, P.C. (PAUL) US NUCLEAR REGULATORY COMMISSION [REDACTED]	[REDACTED]	WG-3.4(S)

**NPEC Summary for Meeting 00-1**

1. NPEC met in Washington, DC on November 16-17, 2000.
2. NPEC is one of 17 technical committees and six (non-technical) standing committees that report to the IEEE Power Engineering Society (PES) Technical Council. The Technical Council is presently composed of the Chairpersons of the PES Technical Committees, plus the Chairpersons of Standing Committees and is chaired by the Power Engineering Society's Vice President of Technical Activities.

Technical Council met at the PES Summer Power Conference in Seattle. NPEC did not send a representative. The key item of discussion was restructuring of TC. The proposed restructure had been provided to the council members and significant resistance had been voiced. The council determined to lay the proposal aside due to the potential detrimental impacts and the members general view that it would not cure the ill of poor conference attendance.

3. Jim Tomas has replaced Mark Zar as Standards Coordinator and Paul Yanosy has replaced Mark as Subcommittee 6 Chair. The mergers of SC-3 and SC-8 and of SC-5 and SC-7 are now complete.
4. A special Certificate of Appreciation was provided to R. Paul Colaianni for invaluable and extensive technical contributions to the year 2000 revision of IEEE STD. 1205 based on his unique license renewal and electric cable age assessment expertise. Sal Carfagno received a Life long Achievement Award for his invaluable services of three decades.
5. New NPEC Officers for 2001 Chair – Neil Smith, Vice Chair – Jack Carter, Secretary – John Disosway. Brit Grim becomes Past Chair and Past-Vice Chair Scott Malcolm was unable to accept a nomination due to lack of funding for 2001.
6. SC-2 (Qualification) Report: IEEE Std 627 will be withdrawn. Because of extended delays, a new Chair of WG-2.0 has been appointed: Robert Smith of Duke Energy. Delays in hand over from prior Chair Carl Kunkel continue. The starting point for revising IEEE 344 has been the recommendation prepared by the Joint ASME-QME/IEEE-NPEC Special Working Group (SWG). A slightly revised version of the SWG document was prepared, which incorporates several comments received from SWG members. Coordination with the ASME-QME, to the extent practical, to maximize the benefit to users of these two standards. Some of the issues being facing are common to both groups. Having Don Moore and John Richards participate on our subcommittee because they are also on the ASME-QME committee facilitates this coordination.
7. SC-3 (OMA&T) Report: Results of SC- 3 questions of NPEC
  - Concurrence or approval on new requested name for SC-3 [Agreed]
  - Concurrence on intended approach for IEEE 336 [agreed that post mod testing guidance should be developed and included. New installation testing should be moved to an annex.]
  - Concurrence on criteria to be used for NPEC Goal 6. [Agrees with approach and that Goal 6 is not to include a review of Standards that per the scope statement do not include post-

8. SC-4 (Auxiliary Power) Report: IEEE 308 has been balloted (35 affirmative and 1 negative). IEEE 387 was balloted successfully for reaffirmation.

9. SC-5 (Human Factors & Reliability) Report: Lessons learned presentation – Earl Carnes and Bruce Breslau of DOE have requested that they be permitted to work on a lessons learned standard to be issued through IEEE. They will supply all working group resources. An email describing the project and the rationale for pursuing it will be forwarded to NPEC.

10. SC-6 (Safety Systems) Report: SC-6 is looking at the issue of EMI with respect to digital retrofits by revising IEEE 7-4.3.2 and with an Ad Hoc group which is addressing commercial grade dedication of digital devices.

12. Future NPEC Meetings:

01-01 will be in Stateline NV on March 5-7, 2001 - Jack Carter (lead).

01-02 will be in San Diego, CA on Nov 5-6, 2001 -Jay Forester (lead).

