



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

March 7, 2002

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

SUBJECT: FEBRUARY 27, 2002: 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 U.S. Nuclear Regulatory Commission offices in Rockville, Maryland, on February 27, 2002.

Sincerely,

A handwritten signature in black ink, appearing to read "R. L. Dennig", written over a horizontal line.

Robert L. Dennig, Section Chief
Technical Specifications Section
Operating Reactor Improvements Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Enclosures:

1. Meeting Summary
2. Attendance List
3. Agenda
4. RITSTF Initiative Status
5. Initiative 4b, Response to NRC questions on industry 4B paper

cc w/encl: See attached page

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/RA/

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DATE	03/6/2002	03/7/2002	

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Mr. Drew Richards
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Mr. Rick Hill
General Electric Nuclear Energy

Mr. Michael S. Kitlan, Jr.
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Mr. Noel Clarkson
Duke Energy Corporation

Mr. Donald Hoffman
EXCEL Services Corporation

Mr. Ted Book
Framatech-ANP

Mr. R. J. Schomaker
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Mr. J. E. Rhoads
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Ms. Deann Raleigh
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Mr. Ken Canavan
DS&S

Mr. Sam Chien
SCE

Mr. Gary Chung
SCE-SONGS

Mr. Courtney Smyth
PSEG Nuclear LLC

SUMMARY OF THE FEBRUARY 27, 2002, 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 February 27, 2002, from 8:30 am to 11:55 pm. The meeting attendees are listed in Enclosure 2.

The agenda (Enclosure 3) consisted of discussions of the seven active Risk Informed Technical Specification initiatives. The RITSTF provided a summary of the status of the initiatives (Enclosure 4), updated to reflect the meeting's progress. Following is a brief description of the status of the initiatives in the order in which they were discussed.

Initiative 1, TS Actions End States Modifications: The CE topical SER was issued on July 17, 2001. The BWR topical SER is in review and RAIs were issued on July 30, 2001. The RITSTF responded to the BWR SER RAIs on October 31, 2001; the RAI responses are undergoing staff review and the BWR topical SER is being written. A draft BWR topical SER will be provided the BWROG in March 2002, to allow the RITSTF to map the requirements and prepare the BWR TSTF-423. The RITSTF will provide the CE TSTF-422 by March 18, 2002. The CE TSTF-422 will not reflect every detail of the CE topical SER stipulations, but instead will rely upon the (a)(4) process to address some of the stipulations. The WOG will begin work on a topical when the CE TSTF has been approved.

Initiative 3, TSTF-359, Modification of mode restraint requirements of LCO 3.0.4: The RITSTF submitted the final TSTF 359, Revision 6, along with a revised analyses for the new systems tables for BWOG and WOG (the CE and BWR analyses were still applicable), on 22 February 2002, addressing the staff comments to the draft TSTF-359, Revision 6. The RITSTF did not include in TSTF-359, Revision 6, applicability to high risk systems (i.e., systems not on the tables), in response to NRC comments. The staff schedule is for the first CLIIP FRN to be published by May 1, 2002.

Initiative 5, Relocation of non-safety SRs (5b) and relocation of all SR frequency requirements (5a) out of TS: In September 2001, the staff provided draft RAIs to the RITSTF on the concept/white paper that they presented to the NRC at the last meeting. The staff and the BWROG will discuss by phone the draft RAIs. The BWROG will develop a Guidance Document and provide it to the NRC by May 31, 2002. After NRC review and acceptance of the Guidance Document, the RITSTF will prepare and submit TSTF-425.

Initiative 6, Modification of LCO 3.0.3 Actions and Completion Times: A CEOG submittal (on 6b/c) was received on January 24, 2001, and it was reviewed by the staff. RAIs were issued on May 9, 2001. A comprehensive TSTF-426, for all OGs, is planned to be submitted in September 2002.

