



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 4, 2024

MEMORANDUM TO: Daniel Collins, Director
Division of Operating Reactor Safety,
Region I

LaDonna Suggs, Director
Division of Reactor Safety
Region II

Mark Franke, Director
Division of Reactor Projects
Region II

Jason Kozal, Director
Division of Operating Reactor Safety,
Region III

Geoff Miller, Director
Division of Operating Reactor Safety,
Region IV

FROM: Russell N. Felts, Director
Division of Reactor Oversight
Office of Nuclear Reactor Regulation

Signed by Felts, Russell
on 06/04/24

Michael R. Franovich, Director
Division of Risk Assessment
Office of Nuclear Reactor Regulation

Khanna, Meena signing on behalf
of Franovich, Michael
on 06/03/24

SUBJECT: ESTABLISHMENT OF PROBABILISTIC RISK ASSESSMENT
CONFIGURATION CONTROL INSPECTION CROSS-REGIONAL
PANELS

This memorandum establishes cross-regional panels to promote consistent application and resolution of inspection findings and violations, and associated proposed enforcement actions, identified through implementation of the Probabilistic Risk Assessment (PRA) Configuration Control (CC) Operating Experience Smart Sample (OpESS) 2023-02 (Agencywide Documents Access and Management System Accession No. ML23255A006). Per the generic charter for topic-specific cross-regional panels (ML18232A192), topic-specific cross-regional panels will be

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staffed by representatives from the program office and the regions. Additionally, these panels record and share their results for knowledge management and training purposes.

The topic of PRA CC cross-regional panels was discussed at the March 2023 Division Director Counterpart Meeting and the attendees approved moving forward to develop topic-specific guidance and implement the panels once the OpESS was finalized.

All proposed PRA CC findings or violations identified via OpESS 2023-02 will be brought to a cross-regional panel. Enclosure 2 of this memorandum is provided to assist with screening PRA CC issues through the existing issue screening and significance evaluation guidance. Any findings that do not screen to Green will continue through the Significance Determination Process.

Panels formed under the generic charter, including these PRA CC Panels, are temporary and remain in existence until there is sufficient familiarity and direction with how to disposition such inspection findings and issues. Once sufficient familiarity and consistency has been achieved, a discussion of dissolving the topic-specific panels will be brought to the Division of Reactor Oversight (DRO) and a regional directors call. The topic can then be added to the next Division Director Counterpart Meeting for a full discussion and decision. Following this discussion, the panel can be ended with DRO Director approval.

Participation in the panels is indicated in the table below. A quorum is required for initial presentation and final issue resolution, and attendees required for quorum constitute voting members. In preparation for each meeting, the presenter shall complete the panel template for each issue that will be presented (e.g., if there are two issues at one site, two templates will be completed) and provide it to the panel chair at least four working days prior to the meeting to share with all participants in advance.

List of Participants	
IRAB Branch Chief or designee*	Chair and Participant
APOB Branch Chief or designee*	Participant
Regional Branch Chief responsible for inspection that identified the issue*	Participant
Senior Reactor Analyst (SRA) or Reliability and Risk Analyst (RRA) from DRO or DRA*	Participant
SRA from regional office	Participant
Lead Inspector	Presenter and Participant
Regional Enforcement Coordinator*	Participant
NRR Enforcement Coordinator	Participant
Staff technical experts, as needed	Participant

*Voting members and required for quorum

The panel chair will facilitate the discussion and help the panel reach consensus on the final disposition of the issue of concern, performance deficiency, and inspection finding. Similar to Significance and Enforcement Review Panel (SERP) consensus decision-making, unanimous agreement of the cross-regional panel voting members is not needed to establish consensus. Rather, a consensus decision is one in which all members at least generally accept the position, agreement, or decision reached. Each panel member may question or challenge any of the information and analyses presented. If consensus is not reached at the conclusion of the panel,

the issue will be elevated to a discussion between the Division Directors, Deputies, or designees of the Division of Reactor Oversight and Division of Risk Assessment in NRR and the regional technical division for a decision. For potentially greater than green issues, the SERP process will be followed. The panel's decision will serve as the final more-than-minor determination for these performance deficiencies.

The lead inspector or inspection team leader will place the completed template into the Agencywide Documents Access and Management System as non-public document sensitivity A.7. The ADAMS Accession number for the panel decision will be made available to regional staff on the NRR/DRO/IRAB SharePoint site. The final panel template documentation should be posted on the DRO Reactor Inspection Branch SharePoint site.

