

July 8, 2005

MEMORANDUM TO: Michael D. Tschiltz, Chief  
Probabilistic Safety Assessment Branch  
Division of Systems Safety and Analysis  
Office of Nuclear Reactor Regulation

FROM: F. Mark Reinhart, Section Chief **/RA/**  
Operations Support and Licensing Section  
Probabilistic Safety Assessment Branch  
Division of Systems Safety and Analysis  
Office of Nuclear Reactor Regulation

SUBJECT: STAKEHOLDERS MEETINGS  
RISK MANAGEMENT TECHNICAL SPECIFICATIONS (RMTS)  
INTEGRATED, FLEXIBLE COMPLETION TIMES (CT)

To facilitate stakeholder interface with respect to proposed Risk Managed Technical Specifications Integrated Flexible Allowed Outage Times (Initiative 4b), the U.S. Nuclear Regulatory Commission (NRC) convened a series of meetings to discuss and understand the spectrum of views. The meetings covered four days on March 17 - 18, 2005, and May 3 - 4, 2005. Attendees included NRC staff and management, licensees, Electric Power Research Institute (EPRI), Nuclear Energy Institute (NEI), and the trade press. See Attachment 1 for a list of attendees. During the meetings attendees participated in open discussions on probabilistic risk assessment (PRA) scope, content, quality, and capability; Configuration Risk Analyzer capabilities and characteristics; risk principles, metrics, and criteria; risk management programs; integrated risk management decision making; and other related topics. See Attachment 2 for a list of categories of critical issues related to Initiative 4b. During the discussions, the group realized that it had a mutual understanding on many points and proposed options to consider for other points.

Key highlights of common understandings are summarized in the following lists. Primary areas of staff expectations, comments, concerns, and areas for additional discussion are indicated:

PRA Capabilities:

- Level 1 and Large Early Release Frequency (LERF)
  - Internal Events
  - External Events:
    - < Fire, Flood, Seismic, Severe Weather
    - < Impact Captured [**Model Preferred**] in Quantified Risk Informed Completion Times (RICT)

CONTACT: F. Mark Reinhart, NRR/DSSA  
415-1185

- Modes 1 and 2 [**Readdress Shutdown**]
- Assurance that Model Bounds Other Modes
- Containment Configuration Changes Captured
- All Significant Sequences Modeled
- Expectation to Satisfy Capability Category 2 (ASME PRA Standard)
  - < Exceptions Must be Justified
- Satisfies Available Standards and Guides that Address all Available Conditions
- Living, Maintained

Configuration Risk Analyzer Attributes to be understood with respect to the PRA:

- Event Initiators
- Truncation Levels
- Model Translation
- Software Control and Configuration
- Dependent Operator Actions
- Testing
- Fault Trees Traceable to PRA
- Model Alignment with Real Time Plant Configuration
- Component Mapping
- Uncertainties
- Configuration Risk Analyzer Aspects not in PRA
- Interface
- Defense in Depth
- Safety Margins

Areas of Staff Expectations, Comments, and Concerns:

- A benefit the staff expects from this initiative is that licensees will maintain an ongoing awareness of the risk of existing and changing plant conditions in near real time.
- Associated with the above expectation, the staff expects that licensees will assess and manage the integrated change of risk from deviations from the zero maintenance baseline core damage frequency and LERF. Such deviations could result from being in multiple technical specifications CTs as well as from non-technical specifications non-functional components. Accordingly, a licensee may find that a RICT from multiple technical specifications inoperabilities is shorter than any one of the related original CTs (or “Front Stops”).
- With respect to the PRA scope regarding MODES, the staff has some concerns about licensee discipline applied to shutdown operations and potential future configurations in which the risk of continued operation would be assessed with respect to the risk of performing the same activity at shutdown and the risk of transitions.

- With respect to assessing the risk from external event initiators, the staff prefers that PRAs model the external events. Since internal flooding has been modeled by most licensees following the initial individual plant evaluations, the staff expects that internal event initiators would be modeled in the PRAs. Because of fire initiating events' very significant contribution to risk, the staff expects that they will be modeled in the PRAs. For plants that model seismic initiators, because of their location, etc., the staff expects that seismic initiators will be modeled in the PRAs. While the staff prefers that plants proposing Initiative 4b model the balance of external events, we will listen to reasonable contingencies.
- The staff does not consider it appropriate to license a flexible CT for a loss of function within a limiting condition for operation (LCO). The improved Standard Technical Specifications LCO 3.0.3 or shutdown tracks included in specific LCOs provide appropriate action.