Initiative 7, Non-TS support system impact on TS operability determinations: The RITSTF presented an enhanced white paper at the December 19, 2001 meeting. The NRC provided feedback to this enhanced white paper on January 25, 2002. The RITSTF submitted TSTF-372, addressing only snubbers, on January 14, 2002. The NRC staff will provide a disposition of TSTF-372 by May 1, 2002. A separate meeting will be held to discuss issues related to Initiative 7. The RITSTF will submit TSTF-427 to comprehensively address Non-TS support system impact on TS operability determinations, Initiative 7, subsequent to that meeting.

Initiative 8a, Remove/Relocate non-safety and non-risk significant systems from TS that do not meet 4 criteria of 10 CFR 50.36: NRC will provide guidance on application of Initiative 8a by April 30, 2002. The RITSTF will determine course of action for Initiative 8a, and inform the staff and provide a schedule by May 15, 2002.

Initiative 4b, Risk Informed AOTs, use of a configuration risk management program (CRMP): The RITSTF presented a response (Enclosure 5) to the NRC comments of January 15, 2002, addressing the description White Paper of October 12, 2001. The staff will provide written feedback on this response by March 29, 2002. The RITSTF and TSS will discuss and resolve issues. The RITSTF will provide some examples of the Initiative 4b processes and how the TS are proposed to be revised. The RITSTF intends to provide a final White Paper by April 30, 2002, if all issues are resolved. The NEI RITSTF will coordinate comprehensive and multiple pilots, including the CEOG and STP approaches. While each pilot may not address the proposed methodology completely, in toto the entire methodology will be proved. The RITSTF will ensure a single coordinated methodology will emerge from and be supported by the individual pilots. The RITSTF requested that the NRC consider granting fee waivers for the pilot reviews. The RITSTF intends to submit the Initiative 4b TSTF-424 for approval by September 30, 2002.

The next NRC TSS/NEI RITSTF meeting is scheduled for Friday, May 17, 2002; the location is to be determined.

NRC/INDUSTRY MEETING OF THE
RISK-INFORMED TECHNICAL SPECIFICATION TASK FORCE ATTENDANCE LIST
FEBRUARY 27, 2002

<u>NAME</u>	<u>AFFILIATION</u>
TONY PIETRANGELO	NUCLEAR ENERGY INSTITUTE
BIFF BRADLEY	NUCLEAR ENERGY INSTITUTE
MIKE SCHOPPMAN	NUCLEAR ENERGY INSTITUTE
JACK STRINGFELLOW	SOUTHERN NUCLEAR OPERATING COMPANY
DONALD HOFFMAN	EXCEL SERVICES
JIM ANDRACHEK	WESTINGHOUSE/WOG
ALAN HACKEROTT	OPPD
NOEL CLARKSON	DUKE ENERGY
MIKE KITLAN	DUKE ENERGY
COURTNEY SMYTH	PSEG NUCLEAR LLC
GARY CHUNG	SCE-SONGS
FRANK RAHN	EPRI
R. J. SCHOMAKER	FRAMATECH ANP
DREW RICHARDS	STP
WAYNE HARRISON	STP
DON McCAMY	TVA
RICK HILL	GE
DEANN RALEIGH	SCIENTECH
FRANK GILLESPIE	NRC/NRR/DRIP
BOB DENNIG	NRC/NRR/DRIP/RORB/TSS
BOB TJADER	NRC/NRR/DRIP/RORB/TSS
PETE HEARN	NRC/NRR/DRIP/RORB/TSS
JACK FOSTER	NRC/NRR/DRIP/RORB/TSS
NICK SALTOS	NRC/NRR/DSSA/SPSB
MILLARD WOHL	NRC/NRR/DSSA/SPSB
CLIFF DOUTT	NRC/NRR/DSSA/SPSB
WAYNE SCOTT	NRC/NRR/DIPM/IEHB

