



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

WASHINGTON, D.C. 20555-0001

July 28, 2003

Mr. Biff Bradley
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

**SUBJECT: JULY 18, 2003: SUMMARY OF MEETING WITH RISK-INFORMED TECHNICAL
SPECIFICATION TASK FORCE (RITSTF)**

Dear Mr. Bradley:

The purpose of this letter is to transmit the summary of a meeting with the RITSTF. The meeting was held at the Tremont Boston Hotel in Boston, Massachusetts, on July 18, 2003.

Sincerely,

A handwritten signature in black ink, reading "Stewart Z. Magruder".

Stewart Magruder, Acting Section Chief
Technical Specifications Section
Reactor Operations Branch
Division of Inspection Program Management
Office of Nuclear Reactor Regulation

Enclosures:

1. Meeting Summary
2. Attendance List
3. Agenda
4. RITSTF Initiative Status
5. Acceptance Review Questions of RMTS Risk Management Guide
6. Initial Impressions of the STP LAR for the RMTS Initiative 4b Pilot & DG-1122 Pilot

cc w/encl: See attached page

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/RA/

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SUMMARY OF THE JULY 18, 2003, NRC/INDUSTRY MEETING OF THE RISK-INFORMED TECHNICAL SPECIFICATION TASK FORCE

The NRC staff met with the NEI Risk-Informed Technical Specification Task Force (RITSTF) on July 18, 2003, from 8:30 a.m. to 11:10 a.m. The meeting attendees are listed in Enclosure 2.

The agenda (Enclosure 3) consisted of discussions of the six active RITSTF initiatives. The RITSTF provided a summary of the status of the initiatives (Enclosure 4). Following is a brief description of the status of the initiatives in the order in which they were discussed.

Initiative 3, TSTF-359, Modification of mode restraint requirements of LCO 3.0.4 & SR 3.0.4: The staff published the final CLIP Federal Register Notice announcing availability of this change on April 4, 2003. The NRC staff attended the NEI workshop in Boston, on July 17, 2003, on implementation of initiative 3. The workshop was a success in that it provided a beneficial exchange of information between the industry and staff, and it was a useful educational forum.

Initiative 4b, Risk Informed CTs/AOTs: The NEI RITSTF provided a draft risk management guidance document and the CEOG single system pilot proposal, TSTF-424, on January 21, 2003. The STP pilot proposal in support of the DG-1122 Office of Research effort on PRA quality and this initiative was received in June. The NRC staff has commenced the review process for the RMTS Risk Management Guide, TSTF-424 and STP submittals. The staff provided acceptance review questions (Enclosure 5) regarding the RMTS Risk Management Guide, and initial impressions (Enclosure 6) of the STP Pilot submittal. A meeting will be scheduled in the near future to discuss the acceptance review questions of the RMTS Risk Management Guide.

Initiative 5, Relocation of non-safety SRs (5a) and relocation of all SR frequency requirements (5b) out of TS: The RITSTF is developing a white paper on Initiative 5b addressing staff concerns that this proposal may conflict with the requirements of 10 CFR 50.36. If an SR frequency is determined to be material to the 10 CFR 50.36 requirement for an SR, rulemaking may be necessary in order to proceed with this initiative.

Initiative 8a, Remove/Relocate non-safety and non-risk significant systems from TS that do not meet 4 criteria of 10 CFR 50.36: The RITSTF will interface with the NRC in the development of guidance and a methodology, based on NEI 00-04, for the application of the four criteria of 10 CFR 50.36. The RITSTF will develop a white paper on Initiative 8a, outlining the guidance and methodology for implementation, to be provided in the third quarter of CY 2003. NEI noted that the priority of Initiative 8b, on rule making, may need to be increased if an appropriate methodology cannot be found for Initiative 5b, or if other problems arise.

Initiative 1, TS Actions End States Modifications: On June 23, 2003, the staff sent a letter to the RITSTF detailing the revisions needed to CE TSTF-422 in order for it to be consistent with the staff's safety evaluation. The RITSTF does not agree with the information that the letter requests be placed in the TS Bases. A response to the letter will be sent to the staff and a subsequent meeting will be scheduled to resolve the issues. The BWR topical SER was issued on September 27, 2002. The BWR TSTF-423 is being developed and will be provided the staff after TSTF-422 issues are resolved.

Initiative 6, Modification of LCO 3.0.3 Actions and Completion Times: The RITSTF will provide responses to RAIs in July. The staff has the SER on the CEOG Initiative 6b/c submittal distributed for internal review. The RITSTF plans to submit a comprehensive TSTF-426 after receipt of the final SER.

Initiative 7, Non-TS support system impact on TS operability determinations: The RITSTF plans to submit TSTF-372, Revision 4, on snubber inoperability by the end of August. The staff provided comments regarding TSTF-427 to the RITSTF on June 26, 2003. The RITSTF is evaluating the comments.

The next NRC TSS/NEI RITSTF meeting is scheduled for October 9, 2003, at the NRC Headquarters in Rockville, MD. The NRC is hosting an Operability Workshop, to update Generic Letter 91-18, on August 14, 2003, at the NRC Headquarters in Rockville, MD.