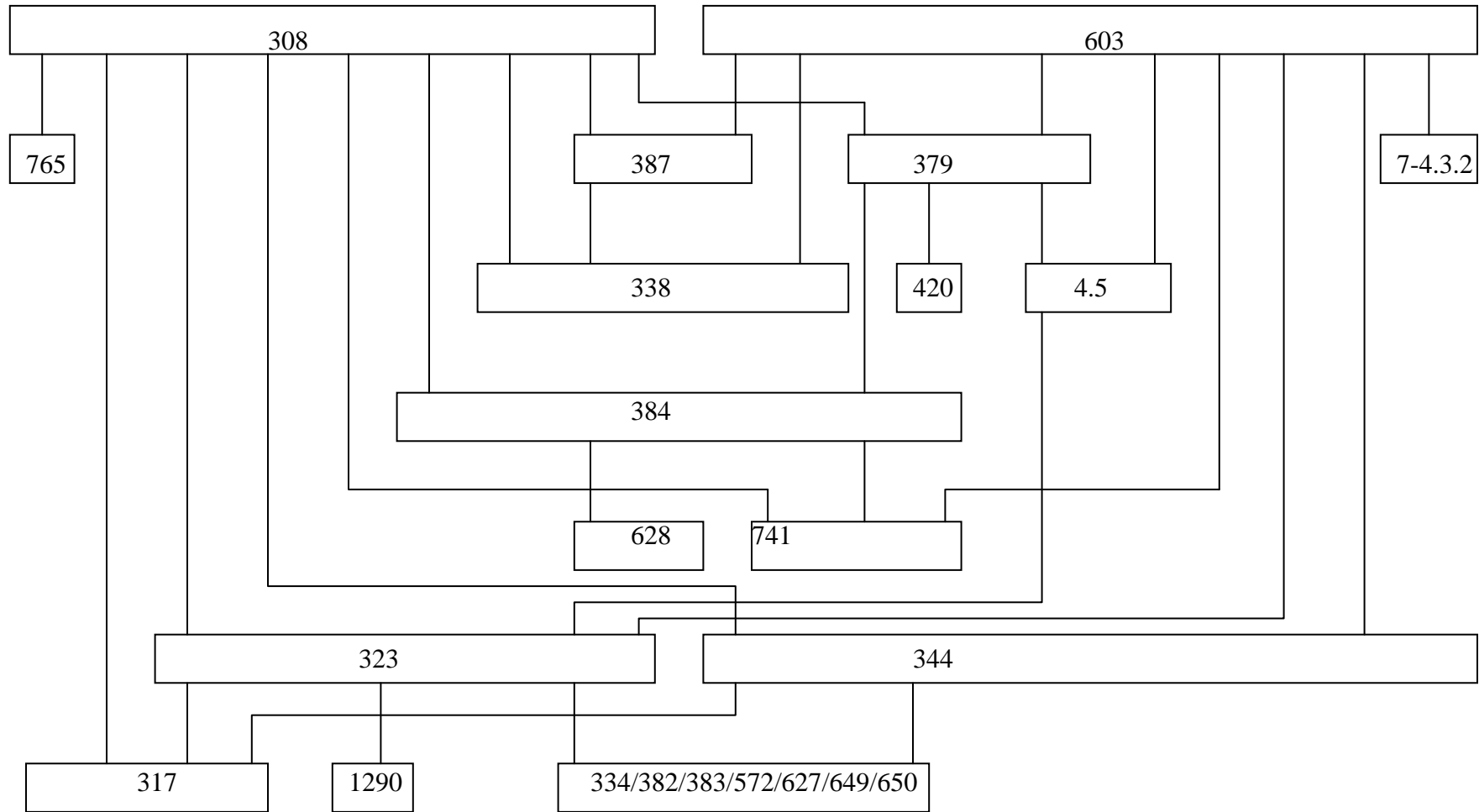
02-01 will be in South Carolina – Jim Thomas (lead)

02-02 will be in Monterrey – SC5 (Align with SC5 Conference on Human Factors in Power Plants) Sept. – Oct. timeframe

Prepared by

David A. Horvath  
SC-3 Chair

# Nuclear Power Engineering Committee – Standards Hierarchy (2-12-01 Draft)



**Not Used**

**Not Used**



**Not Used**

**Not Used**

**Not Used**