AGENDA

TSB/NEI RITSTF Meeting

February 27, 2002 from 8:30 AM to 12:30 PM, in O-9B4

- **Status of Initiatives**

- Initiative 1, End States**

- BWR Topical SE is being completed**
 - TSTF submittal(s)**

- Initiative 3, LCO 3.0.4 (Mode Restraint) Flexibility**

- TSTF-359 R6**

- Initiative 4, RI AOTs with CRMP**

- Industry proposed approaches, pilots**
 - NRC provided feedback to latest NEI description white paper**

- Initiative 5, STI Evaluation Methodology**

- Response to NRC feedback**
 - Revised white paper**

- Initiative 6, LCO 3.0.3 Actions and Completion Times**

- Draft response to NRC RAIs; final formal responses to be submitted**

- Initiative 7, Non-TS Support System Operability Impact on TS System**

- NRC provided feedback to enhanced white paper**

- Initiative 8a, Remove/Relocate non-safety and non-risk significant systems from TS that do not meet 4 criteria of 10 CFR 50.36**

- **NEI presentation to the NRC staff on February 28, 2002, on the 10 CFR 50.65 (a)(4) risk assessment and management process**

- **Schedule Next Meeting**

- **Closing Comments**

**RISK INFORMED TECHNICAL SPECIFICATION TASK FORCE (RITSTF)
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"> ● SE for CEOG Topical issued. ● CEOG-152 R1 which will become TSTF 422 R0 has been drafted and approved. ● BWROG SE expected March 2002. 	<ul style="list-style-type: none"> ● NEI provided responses to the NRC questions on the Initiative 1 proposal and will provide more detailed responses to the NRC questions in TSTF 422. ● TSTF will provide TSTF 422 to the NRC by 3/18/02. ● The NRC has essentially completed the BWROG SE and will provide a draft SE for the RITSTF to outline the proposed mapping of the requirements similar to what was performed for CEOG. 	CEOG - TSTF 422 R0 BWROG - TSTF 423 R0 BWOG - TSTF 431 R0 WOG - TSTF 432 R0
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 ● Essentially all plants will have submitted a plant specific LAR by 6/30/02. 	TSTF 358 R6

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

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
3	Increase Flexibility in Mode Restraints LCO 3.0.4	<ul style="list-style-type: none"> ● Provided NRC final TSTF-359, R6 on 02/22/02. ● NRC reviewing. Schedule is to put TSTF 359 R6 into the CLIP by 5/1/02. 	<ul style="list-style-type: none"> ● TSTF provided final TSTF 359 R6 to the NRC 2/22/02. ● NRC reviewing and will put the TSTF 359 R6 into CLIP by 5/1/02. 	TSTF 359 R6
4a	Individual Risk Informed AOTs	<ul style="list-style-type: none"> ● Individual Owners Groups (OGs) and plants are pursuing individual Risk Informed AOTs through Topicals and LARs 	<ul style="list-style-type: none"> ● Ongoing 	Various

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

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
4b	Risk Informed AOTs With CRMP/MR Backstops	<ul style="list-style-type: none"> ● RITSTF provided the NRC a revised White Paper addressing the NRC comments on 2/27/02. 	<ul style="list-style-type: none"> ● NRC will provide comments on the White Paper by 3/29/02. ● RITSTF will provide revised White Paper based on resolution of NRC comments and other pertinent information to NRC by 4/30/02. ● RITSTF will continue to coordinate with CEOG and the other pilot programs to ensure a single coordinated methodology and process for Initiative 4b. This single process and overall pilot for Initiative 4b will be supported by the multiple individual plant and OG pilots. ● RITSTF will coordinate with STP to integrate the generic Initiative 4b and the STP approach. ● TSTF will provide TSTF 424 to the NRC by 9/30/02. 	TSTF 424 R0

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INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
5a	Relocate SRs 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 10/31/02. 	
5b	Relocate STIs to Licensee Control	<ul style="list-style-type: none"> ● NRC provided comments on the RITSTF White Paper. 	<ul style="list-style-type: none"> ● NRC provided comments on the RITSTF White Paper. ● BWROG will develop Guidance Document from the White Paper and NRC/Industry comments and provide to RITSTF by 4/30/02. ● RITSTF review and provide comments to BWROG by 5/17/02. ● RITSTF will provide a Guidance Document to the NRC by 5/31/02. ● After NRC review and acceptance of the Guidance Document, RITSTF will develop a TSTF for Initiative 5 and submit to NRC. 	TSTF 425 R0
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. 	