**NRC/INDUSTRY MEETING OF THE
RISK-INFORMED TECHNICAL SPECIFICATION TASK FORCE ATTENDANCE LIST
JULY 18, 2003**

<u>NAME</u>	<u>AFFILIATION</u>
TONY PIETRANGELO	NUCLEAR ENERGY INSTITUTE
BIFF BRADLEY	NUCLEAR ENERGY INSTITUTE
DON HOFFMAN	TSTF/EXCEL SERVICES
JIM ANDRACHEK	WESTINGHOUSE/WOG
MIKE KITLAN	DUKE ENERGY
JACK STRINGFELLOW	SOUTHERN NUCLEAR OPERATING COMPANY
J. E. DUSTY RHOADS	ENERGY NORTHWEST/BWROG
DREW RICHARDS	STP NOC
STANLEY LEVINSON	FRAMATOME-ANP
DON McCAMY	BWROG/TVA
GARY CHUNG	SONGS, SCE
TONY BROWNING	NMC-DUANE ARNOLD
BERT MORRIS	TVA-BROWNS FERRY/BWROG
THOMAS R. BYRNE	OMAHA PUBLIC POWER DISTRICT
STU MAGRUDER	NRC/NRR/DIPM/IROB/TSS
T. R. (BOB) TJADER	NRC/NRR/DIPM/IROB/TSS
KERRI KAVANAGH	NRC/NRR/DIPM/IROB/TSS
CRAIG HARBUCK	NRC/NRR/DIPM/IROB/TSS
CARL SCHULTEN	NRC/NRR/DIPM/IROB/TSS
MIKE TSCHILTZ	NRC/NRR/DSSA/SPSB
NICK SALTOS	NRC/NRR/DSSA/SPSB
MARK CARUSO	NRC/NRR/DSSA/SPSB

AGENDA

**TSB/NEI RITSTF MEETING
JULY 18, 2003
AT TREMONT BOSTON HOTEL, BOSTON, MASSACHUSETTS**

- **Status of Initiatives**
 - **Initiative 3, LCO 3.0.4 & SR 3.0.4 (Mode Restraint) Flexibility**
July 17, 2003 Workshop on Implementation of Initiative 3
Adoptions
 - **Initiative 4b, RI AOTs with CRMP**
RMTS Risk Management Guide
CE Pilot, TSTF-424
STP Pilot
- **Public Questions and Discussion**
- **Initiative 5, STI Evaluation Methodology**
- **Initiative 8a, Remove/Relocate non-safety & non-risk significant systems from TS**
- **Initiative 1, End States**
CEOG TSTF-422 Feedback
BWROG TSTF-423 Status
- **Initiative 6, LCO 3.0.3 Actions and Completion Times**
CEOG Final SER
- **Initiative 7, Non-TS Support System Inoperability Impact on TS System & TSTF-372**
- **Public Questions and Discussion**
- **Schedule Next Meeting**
- **Closing Comments**

**RISK INFORMED TECHNICAL SPECIFICATION TASK FORCE (RITSTF)
RISK MANAGEMENT TECHNICAL SPECIFICATION INITIATIVE STATUS**

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
1	Technical Specification Required Actions Preferred End States	<ul style="list-style-type: none"> NRC provided comments on TSTF-422 on 6/23/03. TSTF developing revision. TSTF-423 to be submitted to NRC in 8/03. 	<ul style="list-style-type: none"> TSTF developed a list of needed changes to TSTF-422 based on NRC comments. List created and discussed at the 12/18/02 RITSTF meeting. TSTF-422, Rev. 1 was submitted to the NRC on 1/24/03. The NRC provided comments on TSTF-422 on 6/23/03. The RITSTF is developing responses and will set up a meeting with the NRC to discuss what should be in the TSTF in early August 2003. The final TSTF will be submitted by 9/03 and the NRC plans to have it in CLIP by 11/03 The BWROG SE was issued 9/27/02 and the BWROG Topical A version was issued in 2/03. TSTF-423 is undergoing industry review. Scheduled to be submitted to the NRC 8/03 after resolution of TSTF 422 issues. 	<p>CEOG - TSTF-422 R0</p> <p>BWROG - TSTF-423 R0 <i>(Being Developed)</i></p> <p>BWOG - TSTF-431 R0 <i>(Not created)</i></p> <p>WOG - TSTF-432 R0 <i>(Not created)</i></p>

Enclosure 4

NEI Biff Bradley, 202 739-8083
Tony Pietrangelo, 202 739-8081
EXCEL Don Hoffman, 301 984-4400
EPRI Frank Rahn, 650 855-2037
John Gaertner, 704 547-6169

NEI RITSTF

WOG Jack Stringfellow, Southern Nuclear, 205 992-7037
Jim Andrachek, Westinghouse, 412 374-5018
Jerry Andre, Westinghouse, 412 374-4723
BWOG Noel Clarkson, Duke, 864 885-3077
R. Schomaker, Framatome, 434 832-2917
Mike Kitlan, Duke, 704 373-8348

CEOG Alan Hackerott, OPPD, 402 533-7276
Gary Chung, SCE, 949 368-9431
Ray Schneider, CE, 860 731-6461
BWROG Rick Hill, GE, 408 925-5388
Dusty Rhoads, Energy Northwest, 509 377-4298
Don McCamy, TVA 256 729-4595