Enclosures:

1. PRA Configuration Control OpESS Panel
Template
2. PRA Configuration Control Issue Screening
Guidance

SUBJECT: ESTABLISHMENT OF PROBABILISTIC RISK ASSESSMENT CONFIGURATION
CONTROL INSPECTION CROSS-REGIONAL PANELS DATE: JUNE 4, 2024

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ADAMS Accession No. ML24081A131**NRR-106**

OFFICE	NRR/DRO/IRAB	NRR/DRA/APOB	NRR/DRO/IRAB
NAME	AGarmoe	AZoulis	PFinney
DATE	3/22/2024	5/24/2024	5/28/2024
OFFICE	NRR/DRA	NRR/DRO	
NAME	MFranovich	RFelts	
DATE	6/3/2024	6/4/2024	

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PRA Configuration Control OpESS Panel Template

Note: The standard IMC 0611 four-part write-up can be submitted in lieu of this worksheet.

Date of Panel		Inspection Date	
Licensee		Exit Date	
Region		Report Number	

IRAB BC (Panel Chair)*		APOB BC*	
Regional BC*		Regional SRA	
DRO or DRA SRA/RRA*		Lead Inspector	
Regional Enforcement Coordinator*		NRR Enforcement Coordinator	
Other Staff			

*Voting member and required for quorum

Performance deficiency (including regulation or standard not met)

Brief summary of the issue

Minor/more-than-minor (including basis) and proposed significance

PRA Configuration Control OpESS Panel Template

Cross-cutting aspect and basis

Enforcement (if applicable)

Comments

Decision Reached

PRA Configuration Control Issue Screening Guidance

Objectives:

This screening guidance is being provided to aid in achieving consistent treatment and resolution of probabilistic risk assessment (PRA) configuration control (CC) issues identified via Operating Experience Smart Sample (OpESS) 23-02, or other inspections, and to assist with processing PRA CC issues through existing issue screening and significance evaluation guidance. Issues with PRA CC should be screened and evaluated using existing guidance in Inspection Manual Chapter (IMC) 0612, Issue Screening, and IMC 0609, Significance Determination Process, and its appendices, as appropriate, informed by the guidance herein. Consistent with existing guidance for identifying and processing issues of concern, inspectors should generally cite the highest-level applicable requirement (e.g., Technical Specification violations for Risk Informed Completion Time (RICT) issues).

For any identified performance deficiencies (PDs), the most applicable risk-informed program that is affected by the specific error and/or has the most impact should be determined, and the issue should be pursued against that risk-informed program. Consistent with NRC Enforcement Manual (ADAMS Accession No. ML23360A760), staff should follow the guidance contained in Part 1, Sections 1.3.4 and 1.3.5, related to documenting multiple examples of a violation when applicable.

Deviations from this guidance contained within this memo should be discussed with a senior reactor analyst (SRA) or risk and reliability analyst and should be explained to the cross-regional panel when the issue is presented.

Utilize the following guidelines while screening the issue through IMC 0612, Appendix B:

Figure 1: Issue Screening, Blocks TE1 and TE2: Willfulness and Traditional Enforcement
For Blocks TE1 and TE2 follow the guidelines as stated within IMC 0612, Appendix B. Normally PRA CC issues would follow the Reactor Oversight Process (ROP) path.

Block 3: Is there a performance deficiency?

Q1: Was the issue a result of the licensee's failure to meet a requirement or standard?

A1: If inspectors determine the licensee is not meeting applicable requirements or licensee self-imposed standards for PRA CC, which are typically contained within the implementing rule, license amendment, licensee procedures, or ultimately the PRA standard and Regulatory Guide 1.200, then the answer to this question should be yes. Typically, this would be answered as "failure to meet ASME PRA Standard as required by implementing Rule or License requirements," (e.g., 50.69, NFPA 805, Surveillance Frequency Control Program (SFCP), or RICT).

Q2: Was the cause of the issue of concern reasonably within the licensee's ability to foresee and correct and should the issue of concern have been prevented?

A2: The answer to this question for PRA CC issues would generally be yes, as PRA CC is a requirement for use of risk-informed programs. However, inspectors should use the same discretion with answering this question as with other issues. Ultimately, maintaining the PRA and the use of programs to do so as required by the PRA Standard should be reasonably within the purview of the licensee to perform in order for the PRA to match the as-built as-operated plant.

Block 4: Is the performance deficiency (PD) More-than-Minor?

Typically answered as “If left uncorrected, the PD would have the potential to lead to a more significant safety concern.” However, depending on the situation, the issue could also or alternatively impact a cornerstone objective, (most likely the mitigating systems cornerstone objective associated with availability and reliability). Specifically, the PRA CC issue could result in an incorrect or nonconservative assessment of risk to the plant; for example, an erroneous RICT backstop calculation. For details on the more-than-minor questions refer to IMC 0612, Section 05.01b and c.