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

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
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"> ● CEOG and RITSTF responded to RAIs on 2/27/02. ● CEOG will develop a TSTF for RITSTF review by 5/30/02. ● TSTF will provide TSTF 426 to the NRC by 9/30/02. 	TSTF 426 R0
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"> ● CEOG and RITSTF responded to RAIs on 2/27/02. ● CEOG will develop a TSTF for RITSTF review by 5/30/02. ● TSTF will provide TSTF 427 to the NRC by 9/30/02. 	TSTF 426 R0

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

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
7	Impact of Non TS Design Features on Operability Requirements	<ul style="list-style-type: none"> ● RITSTF provided a White Paper to the NRC. NRC comments indicate no major issues and RITSTF can proceed. 	<ul style="list-style-type: none"> ● RITSTF provided enhanced White Paper to NRC at meeting 12/19/01. ● NRC provided comments on the White Paper 1/25/02. ● Based on discussions at the 2/27/02 NRC/RITSTF meeting a separate meeting for Initiative 7 will be held to resolve issues. ● TSTF will provide TSTF 427 to the NRC by 4/30/02. ● TSTF provided TSTF 372 R1 (Snubbers only) to the NRC 1/14/02. ● NRC will provide disposition of TSTF 372 R1 by 5/1/02. 	TSTF 427 R0
8a	Remove/Relocate Systems LCOs That Do Not Meet The 4 Criterion of 50.36 From Technical Specifications	<ul style="list-style-type: none"> ● A BWROG specific list of candidate LCOs has been developed ● Other OG specific lists being developed 	<ul style="list-style-type: none"> ● NRC will provide guidance on plant specific application of Initiative 8a by 4/30/02. ● RITSTF to determine course of action for Initiative 8a and schedule to NRC by 5/15/02 	

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

INITIATIVE	TITLE	INITIATIVE STATUS	NEXT ACTIONS/ SCHEDULE/ RESPONSIBILITY	TSTF NUMBER
8b	Modify 50.36 Rule to Permit Removal/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 8a with longer term initiatives given the requirements for rulemaking. 	

BWOG - Active in Initiatives 1 and 4

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

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

WOG - Active in Initiatives 1, 4, and 5

Response to NRC questions on industry initiative 4B paper

February 27 2002

Definitions from NRC paper:

The concept works off the existing TS structure, defining several new roles for the existing completion time (ECT), and adding two new completion times: the flexible completion time (FCT) and the backstop completion time (BCT).

Note: In addressing NRC's questions, we have used the terminology as defined above. However, industry would propose the following terminology, to be consistent with our previous discussions:

(ECT) - Frontstop

(FCT) - Risk informed completion time (RICT)

(BCT) - Backstop

NRC Question 1:

All of these times will be used to specify a span of inoperability in which time some action must be taken. The ECT will specify either the time to restore operability to avoid entering other TS action statements, OR the time to calculate the FCT and put in place risk-management actions. It also demarcates the transition from general (a)(4) risk management to quantitative or "configuration risk" management. How is the ECT appropriate for this role; given that it may be either an engineering judgment or risk informed via RG 1.177, and that it varies from plant to plant?