RITSTF INITIATIVE STATUS

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
2	Missed Surveillances SR 3.0.3	<ul style="list-style-type: none"> TSTF-358, R6, has been approved and published for CLIP adoption. 	<ul style="list-style-type: none"> Initiative Complete 	TSTF-358 R6
3	Increase Flexibility in Mode Restraints LCO 3.0.4	<ul style="list-style-type: none"> TSTF-359, R9, has been approved and published for CLIP adoption. NEI sponsored an Industry workshop on July 17 to discuss implementation of TSTF-359. The final Implementation Guidance will be issued by 8/31/03. 	<ul style="list-style-type: none"> Initiative Complete. 	TSTF-359 R9
4a	Individual Risk Informed Allowed Outage Times (AOTs)	<ul style="list-style-type: none"> Individual Owners Groups (OGs) and plants are pursuing individual Risk Informed AOTs through Topicals and license amendments. 	<ul style="list-style-type: none"> Ongoing 	Various

RITSTF INITIATIVE STATUS

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
4b	Risk Informed AOTs With Configuration Risk Management Program or Maintenance Rule Backstop	TSTF-424 and the Draft Risk Management Guide were provided to the NRC on 1/21/03.	<ul style="list-style-type: none"> • RITSTF has coordinated with South Texas Project (STP) to integrate the generic Initiative 4b and the STP approach • TSTF-424 and the Draft Risk Management Guide were provided to the NRC on 1/21/03. • The STP application was provided as a letter of intent. • NRC has formed a Task Action Plan to determine action and schedule for review. • NRC provided acceptance review comments on the Risk Management Guide on 7/15/03. • NRC provided initial impressions on the STP pilot at the 7/18/03 RITSTF/NRC meeting. • CEOG and NRC to schedule meeting to discuss the Risk Management Guide. 	TSTF-424 R0
5a	Relocate Surveillance Requirements Not Related to Safety	<ul style="list-style-type: none"> • Deterministic portion of Initiative 5 transferred to TSTF responsibility. 	<ul style="list-style-type: none"> • TSTF reviewing candidate SRs to be relocated. • TSTF will provide a TSTF to the NRC by 12/03. 	None assigned

RITSTF INITIATIVE STATUS

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
5b	Relocate Surveillance Test Intervals to Licensee Control	<ul style="list-style-type: none"> • RITSTF/BWROG/Pilot Plant will be applying the methodology and interfacing with the NRC on the issues in 2003. • RITSTF to address NRC position that Surveillance Test Intervals must be in the Technical Specifications 	<ul style="list-style-type: none"> • NRC provided a new position regarding Surveillance Test Intervals at 5/15 RITSTF/NRC meeting. NRC stated that test intervals required to be in Technical Specifications under 10 CFR 50.36. It may be acceptable for the Technical Specifications to contain a methodology rather than a fixed interval. • RITSTF to address NRC position that Surveillance Test Intervals must be in the Technical Specifications and provide a White Paper to the NRC by 8/31/03. • RITSTF to provide the Draft Technical Guidance Document and the draft TSTF on a schedule to be determined with the NRC. • BWROG has identified two pilot plants and will develop a draft Traveler based on the application of the methodology. BWROG will attach the Guidance Document to the TSTF. • Pilots are currently scheduled to be submitted to NRC in 1/04 • TSTF-425 to be submitted to NRC in 1/04 	TSTF-425 R0 (Not created)

RITSTF INITIATIVE STATUS

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
6a	Modify LCO 3.0.3 Actions and Timing 1 hour - 24 hours	<ul style="list-style-type: none"> On hold. 	<ul style="list-style-type: none"> On hold for resolution of Initiative 6b and 6c to determine if Initiative 6a is required. 	None assigned
6b	Provide Conditions in the LCOs for Those Levels of Degradation Where No Condition Currently Exists to Preclude Entry Into LCO 3.0.3	<ul style="list-style-type: none"> NRC drafting Safety Evaluation. 	<ul style="list-style-type: none"> CEOG to provide revised version to address the RAIs to NRC in 7/03. NRC will finalize the SE based on the CE responses. CEOG to provide a list of ISTS changes and justification to TSTF after NRC completes Safety Evaluation. TSTF to prepare and submit TSTF-426 to NRC after receipt of NRC SE and receipt of information from CEOG. Current schedule for TSTF to NRC is 11/03. 	TSTF-426 R0 (Not created)

RITSTF INITIATIVE STATUS

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
6c	Provide Specific Times in the LCO For Those Conditions That Require Entry Into LCO 3.0.3 Immediately	<ul style="list-style-type: none"> NRC drafting Safety Evaluation. 	<ul style="list-style-type: none"> CEOG to provide revised version to address the RAIs to NRC in 7/03. NRC will finalize the SE based on the CE responses. CEOG to provide a list of ISTS changes and justification to TSTF after NRC completes Safety Evaluation. TSTF to prepare and submit TSTF-426 to NRC after receipt of NRC SE and receipt of information from CEOG. Current schedule for TSTF to NRC is 11/03. 	TSTF-426 R0 (Not created)

RITSTF INITIATIVE STATUS

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
7a	Impact of Non Technical Specification Design Features on Operability Requirements - Barriers	<ul style="list-style-type: none"> • NRC provided comments on TSTF-427 on 6/26. • TSTF, SNUG, and NRC met on TSTF-372 on June 16. SNUG gathering information and TSTF drafting revised Traveler. 	<ul style="list-style-type: none"> • Draft Revision 4 of TSTF-372 created on 2/24/03. NRC reviewed and agreed it addressed their comments. Draft being reviewed by TSTF, RITSTF, and Snubbers Users Group (SNUG). • TSTF, Snubbers User Group (SNUG), and NRC met to discuss TSTF-372 on June 16. SNUG gathering information and TSTF drafting revised Traveler. Schedule is to advise the NRC by 8/03 of the Industry plans for TSTF 372. • Draft Traveler for Initiative 7a (TSTF-427) drafted for discussion with the RITSTF on 12/18/02 and NRC 12/19/02. • TSTF-427 transmitted to NRC on 3/4/03. • NRC provided comments on TSTF-427 on 6/26/03. RITSTF evaluating comments. 	<p>TSTF-372 R2</p> <p>TSTF-427 R0</p>

