

November 14, 2001

MEMORANDUM TO: Cynthia A. Carpenter, Chief  
Risk-Informed Initiatives, Environmental, Decommissioning  
and Rulemaking Branch  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

FROM: Eileen M. McKenna, Senior Reactor Engineer/**RA**/  
Risk-Informed Initiatives, Environmental, Decommissioning  
and Rulemaking Branch  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

SUBJECT: PUBLIC WORKSHOP - RISK-INFORMING SPECIAL TREATMENT  
REQUIREMENTS IN 10 CFR PART 50 (RIP50) OPTION 2 HELD ON  
NOVEMBER 7, 2001

On November 7, 2001, NRC held a public workshop on RIP50 (option 2) at the Gaithersburg Holiday Inn. Approximately 60 people attended, nearly equally divided between NRC staff and stakeholders from the nuclear power industry. Attachment 1 contains the list of attendees.

Following opening remarks by Sam Collins, Director of the Office of Nuclear Reactor Regulation, the staff presented its objectives for the workshop and the issues to be discussed during the workshop (See Attachment 2 for the staff slides). As noted, the primary focus of the workshop was on the "boundary conditions", or objectives for rule requirements on treatment for RISC-3 structures, systems and components. RISC-3 SSCs are those SSCs that are safety-related, but which a risk-informed categorization process has shown to be of low risk significance; these SSC are those for which existing special treatment requirements would be removed, but which are still expected to perform their safety-related functions). In preparation for the meeting, NRC had posted on its web site some background information discussing these topics as well as draft rule language concepts.

The meeting was transcribed to facilitate the staff's use of the information discussed and presented during the workshop. Attachment 3 is the transcript of the workshop. As can be seen from the transcript, there was a good interchange of ideas and questions among the participants. Two entities, NEI and ASME, made presentations during the workshop; their presentation materials are contained in Attachment 4. The NEI presentation focused upon the concept of "nuclear industrial treatment", as being a sufficient level of treatment for the RISC-3 SSC, in combination with requirements for functional performance monitoring and corrective action. The ASME presentation summarized a number of code cases under development on risk-informed classification of piping and other components and for revised treatment requirements for low-risk components.

Subsequent to the workshop, NEI and Morgan Lewis provided some written comments related to the rule language concepts posted September 27, 2001; these documents are Attachment 5 and 5-1 to this summary.

The NRC members present concluded that the discussion was valuable in reaching agreement on the objectives of the treatment requirements and upon how these objectives could be met through the rulemaking. The NRC thanked the participants for attending and being actively engaged in the dialogue. In closing, NRC noted its planned next steps, including putting the complete draft rule language on the web for comment, ACRS meetings and other milestones.

Attachments: 1. List of attendees  
2. Staff presentation  
3. Transcript  
4. Other presentations  
5. Written comments provided after the workshop

Subsequent to the workshop, NEI and Morgan Lewis provided some written comments related to the rule language concepts posted September 27, 2001; these documents are Attachment 5 and 5-1 to this summary.

The NRC members present concluded that the discussion was valuable in reaching agreement on the objectives of the treatment requirements and upon how these objectives could be met through the rulemaking. The NRC thanked the participants for attending and being actively engaged in the dialogue. In closing, NRC noted its planned next steps, including putting the complete draft rule language on the web for comment, ACRS meetings and other milestones.

Attachments: 1. List of attendees  
2. Staff presentation  
3. Transcript  
4. Other presentations  
5. Written comments provided after the workshop

**DISTRIBUTION:**

ADAMS

RGEb/r/

SCollins/JJohnson

GHolahan

FGillespie

EMcKenna

WBorchardt

JStrosnider

CCarpenter

TReed

BSheron

BBoger

SWest

DDiec

DMatthews

SNewberry

RBarrett

JMoore, OGC

**Package Accession #ML013190316**

**Memo Accession#ML013190611**

**Transcript Attch.3 Acc.#ML013190052**

**NEI Slides Attch.4 Acc.#ML013200300**

**Attachment 5 Acc.#ML013190305**

**Attachment 5-1 Acc.#ML013190320**

**NRC-001**

Document name: G:\RGEb\RIP50\workshopsum.wpd  
(Att. 3 is g:\RGEb\RIP50\transcript)

OFFICE	RGEb	RGEb	SC:RGEb
NAME	E. McKenna	T. Reed	S. West
DATE	11/14/01	11/14/01	11/14/01

**OFFICIAL RECORD COPY**

NRC - RIP 50 Option 2 Rule Concept Workshop  
November 7, 2001  
List of Attendees