Response:

The ECT is appropriate for this role for the following reasons:

1. Risk-informed applications usually use the existing licensing basis as the point of departure. The ECT, which is recognized to vary for the reasons NRC notes, is found to be acceptable for the existing tech specs. The advent of (a)(4) has significantly diminished the concern with variability of ECTs and their bases. Prior to (a)(4), the ECT variations would have a more significant impact than they do today, but they were still found acceptable, even when they were the sole controlling element.
2. For practical reasons, a plant would not maintain separate risk management programs, one for (a)(4) and the other for extended ECTs. Thus, the concern of a "transition" from one program to the other is overstated. The same risk assessment

tools, analyses, and methods would be applied both before and after the ECT expiration.

3. The use of the ECT simplifies the transition to RITS, and provides familiarity to the operations staff. The ECTs are structured to allow plant operations staff to comply with procedural and administrative actions associated with entry into limiting conditions for operation.
4. The ECT (particularly if it is risk-informed per Reg Guide 1.177) may be appropriate for a specific train or system out of service, with no other systems out of service. The (a)(4) implementation guidance does not require analysis for a single system out of service, unless unusual conditions are present.
5. ECTs are generally short, and are predicated on the assumption that the train or system is totally incapable of performing its safety function.

NRC Question 2:

It is generally believed that the non-risk informed ECT is conservative (i.e., short compared to what might be justified based on risk) time to complete actions with inoperability in only one LCO. (This is in fact why (a)(4) decisions can be at odds with technical specifications). With only one LCO affected, the non-risk informed ECT might be appropriate as a planning period for a FCT. However, with more than one LCO affected, a risk analysis would likely show that the FCT is less than the ETC. In such a case, what is the "ECT"? When multiple LCOs are affected, how is the ECT selected? Can the ECT planning period be shortened by emerging conditions? More broadly, can you describe the dynamics of the configuration management process for multiple LCOs, including emergent conditions?

Response:

When multiple LCOs are affected, the limiting ECT would be that of the limiting (shortest) LCO. It should be noted that the risk analysis will be done in advance during the work planning process, and the question of timing relative to the ECT would apply only to emergent conditions.

Items 1 and 2 of above response are again pertinent here. This question is predicated on an assumption that there would be some difference in the "pre" and "post" ECT configuration risk management programs. The reason (a)(4) was developed was to address the potential risk significance of multiple simultaneous LCO entries. The dynamics of the configuration risk management process for multiple LCOs and emergent conditions are fully described in the (a)(4) implementation guidance. There are already numerous occasions where (a)(4) risk management actions have resulted in restoring equipment to service in advance of the tech spec ECTs. The fact that a configuration risk management program may be used to justify extending an existing ECT does not change any of the conditions or requirements for dealing with multiple LCOs or emergent conditions. If the configuration assessment result indicates an existing ECT or FCT is unacceptable, risk management actions must be taken in a timely manner. The plant would not wait for the expiration of any applicable ECT before taking these actions.

Once the plant applies the ECT as a period to determine the FCT, it should be monitoring the configuration risk or be capable of determining the configuration risk in a relatively short time. If additional TS SSCs become inoperable during this time, their effect on the current FCT would have to be evaluated. The time to make this determination should be established by the plant's configuration risk management program. The determined FCT may be less than the ECTs for the subsequent inoperable components and obviously would not exceed the ECTs for the subsequent inoperable components.

NRC Question 3:

Typical LCOs contain a variety of completion times for various degrees and sources of inoperability, and also for various compensatory actions. Which of these completion times will be subject to extension as a FCT? Will completion times that act as backstops for mode changes in Initiative 3 be subject to extension? Are any of the analyses performed for Initiatives 1 or 6 affected?

Response:

It is expected that the FCT could apply to any existing completion time, as long as the completion time deals with equipment configuration (versus parameters) and is amenable to risk management methods. It is recognized that there is a relationship between this initiative and initiatives 1, 3, 6, and 7. Recall that the initiative 3 generic analysis is predicated on the fact that moving up to a given mode results in no more risk than being in that mode steady state. This analysis does not rely on the explicit completion times to reach this conclusion – it is essentially time-independent. The same conclusion is true for initiative 1, where the analysis is comparing the risk significance of different end states in a time-independent manner. Thus, risk analyses and management actions would remain appropriate for LCOs that are subject to the 3.0.4 exceptions allowed by initiatives 1 and 3.