RITSTF INITIATIVE STATUS

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
7b	Impact of Non TS Design Features on Operability Requirements – All other SSCs not in Technical Specifications	<ul style="list-style-type: none"> A White Paper on the process to address this scope of SSCs is being developed. 	<ul style="list-style-type: none"> RITSTF will develop a White Paper to outline the process to address this scope of SSCs by 12/03. RITSTF/TSTF will work with the NRC on a risk informed revision of GL 91-18 and integrate the Initiatives. There is an Operability/GL 91-18 Workshop on 8/14/03 to discuss these issues. RITSTF/TSTF will develop a TSTF and submit to NRC by 2/04. 	None assigned
8a	Remove or Relocate Systems LCOs That Do Not Meet the 4 Criterion of 10 CFR 50.36 From Technical Specifications	<ul style="list-style-type: none"> A White Paper on the application of the 10 CFR 50.36 criteria is being developed. 	<ul style="list-style-type: none"> NEI 00-04 is being reviewed and will serve as the basis for Criterion 4 application. RITSTF will develop a White Paper to outline the guidance and methodology based on NEI 00-04 for the application of the four criteria of 10 CFR 50.36 and a list of the systems identified for relocation. RITSTF working on the schedule – current plans are third quarter 2003. 	None assigned

RITSTF INITIATIVE STATUS

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
8b	Modify 50.36 Rule to Permit Removal or Relocation of Non Risk Significant Systems out of Technical Specifications	<ul style="list-style-type: none"> Requires Rulemaking 	<ul style="list-style-type: none"> RITSTF looking at coordinating Initiative 8b with longer term initiatives given the requirements for rulemaking. Approach favored by NEI and NRC is making Criterion 4 a "two way door" (e.g., if it doesn't meet Criterion 4, Specification can be relocated even if it meets Criteria 1, 2, or 3). 	Not applicable

BWOG - Active in Initiatives 1, 4 and 7

CEOG - Active in Initiatives 1, 4, 5 and 6

BWROG - Active in Initiatives 1, 4, 5 and 8

WOG - Active in Initiatives 1, 4, and 5

**NRC STAFF ACCEPTANCE REVIEW QUESTIONS
REGARDING RISK-MANAGEMENT TECHNICAL SPECIFICATIONS
NEI/RITSTF RISK MANAGEMENT GUIDE**

GENERAL COMMENTS

1. The document contains misspelled words. The treatment of acronyms is inconsistent; some acronyms are never defined others are defined after being used several times, and others are frequently defined. Punctuation needs improvement. The use of "i.e." and "e.g.," is not always correct and could cause confusion, especially in a guidance document meant to be followed by implementors throughout the nuclear power industry.
2. The implementation of the proposed RMTS approach needs to be justified in accordance with guidance provided in RG 1.177 and RG 1.174. Will the implementation of the proposed RMTS approach meet the guidance stated in these two regulatory guides? If the answer is yes, please discuss how such guidance will be met.
3. The topical report documenting the risk management guide was prepared by EPRI and CEOG for NEI. It needs to be clearly stated that the report is proposed for both CE and non-CE reactors. [page 1]
4. Presently the TS requirements are relatively easy to inspect. Unless the requirements for RMTS are clearly stated in the TS, the inspectors may have a difficult time verifying the implementation of flexible completion times. The TS should state that "the licensee's risk assessment and risk management actions must be in accordance with [Risk Management Guide, ---]." How does the RITSTF see the proposed risk management approach fitting into the regulatory framework and regulatory process?
5. Recommend that the guide be revised to address maintenance of equipment during: high demand months, bad weather, when electric demand is high, and other times of external vulnerability, such as plant vulnerabilities to terrorist attack.

COMMENTS CONCERNING CLARITY OF THE GUIDE

TERMS, DEFINITIONS, EDITORIAL CHANGES, and EXPLANATIONS REQUIRED

- 1.a. [pages 4, 5, 11, 26] Use of figures needs work. The static nature of figure 3-1 does not capture the dynamic nature of emergent conditions. For example, what happens when an emergent condition creates a configuration that is outside the modeling capability of the PRA so that calculation of a RICT is not possible? The discussion of determining a RICT under Process Description is hard to follow and could benefit from use of a diagram.
- 1.b. Page 11 flow chart:
 - i. first stop "RICT not required" - should it also read "not permitted"?
 - ii. who determines what makes a "qualified staff" to perform a RICT?
 - iii. "monitor configuration risk factors" - what is the frequency of this?

2. On page 17 and 18, it is stated: *"It is important to note that a RMTS program should not permit intentional, simultaneous disabling of all trains of any key safety function."* This sentence needs clarification. The sentence should state "It is important to note that a RMTS program SHALL not permit intentional, simultaneous disabling of all trains of all trains of any key safety system" and define a "key" safety system. Loss of function for key systems should be addressed outside this initiative.

3. Terms need to be better defined and explained; "functional" vs "operable", "degree of residual capability", "intended" vs "specified", "restored to service", "key safety function", "RMTS tool" vs "quantitative risk assessment tool", etc.