Areas for Further Discussion:

- It was agreed that there is a distinction between equipment operability, as defined by technical specifications, and functionality. To accommodate this difference will require additional discussion.
- EPRI is revising their Risk Management Guidelines (RMG) to accommodate comments received before and during these meetings. Industry would like the staff to endorse the RMG as an acceptable basis for a licensee program to implement this initiative. Accordingly, the RMG appears to be on the critical path for the staff to review and approve and for a licensee to implement this initiative.

Attachments: As stated

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T. Martin

ADAM Accession #: ML051920232  
reinhardt\RMTS AOT MEETINGS SUMMARY MEMO.wpd NRR-096

<b>OFFICE</b>	NRR/DSSA/SPSB	NRR/DSSA/SPSB
<b>NAME</b>	MLaur	MReinhart
<b>DATE</b>	07/ 07 /05	07/ 08 /05

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## Attendee List

1. John Gaertner (EPRI)\*
2. Jim Liming (ABS)\*
3. Drew Richards (STP)\*
4. Wayne Harrison (STP)\*
5. Alan Hackerott (OPPD)\*
6. Ray Schneider (Westinghouse)\*
7. Wei He (PSEG)
8. Gabor Salamon (NMC)\*
9. Randall Best (NMC)
10. Rick Hill (GE)
11. Biff Bradley (NEI)\*
12. Don Hoffman (EXCEL)
13. Rick Grantom (STP)\*
14. Michele Laur (NRC)\*
15. Nick Saltos (NRC)\*
16. Millard Wohl (NRC)\*
17. Andrew Howe (NRC)\*
18. Donnie Harrison (NRC)
19. Marty Stutzke (NRC)
20. Selim Sancaktar (NRC)
21. Bob Tjader (NRC)\*
22. Tom Boyce (NRC)\*
23. Gareth Parry (NRC)\*
24. Mike Tschiltz (NRC)
25. Mark Reinhart (NRC)\*
26. Deanne Raleigh (Sciencetech)
27. Dusty Rhoads (Energy - Northwest)
28. Gary Chung (SCE)
29. Marie Pohida (NRC)\*
30. Bryan Carroll (Duke Power)
31. Leo Shanley (ERIN)\*
32. Stanley Levinson (AREVA)\*
33. Michael Phillips (Sciencetech)\*
34. Gene Hughes (EXELON)
35. Evelyn Wight (WPI)\*

\* Indicates that the attendee participated in the March and May meetings.

### Categorized Critical Issues

Item	Model Scope	Model Capability	PRA Model Configuration Control	Model Limitations	Risk Management
Bounding assessments	X				
Shared systems (between units)	X				
Whole plant versus single system	X				
Aggregation between internal/external & shutdown	X				
Shutdown	X				
Screened-out scenarios	X				
Scope	X				
Applicability	X				
Model detail	X				
Level II vs. LERF	X				
Seismic margins	X				
Instrumentation	X				
Operability versus functionality		X			X
Degraded equipment		X			X
Operable but degraded		X			X
Procedure-driven process		X			
Operator actions		X			
PRA capability determination		X			
PRA quality requirements		X			
QA		X			
Bases/software for success criteria (MAAP)		X			
MAAP		X			
Common cause		X			
ASME standards		X			
Capability commensurate with application		X			
Uncertainty		X			
PRA technical adequacy requirements		X			
Peer review		X			
Use of Reg Guide 1.200		X			
Truncation limit		X			
Independence of peer reviewers		X			
Graders (who)		X			
Use of consensus models		X			
Model credit for recoveries and repairs		X			
Cross-comparisons		X			
Data treatment (Plant-specific vs. generic)		X			
Model revisions			X		
Model errors			X		
Ensuring an as-built/as-operated PRA model			X		
Rectification			X		
Upgrade vs. update			X		
Compensatory measures				X	
Qualitative assessments				X	
Unanalyzed conditions				X	
Model completeness				X	