<u>Name</u>	<u>Affiliation</u>
Sam Collins	NRC
Gary Holahan	NRC
Jack Strosnider	NRC
Frank Gillespie	NRC
Cindi Carpenter	NRC
Steve West	NRC
Tim Reed	NRC
Eileen McKenna	NRC
David Diec	NRC
George Gaydos	Bechtel SERCH
Paul Bassette	Morgan Lewis
Adrian Heymer	NEI
Steve Floyd	NEI
Tony Pietrangelo	NEI
Ellen Anderson	NEI
Glen Schinzel `	STPNOC
Wayne Scott	NRC
Mike Cheok	NRC
Ron Young	NRC
John Fair	NRC
Tom Scarbrough	NRC
Stanley Levinson	Framatome
Craig Sellers	ITS
Don Lincoln	ITS
Ken Balkey	Westinghouse/ASME
David Alford	Wolf Creek Nuclear Operating Company
Kevin Kimball	NISYS Corporation
Jason Brown	Westinghouse
Goutam Bagchi	NRC
John Winebrenner	Dominion
Gerald Sowers	APS
Roger Huston	LSS
Bob Lutz	Westinghouse
Stewart Magruder	NRC
PT Kuo	NRC
Eric Jebsen	Exelon
Charles Brinkman	Westinghouse
Deann Raleigh	LIS, Scientech
Mohammed Shuabi	NRC
Leigh Aparicio	EPRI
Richard Turcotte	Duke Engineering
Jean Liaw	Winston and Strawn
Ted Sullivan	NRC
Mark Rubin	NRC

NRC - RIP 50 Option 2 Rule Concept Workshop  
November 7, 2001  
List of Attendees

<u>Name</u>	<u>Affiliation</u>
Maurice Dinger	Wolf Creek/WOG
John Durham	NISYS Corporation
Doug True	ERIN
Robin Graybeal	Protopower
Paige Negus	GE
Thomas Hook	Dominion
Bill Burchill	Exelon
Loh Hi	PSE&G
David Terao	NRC
Peter Balmain	NRC
Yessie Correa	NRC
Ned Tyler	Calvert Cliffs
Jose Calvo	NRC
Glenn Kelly	NRC
Patrick O'Regan	EPRI
Courtney Smythe	PSE&G



*United States*  
*Nuclear Regulatory Commission*

---

**RISK-INFORMED PART 50  
SPECIAL TREATMENT REQUIREMENTS  
RIP50 OPTION 2**

**WORKSHOP**

**Gaithersburg, Maryland  
November 7, 2001**



# AGENDA

- Opening Remarks-- Sam Collins  
Director NRR 8 -- 8:15
- Overview of Workshop Objectives/Agenda  
-- Tim Reed/DRIP 8:15 -- 8:30
- Overview of Draft Rule -- Tim Reed/DRIP 8:30 -- 8:45
- Discussion of RISC-3 Treatment Alternatives  
-- Tom Scarbrough/DE 8:45 -- 10:15
- Break 10:15--10:30



## **AGENDA CONT'**

- Continuation of RISC-3 Treatment Discussion  
-- All 10:30--noon
- Lunch Noon -- 1:00 pm
- Discussion of Other Portions of the Draft Rule  
(As suggested by participants) 1:00 -- 2:45 pm
- Wrap up/Next Steps -- Steve West/DRIP 2:45 -- 3:00 pm
- Adjourn 3:00 pm



*United States  
Nuclear Regulatory Commission*

---

## **WORKSHOP OBJECTIVES**

- Inform stakeholders of staff's current approach and thoughts regarding §50.69 and Option 2
- Acquire stakeholder feedback regarding alternative approaches for a draft §50.69 in general, and RISC-3 treatment specifically.



---

## **OVERVIEW OF DRAFT 50.69 RULE STRUCTURE**

- §50.69(a) Definitions
  - Defines RISC-1, RISC-2, RISC-3, RISC-4 (terms used throughout 50.69)
- §50.69(b) Applicability
  - Identifies who can adopt 50.69— applicants for, or holders of, reactor licenses, combined licenses, or renewed licenses
- §50.69(c) Categorization Requirements
  - Provides categorization requirements -- can either adopt Appendix T or meet requirements in paragraph (c) with a prior staff review
- §50.69(d) Treatment Requirements
  - Provides “treatment requirements for SSCs binned into each RISC category



## **OVERVIEW OF DRAFT 50.69 RULE STRUCTURE CONT'**

- §50.69(e) STRs that no longer apply to RISC-3 SSCs
  - Identifies which requirements can be removed from RISC-3 SSCs (and which are replaced with 50.69(d) requirements)
- §50.69(f) Submittal Requirements
  - Identifies information to be submitted to NRC for review (when not adopting Appendix T)
- §50.69(g) Change Control Requirements
  - Identifies requirements for controlling changes to procedures implementing 50.69 and for changes that affect safety significant functions