4. A clear definition should be provided in Appendix A for the terms "front-stop" and "back-stop."

5. Page 16 - item 2 of section 3.4.2 states "...to shutdown and maintain the reactor in a safe shutdown condition...." Define the "safe shutdown condition" and show its relationship with LCO 3.0.3 of the STS, related to the shutdown end states. Discuss the interrelationship of this initiative with Initiative 6 on modifying TS 3.0.3.

6. Review the entire document to ensure that when a given direction is imperative, it utilizes an appropriate word, such as, "shall."

7. In some places it says "fire, seismic, and or flood" (p.8); "fire, floods, and external flooding" (p.22). Other places it says "external events" should be considered, which I would include hurricanes, tornados, local events (e.g., fire at near-by plant). Others places just says "initiating events" without calling out external events (p.12). Please re-check document to be consistent or are events limited to just the listed events?

8. Pages 14/15 add bullet to include "industry experience"

9. Page 32 2nd paragraph states that "...Additional discussion on these features is presented in Section 5.3." Section 5.3 is missing.

10. Page 3: a. What is the implication of, "The RMTS . . . will not change the manner in which plant design parameters are controlled."?

11. Page 4: a. How is risk "justified"?
b. How is "Guidance for continuing maintenance beyond the CT" tracked; recommend rewording sentence to make clear that it is the continuing maintenance beyond the CT that is tracked and not the guidance?

12. Page 5: a. How do you "enter a front-stop CT"; recommend clarifying sentence to explicitly state that it is the LCO Condition and Required Actions that are being entered?
b. What does this mean: "Note at intermediate risk levels plant actions will escalate to be commensurate with the projected risk."?
c. The rest of Section 2 appears to be leftover paragraphs that had been written but found no acceptable home in the document; coherence is needed.

- d. Note that the NRC has never endorsed Reference 3, which is revision 3 of NEI's guidance for implementation of the maintenance rule. NRC has endorsed revision 2 of NUMARC 93-01 plus a revised Section 11 dated February 22, 2000. Comment also applies to page 33.
13. Page 6:
- a. How do you "assess and manage the risk impact incurred from plant configuration risk management"?
 - b. It appears that what is being said is that "the (a)(4) process involves a greater reliance on PRA methods and insights in establishing and planning maintenance activities" than implementation of the RMTS will require; when what is meant is the inverse; recommend rewording.
14. Page 7:
- a. What is an "RMTS tool"?
 - b. What is the meaning of, "The assessment then requires . . . performance of a risk assessment"? Recommend rewording for clarity.
15. Page 8:
- a. In (2) .. How do you perform a "risk assessment of the inoperability"? Clarify.
 - b. In (2) .. Same sentence .. That is done to "justify continued power operation beyond the front-stop." Suggest adding the "determination of the feasibility of continued power operation etc."?
 - c. In (3) the word "manage" is misspelled and a comma is missing after "manage risk".
 - d. In (4) .. The time line seems reversed: AFTER entering the extended CT, THEN re-perform the risk assessment?
 - e. The first three sentences of the paragraph beginning at the bottom of the page need clarity.
16. Page 9:
- a. Agree that the risk assessment "shall" be documented.
 - b. How will be the risk assessment be documented and what will be in the documentation?
17. Figure 3-1:
- a. 3rd box text is incomplete.
 - b. **SIGNIFICANT ISSUE:** How are "Qualified Staff" selected/determined/etc. This is a significant issue with respect to all uses of risk assessment.
 - c. How do you "perform" an "RICT"?
 - d. Next oval .. Who is qualified to "review and approve RICT assessment"?
 - e. Time line. Is it appropriate to "implement configuration" before "establish risk management actions"?
 - f. Next oval .. What are the risk factors to be monitored?
 - g. The "Yes" words on the decision branches are illegible.
18. Page 13:
- a. In 9 .. Define "promptly" as in "promptly restored to service". Comment also applies to page 28.
 - b. **UNACCEPTABLE:** "In these cases, the assessment may consider the time necessary for restoration of the SSC's function, with respect to the time at which performance of the function would be needed." This issue caused major problems in maintenance rule space. However, the technical specifications were always considered a safety net or backstop to the application of this logic. It now appears that the RMTS

- program is removing that safety net to the benefit of the plant operators and to the potential detriment of safety.
- c. In 10 .. "Procedural guidance should be provided to specify the appropriate completion time for reassessing the risk." To be provided when and by whom? - -
19. Page 14: a. What are "equipment maintenance configurations"? Clarify.
b. Next sentence .. What does this mean: "... SSCs that have or could have front-stop CT requirements imposed" (emphasis added)
 20. Page 15: a. Second bullet .. How are the dependencies modeled to ensure adequacy the assessment?
b. Fifth bullet .. If the process is available, should it not also be used?
 21. Page 18: a. There are no maintenance rule "requirements to establish and meet SSC performance criteria." Such aspects of implementing the rule come from NEI guidance and are not required by the rule.
b. How can one observe "actual temporary risk impacts"?
c. The statement that "Risk management can be effectively accomplished by using qualitative insights from the PRA" is not always true.
 22. Page 19: The statement that "Qualitative methods to establish risk management actions would generally be necessary to address SSCs not modeled in the PRA, and for shutdown conditions." May better be modified to acknowledge that many licensees have PRAs that function for shutdown conditions.
 23. Page 20: a. The phrase, "which events cause the risk level," needs to be clarified.
b. The parenthetical phrase, "i.e., in a weekly maintenance plan," indicates that the only way maintenance can be "intentionally and deliberately pre-scheduled" is through such a "weekly maintenance plan." True?
 24. Page 21: a. The erroneous statement is made that, "The quantitative risk acceptance guidelines presented in Table 3-2 are consistent with NRC Maintenance Rule (a)(4) guidance." Quite different.