The proposed change would be expected to extend to the required action times even in the case of a mode change that would be allowed by the proposed LCO 3.0.4 Initiative 3. In this case, the configuration risk management program might impose a more restrictive limit than it otherwise would if a mode change were not to be made.

Analyses previously performed for initiatives 1 and 6 would not be affected.

NRC Question 4:

We agree with the need for a backstop completion time, or BCT, to restore the design basis configuration when risk analyses would support practically unlimited inoperability. The paper suggests a "hard time" limit of 30 days. While we understand that at this stage of development the time may be just a trial value, some explanation for its selection (if

adopted) will be needed. More importantly, the paper discusses at some length why the risk-informed completion times that result from a RG 1.177 process, and which have been incorporated in some plant's technical specifications, are not appropriate as BCTs. The paper argues that these values would be overly restrictive because they do not take credit for "partial functionality". This raises questions about the types of conditions for which FCTs will be sought, and about how the quantitative analyses are sufficient /appropriate for the decisions. See 5. and 6. below

Response:

The BCT was proposed to be set at 30 days since:

- (a) almost all equipment repairs can be confidently completed in that time period . Infrequent low risk repairs that require more can be extended by judicious use of other regulatory processes.
- (b) Many plant components have very small contributions to plant risk. While it is not to intent to unnecessarily defer repairs, the FCT would be utilized in instances where repair parts are unavailable and the resulting component is low risk. Other instances of utilizing the FCT would be when a low risk compliance issue develops that renders the component inoperable. The 30 day period provides adequate time to procure parts, resolve a compliance issue, complete as design change, or generate a regulatory change.

As discussed in the paper, the backstop value is purely deterministic, and is aimed at restoring compliance with the plant licensing basis. There is no risk basis intended for its proposed duration. The 30 day time limit is a proposed value that is conservative with respect to the analogous 90 day limit for temporary changes to the plant without performance of a §50.59 evaluation (given that an (a)(4) assessment has been performed). Both of these values are aimed at restoring deterministic licensing basis compliance and defining "temporary" conditions.

One intent of initiative 4B to address degraded conditions (situations of partial functionality). In many cases PSA informed analyses are capable of addressing these situations. It is expected that the degraded condition has been modeled or evaluated, in order to be subject to this initiative. However, it is likely not possible to model all compensatory measures or risk management actions.

NRC Question 5:

We postulate a hierarchy of key terms applied to the condition of SSCs. In words, FUNCTIONAL is less than OPERABLE which in turn is less than QUALIFIED. We presume that "partially functional" is less than FUNCTIONAL. By QUALIFIED we mean that the SSC meets each and every requirement in the licensing. basis; OPERABLE is as defined in standard technical specifications. Could you provide your understanding of FUNCTIONAL, and "PARTIALLY FUNCTIONAL"? Can you provide examples of SSCS

that are: (1) FUNCTIONAL BUT NOT OPERABLE; (2) PARTIALLY FUNCTIONAL? How would the proposed risk analysis, with the proposed quantitative tools, assess these conditions to render risk management decisions? We note and support the prohibition on planned entry into configurations that result in loss of safety function, regardless of the risk analysis. (This prohibition originates from the same concern as the need for a BCT.)

Response:

We do not believe it is necessary to incorporate these proposed new definitions into the body of technical specifications to implement initiative 4B. Our proposed concept would retain the existing definition of operability, and allow flexibility in the actions and completion times once in the limiting condition for operation. The risk analysis will consider the level of degradation in determining risk management actions.