The most applicable examples from IMC 0612, Appendix E, “Examples of Minor Issues,” are likely from Section 8, “Maintenance Rule,” however, examples from other sections may be more applicable, given the circumstances of the specific PRA CC issue. Inspectors should be aware that the IMC 0612, Appendix E examples at present are not specifically written for PRA CC issues. One of the key considerations in determining if a PRA CC is more than minor is whether the issue affected a PRA-informed calculation or decision outcome in a non-conservative manner or introduced reasonable doubt on the outcome, which can be informed at least in part by the existing suite of examples. The PRA CC Working Group has developed PRA CC-specific examples, which will be updated as needed based on experience with PRA CC issue screening, and will eventually be incorporated into IMC 0612, Appendix E. The PRA CC-specific examples are currently contained in a standalone document (ADAMS package ML24152A029) and should be referred to for consideration when screening PRA CC issues.

Block 5: Does the finding screen to Green?**IMC 0609, Attachment 4, “Initial Characterization of Findings”**

Table 1, Finding is typically failure to maintain PRA CC program.

Table 2, PRA CC issues are likely to be contributors in either the Initiating Event (IE) or Mitigating Systems (MS) cornerstones. The specific attributes typically adversely affected are likely one of the following: design control, configuration control or equipment performance.

The most applicable blocks to check for screening:

IE – E. External Event initiators (i.e., incorrect inputs) and

MS – A. MS and PRA Functionality, B. External Event, E. Flex (i.e., PRA inputs incorrect).

Table 3, SDP Appendix Router

All PRA CC issues should be routed to Section C, “Maintenance Rule Risk Assessments,” as a general guideline. Does the finding involve the licensee’s assessment of and management of risk? If so, then proceed to IMC 0609, Appendix K. In this application for PRA CC issues no additional information is required related to 10 CFR 50.65, and it is sufficient to proceed.

It is generally presumed that most PRA CC issues routed to IMC 0609, Appendix K will screen to Green after clearing the more than minor threshold. In the event a PRA CC issue does not screen to Green, additional case by case screening will be performed, and consultation with the SRA community and/or the licensee will be necessary in such cases.

IMC 0609, Attachment 4, will be revised to include a reference to an underestimation of PRA Configuration Risk, which would also be routed to IMC 0609, Appendix K. Additionally, an upcoming revision to IMC 0609, Appendix K, will include additional guidance for assessing risk-informed programs and PRA configuration risk.

Utilize the following guidelines while evaluating the issue in accordance with IMC 0609, Appendix K:

1. Incremental Core Damage Probability (ICDP) Deficit (ICDPD) should be utilized. See Attachment 1 of IMC 0609, Appendix K for further details.

$$\text{ICDPD} = \text{ICDP Actual} - \text{ICDP Flawed}$$

If ICDPD less than or equal to $1\text{E-}6$ then Green,
If ICDPD greater than $1\text{E-}6$ perform a detailed risk evaluation.

2. Duration should be limited to a maximum of 1 year, or the date of the model change that introduced the issue if less than 1 year, or other appropriate exposure metrics as determined by inspectors with appropriate justification to the cross-regional panel.
3. Nominal modeling methods for test and maintenance may be utilized as appropriate for long term exposure times, however for RICT scenarios a zero-maintenance model may be more applicable at the SRA's discretion.
4. A licensee's PRA-based risk evaluation may serve as the basis for screening a finding to Green, in accordance with Step 4.1.1. If the licensee's ICDPD is less than $1\text{E-}6$, then the issue may immediately screen to Green, with SRA approval, based upon the best available information. Or, at the discretion of the SRA, an independent bounding analysis may be performed and if the ICDPD is less than $1\text{E-}6$, then the issue may also immediately screen to Green. Following the SRA review, in coordination with the cross-regional panel, it may be determined that no additional resources are needed and conclude the finding is Green.
5. If there are concerns with the licensee's risk evaluation, or at the discretion of the SRA, an independent analysis of the evaluation of risk may be performed in accordance with Step 4.1.2.
6. If a detailed risk evaluation is required, utilize Flowchart 1 and Step 4.2 of IMC 0609, Appendix K as a general guideline for determining the significance of the finding. Risk management actions (RMAs) are generally not applicable to PCC issues and should be ignored for these SDPs, however this may be dependent upon the situation. For example, RMAs may be an input on the determination for any issues involving RICT. The appropriate utilization of RMAs into the analysis is at the discretion of the SRA.
7. If the above guidelines are insufficient, then inspectors in coordination with the regional SRAs should engage with NRR/DRA/APOB technical staff to propose a reasonable solution, which would also be presented to the cross-regional panel.