<u>Table 3-2</u>		<u>NUMARC 93-01</u>
	(Risk Acceptance Guidelines)	(Risk management actions)
>10-3/yr	Config risk not voluntarily entered	Careful consideration before entering config
>10-5 C.R. not voluntarily maintained(?)		Config should not normally be entered voluntarily
>10-6 (words make no sense*)		Take risk mgmt actions
<10-6 (words make no sense*)		Normal work controls

* How can "risk" be greater than "time"???

25. Page 23: a. What is the meaning of "RMTS thresholds"?
b. On this page it is stated, "Risk management actions should be considered for plant configurations whose instantaneous and cumulative risk measures are predicted to approach or exceed RMTS thresholds." It sounds unacceptable; clarify. Compare with Page 24, where it says: "Controlled plant shutdown should be considered for plant configurations whose instantaneous and cumulative risk measures are predicted to exceed RMTS thresholds." Which sounds contradictory.
26. Figure 3-2: a. Define when "operating risk" is "unacceptably high."
b. Define when "projected integrated risk to complete" is "acceptable."
c. Define criteria in determination of "SD risk compensate benefit for increased operational risk?" [Explain the figure.]
27. Page 27: a. In 3.6.1 ... The last sentence is misleading. No (a)(4) assessment is required at the time of establishing the compensatory measure, but one IS required before performing the maintenance to address the degraded or nonconforming condition.
b. In 3.7.2 .. Last line .. "shall" or "must" vice "should."
28. Page 38: The definitions of "functional" and the phrase "as modeled in the plant-specific PRA" need to be clarified.
29. Page 40: The definition of operable is almost the same as the NRC/TS definition; the word "and" has been replaced with "or" in two places; why?
30. Page 43: a. As a matter of record, the pre-1999 versions of the maintenance rule DID NOT require licensees to assess and manage risk, as the rule does today.
b. The statement that "This rule requires that a "risk assessment" be performed prior to voluntary entry into a maintenance configuration . . ." is erroneous. The rule requires a risk assessment before performing maintenance activities, regardless of configuration or whether equipment will be taken out of service.
c. Once again, the "guidance for satisfying the requirements of this rule provision is defined in Section 11 of NUMARC 93-01 (Reference 3) and has been endorsed by the NRC" Note: the NRC has not endorsed Reference 3.

COMMENTS CONCERNING IMPLEMENTATION

TIMES

1. [pages 4, 8, 10, 13, Table 3-1] Times for performing risk assessments need a rational basis. Why 24 hours for emergent conditions; why not 6 hours or less; why not minutes? How is [6] hour "re-assessment" time limit implemented? Why 30 days for the backstop time; what precludes a NOED at that point?
- 1.b. Page 5 - 3rd paragraph discusses the recalculation of the RICT for a changes maintenance configuration. An example of 24 hours is used as acceptable time to complete the RICT

recalculation. Provide the basis for the acceptable required time to complete the RICT recalculation and address the risk significance of the duration of the recalculation time during which the original target RICT is exceeded.

1.c. On page 10, Table 3-1 third column, it is stated that licensees will verify that the completion time extension is acceptable "In accordance with the RMTS Program (i.e., within 24 hours of a subsequent configuration change." This statements needs to be revised to distinguish between voluntary and involuntary (emergent) configuration changes. For voluntary configuration changes, the acceptability of the extension (or continued extension) should be verified before entering the new configuration. For emergent configuration changes, such acceptability should be verified expeditiously (e.g., within one hour) to ensure that it is safe to operate the plant at the current configuration until a more detailed risk assessment is performed. A longer period (e.g., 24-hours) can be allowed to perform and document a more detailed risk assessment.

1.d. The staff feels that 30-day completion time is a very long time for an equipment to be inoperable. The guide should provide the basis for establishing a maximum of 30-day completion time. The staff believes that most of the maintenance and repairs on the safety equipment can be accomplished within 14 days (based on industry experience a complete overhaul of a diesel generator can be accomplished within 14 days). Consideration need be given to restoring compliance with such GDCs as 17, 34, and 35, and to single failure criteria as soon as practical when determining the appropriate completion time.

1.e. The staff feels that the unavailability of the safety equipment would increase with the proposed completion time of 30 days. How would this increase in unavailability satisfy the requirements of maintenance rule regarding minimizing unavailability of safety systems.

1.f. Has any consideration been given to Nuclear Power Plant security, in light of the recommended long completion times? Shouldn't the guide provide guidance on what measures the licensees should take in order to protect the plant equipment during this period?

1.g. On page 28, Testing, it is stated that " SSCs out of service for testing are considered unavailable, unless the test configuration is automatically overridden by a valid starting signal, or the function can be promptly restored..." The guide should define " promptly," such as "within 5 minutes". It is not clear what promptly means here.