NRC Question 6:

The minimum PSA capability as described in items 1 through 6 on pages 3 and 4 of the paper seems a good proposal for further discussion within the staff. We feel it is important to understand the nexus between this capability and the risk management decisions it will support. As elaboration of the issues raised in 5 above: To what extent will the departures from operability that will be managed be modeled in the PSA prior to the need to perform the analysis? To what degree do you envision "ad hoc" analysis wherein new modeling or revised modeling is performed during the planning period afforded by the ECT? How would compensatory measures be accounted for? External events? To the extent that you envision "ad hoc" analysis, should individuals performing the analysis be qualified to some standard?

Response:

Changes to the PSA model will be conducted by trained and experienced personnel. Changes to the PSA may be required from time to time to ensure a particular condition is accurately modeled. Typically changes may include consideration of available equipment which has been previously screened due to low risk benefit, addition of new plant equipment, and addition of recovery actions. All changes to the PSA model will be performed within the cognizance of the PSA group.

We propose that departures from operability would be modeled in the PSA prior to the time the analysis is performed (for planned activities, given that most configurations will be pre-analyzed, this raises the question of "when" the analysis is considered done. This time may need to be defined.). We further propose that model refinements during the LCO (e.g., during emergent conditions) should not be allowed. We should not otherwise restrict the ability to refine/improve the model.

Compensatory measures and external events may be accounted for either qualitatively or quantitatively. As noted previously, for planned activities, this will

always be done in advance. For emergent conditions, the analysis and selection of risk management actions may need to be documented.

NRC Question 7:

It is vitally important that the staff have the ability to oversee plant performance under a program that grants unprecedented discretion to licensees. We need to easily see the forest and not have to assemble it from the trees (although the need will also be there to look at the trees –i.e., the paper's proposal to have individual analysis available for review is a necessary ingredient; the staff will have to develop guidance to make review of those analyses meaningful). The complexity and dynamics of multiple equipment outages, both planned and emergent, argue strongly for metrics that monitor the plant management of risk at all times, in a quantitative way, and not just when the configuration risk management option is invoked. The paper proposes that licensees have the capability to "consider the instantaneous risk, the integrated risk for a given configuration, and aggregate risk." Why wouldn't these or similar metrics be used throughout operation and shared with staff on some regular basis? Are there other performance indicators already in use or under development that would aid in oversight?

Response:

NRC currently has the capability under (a)(4) for the resident inspector or regional SRA to be aware of, or ask questions, relative to risk metrics. We do not believe the risk metrics need to be formally integrated into the oversight process for plants implementing the tech spec initiative .

NRC Question 8:

In the same vein as 7 above, the ECT marks a transition from unrestricted (a)(4) risk management (i.e., it can be qualitative, quantitative, or a blend) to quantitative (a)(4) risk management. Wouldn't plants with the greater capability apply it across the board for all configuration/ mode changes involving equipment covered by technical specifications?

Response:

Yes they could. See item 2 of response to question 1 above.

We believe it is misleading to characterize the risk analysis and management approach under (a)(4) as "unrestricted". While we have proposed a more quantitative approach (relative to the level one, at power PSA) for implementation of the tech spec initiative, the decision to do so should not be inferred to imply that qualitative and blended approaches are somehow inferior. The (a)(4) guidance recognizes that sole reliance on numerical risk insights may not always be appropriate, and it is important to note that plants implementing the tech spec initiative should continue to use blended and qualitative concepts as part of the risk analysis. This could include external events, and shutdown modes, as well as

qualitative considerations and non-numerical insights from the PSA. The (a)(4) industry implementation guidance notes the following:

The PSA provides valuable insights for risk management, because it realistically assesses the relationship of events and systems. Risk management can be effectively accomplished by making use of qualitative insights from the PSA, rather than sole reliance on quantitative information. Removing equipment from service may alter the significance of various risk contributors from those of the baseline PSA. Specific configurations can result in increased importance of certain initiating events, or of systems or equipment used for mitigation of accidents. Evaluation of a specific configuration can identify "low order" cutsets or sequences, which are accident sequences that may not be important in the baseline analysis but become important for a specific configuration. These considerations are important to risk management