## **OVERVIEW OF DRAFT 50.69 RULE STRUCTURE CONT'**

- §50.69(h) Program Description, Documentation, and Reporting Requirements
  - Identifies reporting requirements for RISC-1 and RISC-2 functions
  - Identifies record keeping and documentation requirements



*United States  
Nuclear Regulatory Commission*

---

## **BOUNDARY CONDITIONS FOR TREATMENT OF RISC-3 STRUCTURES, SYSTEMS, AND COMPONENTS**

1. Licensees required to maintain design functions of safety-related structures, systems, and components (SSCs) with functions of low safety significance (categorized as RISC-3 SSCs) at conditions under which intended functions required to be performed as described in updated FSAR. RISC-3 SSCs must meet existing functional requirements, including capabilities (e.g., pressure, flow) and design conditions (e.g., loads imposed by a seismic event, harsh environment).



*United States*  
*Nuclear Regulatory Commission*

---

## **BOUNDARY CONDITIONS**

(continued)

2. Treatment process must maintain functionality of RISC-3 SSCs consistent with reliability and availability assumptions in categorization process.
  
3. NRC must maintain level of regulatory assurance regarding continued functionality of RISC-3 SSCs consistent with mission to ensure adequate protection of public health and safety.



---

## **ALTERNATIVES FOR RISC-3 SSC TREATMENT**

### **1. Commercial Practice**

#### Rule Concept

Requires reasonable confidence of functionality of RISC-3 SSCs at design-basis conditions throughout service life by applying commercial practice.

#### Content of Statement of Considerations and Guidance

Reference industry guidelines in NEI-00-04.



## Alternative 1 Issues

1. Commercial practice not sufficiently defined to establish an acceptable level of safety and to ensure uniform implementation consistent with categorization process assumptions.
2. Sufficient data or evaluations do not exist to support functionality and reliability of SSCs under design-basis conditions relying only on commercial practice.
3. Reliance on commercial treatment in which no means are employed to detect degradation or failure of safety-related SSCs prior to being called upon to function for a design-basis event does not maintain safety and is inconsistent with NRC's mission.
4. NEI-00-04 does not satisfy boundary conditions for RISC-3 SSCs under Option 2 (e.g., approach might not maintain seismic inputs, or might allow commitments to be changed without technical basis).



## **2. High-Level Treatment Objectives**

### Rule Concept

Requires reasonable confidence of functionality of RISC-3 SSCs at design-basis conditions throughout service life.

Specifies high-level objectives for 8 treatment processes.

### Content of Statement of Considerations and Guidance

Provides NRC expectations and methods for effective implementation of rule to achieve high-level objectives with possible reference to revised industry guidance.



## Alternative 2 Issues

1. Rule specification of high-level treatment objectives might provide less flexibility than referencing commercial practice.
2. NEI-00-04 does not describe an acceptable approach for meeting the high-level treatment objectives.



### **3. Minimum Treatment Attributes**

#### Rule Concept

Requires reasonable confidence of functionality of RISC-3 SSCs at design-basis conditions throughout service life.

Specifies minimum treatment attributes similar to provisions of South Texas updated FSAR.

#### Content of Statement of Considerations and Guidance

Provides more detailed expectations and guidelines specifying methods and acceptance criteria for satisfying treatment attributes without need for industry guidance.



## Alternative 3 Issues

1. Staff would need to develop rule language and more detailed implementation guidance that might be perceived as reducing stakeholder input regarding format and details of rule and guidance.



## **WRAP UP/NEXT STEPS**

- Staff will utilize workshop feedback to complete a draft rule and release it to the public
- Continue with efforts to develop and publish proposed rule
- Ongoing tasks:
  - Reviewing draft NEI 00-04 (industry implementation guidance)
  - Reviewing NEI 00-02 (industry PRA peer guidance) for Option 2 application
  - Developing guidance for the review of a RIP50 Option 2 submittal
  - Continuing to observe pilot activities/revise framework based on feedback



---

## **RIP50 OPTION 2 REMAINING TASKS**

- Perform regulatory analysis
- Continue pilot activities and feedback of lessons learned into framework
- Develop proposed rule package consisting of:
  - Proposed Rule
  - Draft Regulatory Guide
  - Statement of Considerations
  - Regulatory Analysis
  - Proposed Rule SECY



## **RIP50 OPTION 2 REMAINING TASKS CONT'**

- Issue proposed rule package for comment after:
  - RILP/ET review
  - ACRS and CRGR review
  - Office review
  - Commission Review
- 75 day comment period: Review stakeholder comments submitted on proposed rule
- Develop final rule package -- revising constituent pieces based on stakeholder feedback
- Process final Rule package through concurrence (similar to above)
- Issue final rule