2. [page 15] Existing completion time (front-stop time) provided in the TS may not be conservative for certain plant configuration (maintenance activities on multiple SSCs). Table 3-1 suggests that the licensees have to verify only the time beyond the front-stop completion times. The licensees have to do a risk assessment for the configuration they are in to validate the completion time. The approach of this process seems to be based on the assumption that all completion times specified in the existing technical specifications are conservative.

PRA QUALITY, RISK ASSESSMENT PROCESS and RISK MANAGEMENT

1.a. [pages 13, 14] PRA Quality considerations need to be defined; depth/rigor "commensurate with complexity of plant configuration"; qualitative vs quantitative vs blended risk assessment

requirements need to be explicit. Shouldn't level 3 ASME PRA standards be required for technical specification work rather than level 2? What is more important than operational safety?

1.b. Page 4 - 2nd paragraph states that "...The assessment should be performed...and supported by a plant...(PRA) and other risk management tools...." Provide examples to illustrate what are the "other risk management tools" that may be used, and address their acceptability for use in risk assessment to support the risk management guide discussed in the topical report.

1.c. How will TS on systems that do not contribute to CDF or LERF be addressed; will this process apply (e.g., SFP)?

1.d. Page 14 - Last paragraph states "... The PRA should meet ...industry standards...(See References)...." Where applicable, list the documents or letters by which the NRC either endorses or accepts the cited references in support of an acceptable plant PRA for use in the risk management guide.

1.e. Page 22 mentions "plants without external events PRAs," how broad of a spectrum are we allowing in term of quality or completeness of PRA to apply the RMTS? .

1.f. Page 22 states that "plants must appropriately consider the issue of uncertainty" - who determines appropriateness? What guides are available to ensure industry uniformity?

2.a. [pages 4, 8] How does risk assessment of (a)(4) differ from risk assessment of "inoperability"/for determining appropriate CT? Says the assessment process will be "three tiered" but the tiers are not discussed. Guidance needs to be more detailed and explicit.

2.b. [page 7] Is there a limit to the number of changes allowed in a given period of time, such that a qualitative understanding of the risk is known?

3.a. [pages 15, 16] It is not evident what decisions or actions the quantitative and qualitative considerations discussed refer to or how they relate logically (to the unspecified action or decision). What acceptance criteria will the results of these considerations be tested against? Qualitative Consideration 1 and 3 seem to be redundant since they both address impact on "key safety functions."

3.b. [page 21] The staff fully supports and expects that RMTS Quantitative Risk Acceptance Guidelines will be implemented that include both instantaneous and cumulative performance indicators, and used to assess risk management as an element of a unit's annual NRC assessment.

3.c. [pages 5, 19, Figure 3-2] Why are acceptance guidelines of RG 1.177/1.174 not used? They seem entirely appropriate for this TS application. For example, RG 1.177 acceptance guidelines for a completion time change are an ICCDP of less than $5.0E-7$ and an ICLERP of $5.0E-8$ or less, are apparently not considered.

3.d. Page 20 -Item 2 states that "[q]uantitative risk acceptance guidelines...are presented in Table 3.2...." Discuss the acceptability of the proposed acceptance risk guidelines in Table 3.2 for use in the RMST risk analysis.

4. On page 18, it is stated: *"Plants that implement RMTS should develop measures to assess the aggregate risk with respect to its estimated impact on the average baseline risk. This could be accomplished through a periodic assessment of previous out-of-service conditions. Such an assessment may involve quantitatively estimating cumulative risks or may involve a qualitatively assessing the risk management approach employed versus the actual temporary risk impacts observed."* The staff believes that guidance is needed on developing and using "measures to assess the aggregate risk with respect to its estimated impact on the average baseline risk" based on RG 1.174 criteria. Also, clarification is needed on how "a qualitative assessment of the risk management approach versus the actual temporary risk impacts" can be used to ensure that the plant's baseline risk will not increase by the implementation of the proposed RMTS program.

5. On page 7, it is stated: *"In performing the RMTS assessment, the decision making process may optionally include consideration of transition risks associated with mode changes."* Does this statement imply a quantitative consideration? The staff believes that for a quantitative consideration of "transition" risks, licensees will need appropriate models to ensure that the credit taken for avoiding transition risks (by continued operation at power) is not overestimated.

6. On pages 6 and 7, items 1 to 4, several attributes that the RMTS process should have (in addition to MR (a)(4) attributes) are listed. These attributes relate to the development of procedures and guidance for implementing the RMTS process. For example, it states that the RMTS process shall *".... Be documented in plant procedures delineating appropriate responsibilities for (a)(4) related actions,"* and *"Include guidance for using risk insights to manage overall plant risk."* Are these "attributes" explained in the RMTS Risk Management Guide? Who is going to develop such procedures and guidance?

7. On page 5, it is stated: *"Consistent with the maintenance rule a target RMTS configuration risk would be a configuration ICDP of 1E-6 (as measured from entry into the RMTS). For emergent conditions (or forced, unplanned extension of planned maintenance) a maximum RICT equivalent to an ICDP of 1E-5 is identified."* It is not clear why an ICDP of 1E-6, measured from entry into the RMTS, is consistent with the maintenance rule. It appears that if the ICDP were measured from the time the component is taken out for maintenance, the ICDP could be significantly above the 1E-6 target for "normal work controls." Also, the exact meaning of the statement "forced, unplanned extension of planned maintenance" needs to be clarified. Is the underestimation of the time needed to perform maintenance on certain systems included in this statement? It appears that only one such case per year is likely to cause a significant increase in the plant's baseline risk. What would prevent licensees to use all allowed CT (front-stop), overestimate the maintenance they can perform within the RICT, and then use the "forced, unplanned extension of planned maintenance" clause to further extend the RICT? How will this scenario be controlled, especially when cumulative risks may not be always assessed quantitatively?

8. On page 15 it is stated: *"Removal of a single SSC from service for longer than its front-stop CT, or simultaneous removal from service of multiple SSCs for longer than the resulting most limiting front-stop CT, requires an assessment using blended ... methods."* Does the phrase "simultaneous removal from service of multiple SSCs for longer than the resulting most limiting front-stop CT" imply use of (a)(4)? An investigation may be needed to determine whether there are any interface issues between (a)(4) and RMTS program applied before and after the CT extension, respectively.

9. Explain why the required PRA levels are different for the cases discussed in the following statements. Clarify any inconsistencies as necessary.

- page 6 - 3rd paragraph states that "...The scope of the maintenance rule includes SSCs from plant Level 1 PRA...."

- page 8 - 3rd paragraph states that "...For emergent (unplanned) conditions,... PRA results should be based on PRAs with minimum Levels 1 and 2 attributes...."

- page 30 - 2nd paragraph states that "...Ideally, this supporting PRA is a full scope Level 2 or 3 PRA...."

10. Page 13 #10 - are all PRA performed prior to action except emergent conditions? Risk assessment guidance for emergent condition should be consistent with (a)(4) guidance?

11. Pages 14/15 - what about updates to information, including industry experience? At what frequency should they be updated?

12. Risk assessment and/or risk management actions to justify an extension of a completion time or validate an existing completion time shall be documented.

13. The guidance document should specify the SSCs that must be considered for the risk assessment. This should also be addressed in TS bases. The existing guidance states that "...the risk informed assessment scope may be limited to the following scope....".

14. In general, configuration risk is now controlled to a large degree by fixed allowed outage times in current STS, and NRC review and approval of any proposed temporary extensions to completion times. Under the approach proposed in the Risk Management Guide, configuration risk would be controlled to a large degree by the licensees risk management practices. Will guidance be provided on how licensees can monitor and report the overall change in plant risk associated with extending outage times under a RMTS 4b program to ensure that any increase is acceptably small? If so, what quantitative and qualitative criteria will be used to determine the acceptability of the licensees performance in implementing risk management? If not, why not?

**INITIAL STAFF IMPRESSIONS OF THE STP LAR TO BECOME THE
RMTS INITIATIVE 4b, FLEXIBLE COMPLETION TIMES, FULL PLANT PILOT, AND
DG-1122 PRA QUALITY PILOT**

1. The submittal does not provide sufficient information to determine the acceptability of the STP PRA. It only provides a commitment to provide the necessary information at a future time. Justification that the licensee's PRA model is adequate to support the determination of completion times is needed.
2. No risk assessments were included in the information provided to support the proposed changes to the technical specifications described in Table 2. These assessments are needed to make a determination about the acceptability of the proposed changes. The staff expects such risk assessments to be submitted for staff review.
- 3.a. The submittal does not provide sufficient information to determine the acceptability of the proposed process to establish a risk informed technical specification required action completion time. The licensee's process is embodied in his configuration risk management program (CRMP); a detailed description of the CRMP is needed. Documentation regarding this program, associated procedures and analysis methods needs to be provided for review; a description of the licensee's risk assessment methods for determining appropriate completion times is needed.
- 3.b. Two CRMP "risk thresholds" are mentioned (on page 2). A "Non-Risk Threshold" of $1E-6$ ICDP and a "Potentially Risk-Significant Threshold" of $1E-5$ ICDP. It is stated that "The allowed outage time would be calculated as the time required for the cumulative risk associated with a plant configuration to cross the threshold [of ICDP equal to $1E-5$]." This statement may not be in agreement with industry's Risk Management Guide (Draft M) where a target and a maximum "risk-informed completion time (RICT)" are defined to distinguish between voluntary and involuntary (emergent) entries. The staff believes this is an important distinction.
4. It is stated (on page 2) that STP is proposing the establishment of a new TS 3.13 to determine risk-informed allowed outage times applicable to a number of identified LCOs (listed in Table 2). How were these LCOs selected? Why is the proposed change limited to these LCOs? TS 3.13 does not appear consistent with the Risk Management Guide proposed TS.
5. STP is proposing the incorporation of RITS Initiative 6 into Initiative 4b. The staff believes that any completion time (CT) extensions associated with complete loss of a system's function (all three trains inoperable) should be allowed only for emergent (involuntary) conditions and should be based on analyses approved by the staff (such as those reported in CE NPSD-1208 being reviewed by the staff for CEOG plants). Since STP is a special case (three redundant trains instead of the two usually present in other plants), the case with two trains inoperable could be incorporated in Initiative 4b provided STP performs analyses showing that the availability of one train of a specific system is capable of performing the function of that system. If more than one train is needed for certain accident conditions, then these conditions will need to be identified and analyzed. Analyses, such as the ones mentioned in Table 3, should be submitted for the staff's review.

6. It is stated (on page 1) that STP may consider the incorporation of RITS Initiative 7 into Initiative 4b. It appears that this proposal is a departure from the industry's approach (e.g., TSTF-427 and TSTF-372) regarding support system inoperability. Since there is no discussion of an approach, the staff cannot make any comments about this issue at this time. Incorporation of Initiative 7 into Initiative 4b needs to be discussed and justified.